



# *LED Power Supply*



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**2014**

# About MEAN WELL

Established in 1982, MEAN WELL is a leading standard switching power supply manufacturer with advanced manufacturing facilities in Taiwan, GuangZhou, and SuZhou as well as sales offices in China, USA, and Europe. We have more than 5,000 standard models selling through 200 authorized distributors all over the world.

Since 2006, we started to endeavor the development for waterproof LED power supplies. Thus far, more than 1000 models complying with specific lighting norms per UL8750, UL1310, UL879, EN61347-2-13, IEC61347-2-13(CB), and EN61000-3-2 Class C (harmonic current) have been launched in the market with utmost success. In this catalog, we are glad to introduce you different types of LED power supplies, which are very suitable for all kinds of outdoor or indoor LED lighting related applications, such as LED street lighting, LED tunnel lighting, outdoor electronic display, office lighting, LED decorative lighting, LED architectural lighting and others.

If these LED power supplies cannot directly fulfill your requirement, please look into MEAN WELL standard industrial switching power supplies, ranging from 5W to 5,000W, for more selection. Please visit our website for more details — [www.meanwell.com](http://www.meanwell.com)

## New Products Overview

### OWA-60/90/120

60~120W External Type

- Class II (no F.G.) , 90~264VAC input
- No load power consumption<0.15W
- UL8750 LISTED, EN61558/EN60335 LISTED
- EISA 2007(Level VI), ErP step 2 (Level V)
- Output models:  
12V / 15V / 20V / 24V / 30V /  
36V / 42V / 48V / 54V
- 5 years warranty



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### LCM-25(DA)/40(DA)/60(DA)

25~60W Multiple-Stage Io Level Selectable

- Class II (no F.G.) , 180~277VAC input with PFC
- No load power consumption<0.5~1W
- Dimming function: 0~10VDC / PWM signal / DALI interface / Push dimming
- Support synchronization function up to 10 units
- Output current level selectable by DIP switch:  
350 / 500 / 600 / 700 / 900 /  
1050 / 1400mA
- 3 years warranty



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### PWM-40/60/90/120

40~120W PWM Output with PFC

- Class II (no F.G.) , 90~305VAC input
- Constant voltage PWM style output
- No load power consumption<0.5W
- 2 in 1 dimming function
- Output models:  
12V / 24V / 36V / 48V
- 5 years warranty



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### HLG-600H

600W High Efficiency with PFC

- 90~305VAC input
- High efficiency up to 96%
- Fanless design and high IP level , suitable for outdoor environment
- Output models:  
12V / 15V / 20V / 24V / 30V /  
36V / 42V / 48V / 54V
- 5 years warranty



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| ▪ Economical with Plastic Case                     |         |     | ▪ 5 Years Warranty                                              |                             |       |
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| ▪ PFC Function ▪ PCB Type                          |         |     |                                                                 |                             |       |



# AP series

## 12~35W Single Output LED Power Supply

### Features

- Universal AC input / Full range
- Fully isolated plastic case
- Protections: Short circuit / Overload (APV only) / Over voltage
- Constant voltage mode for APV series
- Constant current mode for APC series
- IP30 design
- Withstand 300VAC surge input for 5 seconds (APV/C-25/35)
- Class 2 power unit / Pass LPS (except for APC-25-350 & APC-35-350/500)
- Isolation class II, no F.G.
- Cooling by free air convection
- 100% full load burn-in test
- Low cost, high reliability
- Suitable for LED lighting and moving sign applications
- 2 years warranty

|                                |                                                                                   | APV-12/16                                                                                                     | APC-12/16 | APV-25/35                                                                             | APC-25/35 |
|--------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-----------|---------------------------------------------------------------------------------------|-----------|
| INPUT                          |  |                              |           |    |           |
| OUTPUT                         |  |                                                                                                               |           |                                                                                       |           |
| AC input voltage range         |                                                                                   | 90~264VAC ; 127~370VDC                                                                                        |           |                                                                                       |           |
| AC inrush current (max.)       |                                                                                   | APC/V-12: Cold start, 70A at 230VAC<br>APC-16: Cold start, 45A at 230VAC<br>APV-16: Cold start, 50A at 230VAC |           | Cold start, 45A at 230VAC                                                             |           |
| Overload protection (APV only) | Range                                                                             | >105% rated output current                                                                                    |           |                                                                                       |           |
|                                | Type                                                                              | Hiccup up mode, auto-recovery                                                                                 |           |                                                                                       |           |
| Over voltage protection        |                                                                                   | 110%~145% rated output voltage                                                                                |           |                                                                                       |           |
| Withstand voltage              |                                                                                   | I/P-O/P: 3.75kVAC                                                                                             |           | I/P-O/P: 3kVAC                                                                        |           |
| Working temperature            |                                                                                   | -30~+70℃ (refer to output derating curve)                                                                     |           |                                                                                       |           |
| Vibration                      |                                                                                   | 10~500Hz, 2G 10 minutes /1 cycle, period for 60 minutes each along X, Y, Z axes                               |           |                                                                                       |           |
| Safety standards               |                                                                                   | UL8750, ENEC EN61347-1/2-13, EN62384, IEC61347-1/2-13 approved; Design refer to IEC60950-1                    |           | UL8750 approved (except for APC-25-350&APC-35-350/500); Design refer to TUV EN60950-1 |           |
| EMC standards                  |                                                                                   | EN55015, EN61000-3-2 class A, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, EN61547                                  |           | EN55022 class B, EN61000-3-2 class A, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11           |           |
| Connection                     | Input                                                                             | UL rated, 18AWGx2C (15cm)                                                                                     |           | UL rated, 18AWGx2C (15cm)                                                             |           |
|                                | Output                                                                            | UL rated, 20AWGx2C (15cm)                                                                                     |           | UL rated, 18AWGx2C (15cm)                                                             |           |
| Dimension (LxWxH)(mm)          |                                                                                   | 77x 40x 29                                                                                                    |           | 84x 57x 29.5                                                                          |           |

### APV-12 Series (C.V. mode)



| Model No. | Output      | Tol. | R&N   | Effi. |
|-----------|-------------|------|-------|-------|
| APV-12-5  | 5V, 0~2A    | ±5%  | 100mV | 76%   |
| APV-12-12 | 12V, 0~1A   | ±5%  | 120mV | 82%   |
| APV-12-15 | 15V, 0~0.8A | ±5%  | 120mV | 82%   |
| APV-12-24 | 24V, 0~0.5A | ±5%  | 150mV | 84%   |

### APV-16 Series (C.V. mode)



| Model No. | Output       | Tol. | R&N   | Effi. |
|-----------|--------------|------|-------|-------|
| APV-16-5  | 5V, 0~2.6A   | ±5%  | 100mV | 76%   |
| APV-16-12 | 12V, 0~1.25A | ±5%  | 120mV | 80%   |
| APV-16-15 | 15V, 0~1.00A | ±5%  | 120mV | 81%   |
| APV-16-24 | 24V, 0~0.67A | ±5%  | 150mV | 83%   |

### APV-25 Series (C.V. mode)



| Model No. | Output       | Tol. | R&N   | Effi. |
|-----------|--------------|------|-------|-------|
| APV-25-5  | 5V, 0~3.5A   | ±5%  | 120mV | 75.5% |
| APV-25-12 | 12V, 0~2.1A  | ±5%  | 150mV | 82.0% |
| APV-25-15 | 15V, 0~1.68A | ±5%  | 150mV | 83.0% |
| APV-25-24 | 24V, 0~1.05A | ±5%  | 150mV | 83.0% |
| APV-25-36 | 36V, 0~0.7A  | ±5%  | 150mV | 84.0% |

### APV-35 Series (C.V. mode)



| Model No. | Output      | Tol. | R&N   | Effi. |
|-----------|-------------|------|-------|-------|
| APV-35-5  | 5V, 0~5A    | ±5%  | 120mV | 76.5% |
| APV-35-12 | 12V, 0~3A   | ±5%  | 150mV | 83.0% |
| APV-35-15 | 15V, 0~2.4A | ±5%  | 150mV | 84.0% |
| APV-35-24 | 24V, 0~1.5A | ±5%  | 180mV | 84.0% |
| APV-35-36 | 36V, 0~1.0A | ±5%  | 180mV | 85.0% |

### APC-12 Series (C.C. mode)



| Model No.  | Output       | Io Tol. | R&N   | Effi. |
|------------|--------------|---------|-------|-------|
| APC-12-350 | 9~36V, 350mA | ±8%     | 300mV | 82%   |
| APC-12-700 | 9~18V, 700mA | ±8%     | 250mV | 80%   |

### APC-16 Series (C.C. mode)



| Model No.  | Output        | Io Tol. | R&N   | Effi. |
|------------|---------------|---------|-------|-------|
| APC-16-350 | 12~48V, 350mA | ±8%     | 300mV | 84%   |
| APC-16-700 | 9~24V, 700mA  | ±8%     | 250mV | 83%   |

### APC-25 Series (C.C. mode)



| Model No.   | Output        | Io Tol. | R&N   | Effi. |
|-------------|---------------|---------|-------|-------|
| APC-25-350  | 25~70V, 350mA | ±8%     | 300mV | 83%   |
| APC-25-500  | 15~50V, 500mA | ±8%     | 300mV | 83%   |
| APC-25-700  | 11~36V, 700mA | ±8%     | 300mV | 83%   |
| APC-25-1050 | 9~24V, 1050mA | ±8%     | 300mV | 83%   |

### APC-35 Series (C.C. mode)



| Model No.   | Output         | Io Tol. | R&N   | Effi. |
|-------------|----------------|---------|-------|-------|
| APC-35-350  | 28~100V, 350mA | ±8%     | 350mV | 84%   |
| APC-35-500  | 25~70V, 500mA  | ±8%     | 350mV | 84%   |
| APC-35-700  | 15~50V, 700mA  | ±8%     | 350mV | 84%   |
| APC-35-1050 | 11~33V, 1050mA | ±8%     | 350mV | 84%   |

# LP series

## 18~35W Single Output LED Power Supply

### Features

- LPL-18: 90~132VAC input only  
LPH-18: 180~264VAC input only  
LPV: 90~264VAC input
- Fully encapsulated with IP67 level
- Protections: Short circuit / Overload / Over voltage / Over temperature (LPH-18/LPL-18 only)
- **Constant voltage mode**
- Class 2 power unit / Pass LPS
- Isolation class II, no F.G.
- Withstand 300VAC surge input for 5 seconds (LPV-20/35)
- Cooling by free air convection
- 100% full load burn-in test
- Low cost, high reliability
- Suitable for LED-based decorative/architectural lighting, LED stage and theater lighting, and LED electronic displays
- 2 years warranty

|                          |                                                                                     | LPL-18                                                                          | LPH-18                                                                      | LPV-20                                                                                                                            | LPV-35                    |
|--------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| INPUT                    |    |                                                                                 |                                                                             |                                                                                                                                   |                           |
|                          |   |                                                                                 |                                                                             |                                                                                                                                   |                           |
| OUTPUT                   |  |                                                                                 |                                                                             |                                                                                                                                   |                           |
| AC input voltage range   |                                                                                     | 90~132VAC                                                                       | 180~264VAC                                                                  | 90~264VAC                                                                                                                         |                           |
| AC inrush current (max.) |                                                                                     | Cold start, 40A at 115VAC                                                       | Cold start, 50A at 230VAC                                                   | Cold start, 70A at 230VAC                                                                                                         | Cold start, 55A at 230VAC |
| Overload Protection      | Range                                                                               | >105%                                                                           |                                                                             | 110%~150%                                                                                                                         |                           |
|                          | Type                                                                                | Hiccup mode, auto-recovery                                                      |                                                                             |                                                                                                                                   |                           |
| Over voltage protection  |                                                                                     | 115%~135% rated output voltage                                                  |                                                                             |                                                                                                                                   |                           |
| Withstand voltage        |                                                                                     | I/P-O/P: 3kVAC                                                                  |                                                                             |                                                                                                                                   |                           |
| Working temperature      |                                                                                     | -30~+70°C                                                                       |                                                                             |                                                                                                                                   | -30~+65°C                 |
| Vibration                |                                                                                     | 10~500Hz, 2G 10 minutes /1 cycle, period for 60 minutes each along X, Y, Z axes |                                                                             |                                                                                                                                   |                           |
| Safety standards         |                                                                                     | TUV EN60950-1, EN61347-1, EN61347-2-13 approved for LPH-18                      |                                                                             | LPV-20: TUV EN60950-1, UL879, UL1310 approved<br>LPV-35: IEC 61347-1, IEC 61347-2-13, UL1310 approved; Design refer to IEC60950-1 |                           |
| EMC standards            |                                                                                     | FCC part 15 class B                                                             | EN55022 class B, EN61000-3-2 class A, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11 |                                                                                                                                   |                           |
| Connection               | Input                                                                               | UL rated,18AWGx2C (30cm)                                                        |                                                                             | UL rated, 18AWGx2C (60cm)                                                                                                         | UL rated, 18AWGx2C (60cm) |
|                          | Output                                                                              |                                                                                 |                                                                             |                                                                                                                                   | UL rated, 16AWGx2C (60cm) |
| Dimension (LxWxH)(mm)    |                                                                                     | 140x 30x 22                                                                     |                                                                             | 118x 35x 26                                                                                                                       | 148x 40x 30               |

### LPL-18 Series (C.V. mode)



| Model No. | Output       | Tol. | R&N   | Effi. |
|-----------|--------------|------|-------|-------|
| LPL-18-12 | 12V, 0~1.5A  | ±3%  | 120mV | 80%   |
| LPL-18-24 | 24V, 0~0.75A | ±3%  | 150mV | 83%   |
| LPL-18-36 | 36V, 0~0.5A  | ±3%  | 200mV | 84%   |

### LPV-20 Series (C.V. mode)



| Model No. | Output       | Tol. | R&N   | Effi. |
|-----------|--------------|------|-------|-------|
| LPV-20-5  | 5V, 0~3A     | ±5%  | 80mV  | 77%   |
| LPV-20-12 | 12V, 0~1.67A | ±5%  | 120mV | 81%   |
| LPV-20-15 | 15V, 0~1.33A | ±5%  | 120mV | 83%   |
| LPV-20-24 | 24V, 0~0.84A | ±5%  | 150mV | 83%   |

### LPH-18 Series (C.V. mode)



| Model No. | Output       | Tol. | R&N   | Effi. |
|-----------|--------------|------|-------|-------|
| LPH-18-12 | 12V, 0~1.5A  | ±3%  | 120mV | 77%   |
| LPH-18-24 | 24V, 0~0.75A | ±3%  | 150mV | 82%   |
| LPH-18-36 | 36V, 0~0.5A  | ±3%  | 200mV | 83%   |

### LPV-35 Series (C.V. mode)



| Model No. | Output             | Tol. | R&N   | Effi. |
|-----------|--------------------|------|-------|-------|
| LPV-35-5  | 5V, 0~5A (peak 6A) | ±6%  | 80mV  | 77%   |
| LPV-35-12 | 12V, 0~3A          | ±5%  | 120mV | 84%   |
| LPV-35-15 | 15V, 0~2.4A        | ±5%  | 120mV | 84%   |
| LPV-35-24 | 24V, 0~1.5A        | ±5%  | 150mV | 85%   |
| LPV-35-36 | 36V, 0~1A          | ±5%  | 150mV | 85%   |

# LP series

## 60~150W Single Output LED Power Supply

### Features

- LPV-60/100: 90~264VAC input  
LPV-150: 180~305VAC input only
- Fully encapsulated with IP67 level
- Protections: Short circuit / Overload / Over voltage / Over temperature (LPV-150 only)
- Constant voltage mode
- Class 2 power unit / Pass LPS (LPV-60 only)
- Isolation class II, no F.G.
- Withstand 300VAC surge input for 5 seconds (LPV-60/100)
- Cooling by free air convection
- 100% full load burn-in test
- Low cost, high reliability
- Suitable for LED-based decorative/architectural lighting, LED stage and theater lighting, and LED electronic displays
- 2 years warranty

|                                                                                                                                                  |        | LPV-60                                                                            | LPV-100                                                                           | LPV-150                                                                             |
|--------------------------------------------------------------------------------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <div><div>INPUT</div><div><div>LPV-60/100</div><div>LPV-150</div></div><div>OUTPUT</div><div><div>LPV-60/100</div><div>LPV-150</div></div></div> |        |  |  |  |
| AC input voltage range                                                                                                                           |        | 90~264VAC; 127~370VDC                                                             |                                                                                   | 180~305VAC; 254~431VDC                                                              |
| AC inrush current (max.)                                                                                                                         |        | Cold start, 60A at 230VAC                                                         | Cold start, 75A at 230VAC                                                         | Cold start, 60A at 230VAC                                                           |
| Overload protection                                                                                                                              |        | 110%~150% hiccup mode, auto-recovery                                              |                                                                                   |                                                                                     |
| Over voltage protection                                                                                                                          |        | 115%~135% rated output voltage                                                    |                                                                                   |                                                                                     |
| Withstand voltage                                                                                                                                |        | I/P-O/P: 3kVAC                                                                    |                                                                                   |                                                                                     |
| Working temperature                                                                                                                              |        | -30~+70°C                                                                         | -25~+70°C                                                                         | -25~+65°C                                                                           |
| Vibration                                                                                                                                        |        | 10~500Hz, 2G 10 minutes /1 cycle, period for 60 minutes each along X, Y, Z axes   |                                                                                   |                                                                                     |
| Safety standards                                                                                                                                 |        | UL879 (except for LPV-60-5),<br>UL1310 (except for LPV-60-5)<br>approved          | UL879, UL8750 approved; Design refer to IEC60950-1                                |                                                                                     |
| EMC standards                                                                                                                                    |        | EN55022 class B, EN61000-3-2 class A, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11       |                                                                                   |                                                                                     |
| Connection                                                                                                                                       | Input  | UL rated, 18AWGx2C (60cm)                                                         | UL rated, 18AWGx2C (30cm)                                                         | UL rated, SJTW 18AWGx2C (30cm)                                                      |
|                                                                                                                                                  | Output | UL rated, 16AWGx2C (60cm)                                                         | UL rated, 14AWGx2C (30cm)                                                         | UL rated, SJTW 14AWGx2C (30cm)                                                      |
| Dimension (LxWxH)(mm)                                                                                                                            |        | 162.5x 42.5x 32                                                                   | 190x 52x 37                                                                       | 191x 63x 37.5                                                                       |

### LPV-60 Series (C.V. mode)



| Model No. | Output       | Tol. | R&N   | Effi. |
|-----------|--------------|------|-------|-------|
| LPV-60-5  | 5V, 0~8A     | ±8%  | 80mV  | 76%   |
| LPV-60-12 | 12V, 0~5A    | ±5%  | 120mV | 83%   |
| LPV-60-15 | 15V, 0~4A    | ±5%  | 120mV | 83%   |
| LPV-60-24 | 24V, 0~2.5A  | ±5%  | 150mV | 86%   |
| LPV-60-36 | 36V, 0~1.67A | ±5%  | 150mV | 86%   |
| LPV-60-48 | 48V, 0~1.25A | ±5%  | 150mV | 86%   |

### LPV-100 Series (C.V. mode)



| Model No.  | Output      | Tol. | R&N   | Effi. |
|------------|-------------|------|-------|-------|
| LPV-100-5  | 5V, 0~12A   | ±8%  | 80mV  | 80%   |
| LPV-100-12 | 12V, 0~8.5A | ±5%  | 120mV | 85%   |
| LPV-100-15 | 15V, 0~6.7A | ±5%  | 120mV | 87%   |

| Model No.  | Output      | Tol. | R&N   | Effi. |
|------------|-------------|------|-------|-------|
| LPV-100-24 | 24V, 0~4.2A | ±5%  | 150mV | 88%   |
| LPV-100-36 | 36V, 0~2.8A | ±5%  | 150mV | 88%   |
| LPV-100-48 | 48V, 0~2.1A | ±5%  | 150mV | 89%   |

### LPV-150 Series (C.V. mode)



| Model No.  | Output      | Tol. | R&N   | Effi. |
|------------|-------------|------|-------|-------|
| LPV-150-12 | 12V, 0~10A  | ±5%  | 200mV | 87%   |
| LPV-150-15 | 15V, 0~10A  | ±5%  | 200mV | 88%   |
| LPV-150-24 | 24V, 0~6.3A | ±5%  | 200mV | 89%   |
| LPV-150-36 | 36V, 0~4.2A | ±5%  | 200mV | 89%   |
| LPV-150-48 | 48V, 0~3.2A | ±5%  | 200mV | 90%   |

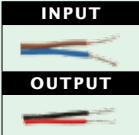


# LP series

## 18~35W Single Output LED Power Supply

### Features

- LPLC-18: 90~132VAC input only  
LPHC-18: 180~264VAC input only  
LPC-20/35: 90~264VAC input
- Fully encapsulated with IP67 level
- Protections: Short circuit / Over voltage /  
Over temperature (except for LPC-20/35)
- **Constant current mode**
- Withstand 300VAC surge input for 5 seconds  
(only for LPC-20/35)
- Class 2 power unit / Pass LPS
- Isolation class II, no F.G.
- Cooling by free air convection
- 100% full load burn-in test
- Low cost, high reliability
- Suitable for LED-based decorative / architectural lighting,  
LED stage and theater lighting, and LED electronic displays
- 2 years warranty

|               | LPLC-18                                                                            | LPHC-18                                                                            | LPC-20                                                                              | LPC-35 |
|---------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------|
| <b>INPUT</b>  |  |                                                                                    |                                                                                     |        |
| <b>OUTPUT</b> |                                                                                    |                                                                                    |                                                                                     |        |
|               |   |  |  |        |

|                          |                                                                                                                     |                              |                                                                                |                              |
|--------------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------------------------------------|------------------------------|
| AC input voltage range   | 90~132VAC                                                                                                           | 180~264VAC                   | 90~264VAC                                                                      |                              |
| AC inrush current (max.) | Cold start,<br>40A at 115VAC                                                                                        | Cold start,<br>50A at 230VAC | Cold start,<br>70A at 230VAC                                                   | Cold start,<br>55A at 230VAC |
| Over voltage protection  | 105%~135% rated output voltage                                                                                      |                              |                                                                                |                              |
| Withstand voltage        | I/P-O/P: 3kVAC                                                                                                      |                              |                                                                                |                              |
| Working temperature      | -30~+70°C                                                                                                           |                              |                                                                                |                              |
| Vibration                | 10~500Hz, 2G 10 minutes /1 cycle, period for 60 minutes each along X, Y, Z axes                                     |                              |                                                                                |                              |
| Safety standards         | Design refer to<br>UL1310, EN60950-1                                                                                |                              | LPC-20: UL1310, UL879, TUV EN60950-1 approved<br>LPC-35: UL1310 approved       |                              |
| EMC standards            | FCC part 15 class A (LPLC-18),<br>EN55022 class A, EN61000-3-2<br>class A, EN61000-3-3,<br>EN61000-4-2,3,4,5,6,8,11 |                              | EN55022 class B, EN61000-3-2 class A, EN61000-3-3,<br>EN61000-4-2,3,4,5,6,8,11 |                              |
| Connection               | Input                                                                                                               | UL rated, 18AWGx2C (30cm)    |                                                                                | UL rated, 18AWGx2C (60cm)    |
|                          | Output                                                                                                              |                              |                                                                                | UL rated, 16AWGx2C (60cm)    |
| Dimension (LxWxH)(mm)    | 140x 30x 22                                                                                                         |                              | 118x 35x 26                                                                    | 148x 40x 30                  |

### LPLC-18 Series (C.C. mode)



| Model No.   | Output       | Io Tol. | R&N   | Effi. |
|-------------|--------------|---------|-------|-------|
| LPLC-18-350 | 6~48V, 350mA | ±8%     | 300mV | 82%   |
| LPLC-18-700 | 6~25V, 700mA | ±8%     | 250mV | 80%   |

### LPC-20 Series (C.C. mode)



| Model No.  | Output       | Io Tol. | R&N   | Effi. |
|------------|--------------|---------|-------|-------|
| LPC-20-350 | 9~48V, 350mA | ±5%     | 200mV | 83%   |
| LPC-20-700 | 9~30V, 700mA | ±5%     | 200mV | 83%   |

### LPHC-18 Series (C.C. mode)



| Model No.   | Output       | Io Tol. | R&N   | Effi. |
|-------------|--------------|---------|-------|-------|
| LPHC-18-350 | 6~48V, 350mA | ±8%     | 300mV | 80%   |
| LPHC-18-700 | 6~25V, 700mA | ±8%     | 250mV | 80%   |

### LPC-35 Series (C.C. mode)



| Model No.   | Output        | Io Tol. | R&N   | Effi. |
|-------------|---------------|---------|-------|-------|
| LPC-35-700  | 9~48V, 700mA  | ±5%     | 200mV | 85%   |
| LPC-35-1050 | 9~30V, 1050mA | ±5%     | 200mV | 85%   |
| LPC-35-1400 | 9~24V, 1400mA | ±5%     | 200mV | 85%   |

# LP series

## 60~150W Single Output LED Power Supply

### ► Features

- LPC-60/100: 90~264VAC input  
LPC-150: 180~305VAC input only
- High efficiency up to 90%
- Fully encapsulated with IP67 level
- Protections: Short circuit / Over voltage /  
Over temperature (LPC-150 only)
- Constant current mode
- Isolation class II, no F.G.
- Cooling by free air convection
- 100% full load burn-in test
- Low cost, high reliability
- Suitable for LED-based decorative / architectural lighting,  
LED stage and theater lighting, and LED electronic displays
- 2 years warranty

|                                                                                                                                    |        | LPC-60                                                                            | LPC-100                                                                            | LPC-150                                                                             |
|------------------------------------------------------------------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <div>INPUT</div> <div><div>60W / 100W</div><div>150W</div></div> <div>OUTPUT</div> <div><div>60W / 100W</div><div>150W</div></div> |        |  |  |  |
| AC input voltage range                                                                                                             |        | 90~264VAC; 127~370VDC                                                             |                                                                                    | 180~305VAC; 254~431VDC                                                              |
| AC inrush current (max.)                                                                                                           |        | Cold start, 60A at 230VAC                                                         | Cold start, 65A at 230VAC                                                          | Cold start, 40A at 230VAC                                                           |
| Over voltage protection                                                                                                            |        | 105%~135%                                                                         | 110%~135%                                                                          |                                                                                     |
| Withstand voltage                                                                                                                  |        | I/P-O/P: 3kVAC                                                                    |                                                                                    |                                                                                     |
| Working temperature                                                                                                                |        | -30~+70°C                                                                         | -25~+50°C                                                                          | -40~+70°C                                                                           |
| Vibration                                                                                                                          |        | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes           |                                                                                    |                                                                                     |
| Safety standards                                                                                                                   |        | UL1310 approved                                                                   | Design refer to IEC60950-1                                                         | EN60950-1(LVD) approved                                                             |
| EMC standards                                                                                                                      |        | EN55022 class B, EN61000-3-2 class A, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11       |                                                                                    |                                                                                     |
| Connection                                                                                                                         | Input  | UL rated, 18AWG x2C (60cm)                                                        | UL rated, 18AWG x2C (30cm)                                                         | UL rated, SJTW 18AWGx2C(30cm)                                                       |
|                                                                                                                                    | Output | UL rated, 16AWG x2C (60cm)                                                        | UL rated, 18AWG x2C (30cm)                                                         | UL rated, SJTW 18AWG x2C(30cm)                                                      |
| Dimension (LxWxH)(mm)                                                                                                              |        | 162.5x 42.5x 32                                                                   | 190x 52x 37                                                                        | 191x 63x 37.5                                                                       |

### LPC-60 Series (C.C. mode)

| Model No.   | Output        | Io Tol. | R&N   | Effi. |
|-------------|---------------|---------|-------|-------|
| LPC-60-1050 | 9~48V, 1050mA | ±5%     | 200mV | 87%   |
| LPC-60-1400 | 9~42V, 1400mA | ±5%     | 200mV | 85%   |
| LPC-60-1750 | 9~34V, 1750mA | ±5%     | 200mV | 87%   |

### LPC-100 Series (C.C. mode)

CE pending

| Model No.    | Output          | Io Tol. | R&N  | Effi. |
|--------------|-----------------|---------|------|-------|
| LPC-100-350  | 143~286V, 350mA | ±5%     | 1.5V | 90%   |
| LPC-100-500  | 100~200V, 500mA | ±5%     | 1.5V | 90%   |
| LPC-100-700  | 72~143V, 700mA  | ±5%     | 1.0V | 90%   |
| LPC-100-1050 | 48~96V, 1050mA  | ±5%     | 1.0V | 90%   |
| LPC-100-1400 | 36~72V, 1400mA  | ±5%     | 1.0V | 89.5% |
| LPC-100-1750 | 29~58V, 1750mA  | ±5%     | 1.0V | 89.5% |
| LPC-100-2100 | 24~48V, 2100mA  | ±5%     | 1.0V | 89%   |

### LPC-150 Series (C.C. mode)

| Model No.    | Output          | Io Tol. | R&N  | Effi. |
|--------------|-----------------|---------|------|-------|
| LPC-150-350  | 215~430V, 350mA | ±5%     | 2.0V | 90%   |
| LPC-150-500  | 150~300V, 500mA | ±5%     | 1.5V | 90%   |
| LPC-150-700  | 107~215V, 700mA | ±5%     | 1.0V | 90%   |
| LPC-150-1050 | 74~148V, 1050mA | ±5%     | 1.0V | 90%   |
| LPC-150-1400 | 54~108V, 1400mA | ±5%     | 1.0V | 90%   |
| LPC-150-1750 | 43~86V, 1750mA  | ±5%     | 1.0V | 90%   |
| LPC-150-2100 | 36~72V, 2100mA  | ±5%     | 1.0V | 90%   |
| LPC-150-2450 | 31~62V, 2450mA  | ±5%     | 1.0V | 90%   |
| LPC-150-2800 | 27~54V, 2800mA  | ±5%     | 1.0V | 90%   |
| LPC-150-3150 | 24~48V, 3150mA  | ±5%     | 1.0V | 90%   |

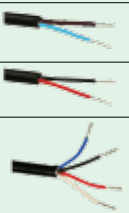


# ELN series

## 30~60W Single Output LED Power Supply

### Features

- Universal AC input / Full range
- Fully isolated plastic case with IP64 level
- Built-in constant current limiting circuit with adjustable OCP level
- Protections: Short circuit / Over current / Over voltage
- Optional dimming function: 1.1~10VDC(D type) or PWM (P type) controlled
- Class 2 power unit / Pass LPS
- Isolation class II, no F.G.
- Cooling by free air convection
- Suitable for economical LED indoor lighting and LED electronic displays
- 2 years warranty

| ELN-30                                                                             |                                                                                   | ELN-60                                                                                           |
|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| <b>INPUT</b><br><b>OUTPUT</b><br>(standard)<br><b>OUTPUT</b><br>(Dimming Function) |  |               |
|                                                                                    |  |                                                                                                  |
|                                                                                    |                                                                                   |                                                                                                  |
| AC input voltage range                                                             |                                                                                   | 90~264VAC ; 127~370VDC                                                                           |
| AC inrush current (max.)                                                           |                                                                                   | Cold start, 55A at 230VAC                                                                        |
| DC adjustment range                                                                |                                                                                   | ±10% rated output voltage                                                                        |
| Current adjustment range                                                           |                                                                                   | 75%~103%                                                                                         |
| Over current protection                                                            |                                                                                   | 95%~110% constant current limiting, auto-recovery                                                |
| Over voltage protection                                                            | Range                                                                             | 110%~150% rated output voltage                                                                   |
|                                                                                    | Type                                                                              | Shut down o/p voltage, re-power on to recover                                                    |
| Withstand voltage                                                                  |                                                                                   | I/P-O/P: 3kVAC                                                                                   |
| Working temperature                                                                |                                                                                   | -20~+60°C (refer to output derating curve)                                                       |
| Vibration                                                                          |                                                                                   | 10~500Hz, 2G 10 minutes /1 cycle, period for 60 minutes each along X, Y, Z axes                  |
| Safety standards                                                                   |                                                                                   | UL1310 approved; Design refer to TUV EN60950-1                                                   |
| EMC standards                                                                      |                                                                                   | EN55022 class B, EN61000-3-2 class A, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11                      |
| Connection                                                                         | Input                                                                             | UL rated, SVT 18AWGx2C (32cm)                                                                    |
|                                                                                    | Output                                                                            | Without dimming: UL rated, SVT 18AWGx2C (32cm)<br>With dimming(optional): UL2464 18AWGx4C (32cm) |
| Dimension (LxWxH)(mm)                                                              |                                                                                   | 145x 47x 30                                                                                      |
| Packing                                                                            |                                                                                   | 0.26kg ; 60pcs / 16.6kg                                                                          |

### ELN-30 Series



| Model No. | Output       | Tol. | R&N   | Effi. |
|-----------|--------------|------|-------|-------|
| ELN-30-5  | 5V, 0~5.0A   | ±5%  | 80mV  | 75%   |
| ELN-30-9  | 9V, 0~3.4A   | ±5%  | 100mV | 80%   |
| ELN-30-12 | 12V, 0~2.5A  | ±5%  | 120mV | 82%   |
| ELN-30-15 | 15V, 0~2.0A  | ±5%  | 120mV | 82%   |
| ELN-30-24 | 24V, 0~1.25A | ±5%  | 150mV | 85%   |
| ELN-30-27 | 27V, 0~1.12A | ±5%  | 150mV | 85%   |
| ELN-30-48 | 48V, 0~0.63A | ±5%  | 250mV | 87%   |

### ELN-60 Series



| Model No. | Output      | Tol. | R&N   | Effi. |
|-----------|-------------|------|-------|-------|
| ELN-60-9  | 9V, 0~5.0A  | ±5%  | 120mV | 82%   |
| ELN-60-12 | 12V, 0~5.0A | ±5%  | 120mV | 85%   |
| ELN-60-15 | 15V, 0~4.0A | ±5%  | 150mV | 86%   |
| ELN-60-24 | 24V, 0~2.5A | ±5%  | 150mV | 87%   |
| ELN-60-27 | 27V, 0~2.3A | ±5%  | 200mV | 87%   |
| ELN-60-48 | 48V, 0~1.3A | ±5%  | 250mV | 88%   |

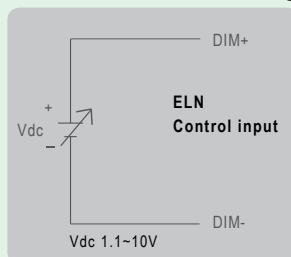
### Dimming Control (optional)

Through the dimming function, output current of ELN series can be adjusted to reduce the energy consumption or adjust the brightness of LEDs connecting to it. Two kinds of control signal are accepted: 1.1~10VDC (D-Type option) or PWM signal (P-Type option).

When there is no signal sending to the control wires (open circuit between the two control wires), the power supply will operate as 0V (D-Type) or 0% duty (P-Type) of input signal and the output current will be zero.

#### D Type :

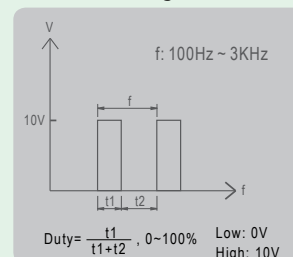
1.1~10Vdc external control signal



Order No.: ELN-30-5D

#### P Type :

PWM control signal



Order No.: ELN-30-5P

# GSC series

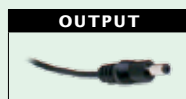
18~40W External Power with PFC

## Features

- Universal AC input (up to 277VAC) / Full range
- Built-in active PFC function
- Protection: Short circuit
- Fully isolated plastic case
- Constant current mode
- No load power consumption <0.15W
- IP30 design
- Isolation class II, no F.G.
- Cooling by free air convection
- 2 pole EURO plug or IEC320-C8
- Low cost, high reliability
- Suitable for indoor LED lighting applications
- 3 years warranty

### GSC18B/25B/40B

### GSC18E/25E/40E



OUTPUT



Under Development

|                          |                                                                              |        |                                |
|--------------------------|------------------------------------------------------------------------------|--------|--------------------------------|
| AC input voltage range   | 90~277VAC                                                                    |        |                                |
| AC inrush current (max.) | Cold start, 15A at 230VAC                                                    |        |                                |
| Setup time               | 500ms at full load and 230VAC                                                |        |                                |
| Short circuit protection | Hiccup mode, auto-recovery                                                   |        |                                |
| Withstand voltage        | I/P-O/P: 3.75kVAC                                                            |        |                                |
| Working temperature      | -30~+50°C ( refer to output derating curve)                                  |        |                                |
| Safety standards         | Design refer to ENEC EN61347-1, EN61347-2-13, EN62384                        |        |                                |
| EMC standards            | EN55015, EN61000-3-2 class C, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, EN61547 |        |                                |
| Connection               | Input                                                                        | B-Type | IEC320-C8                      |
|                          |                                                                              | E-Type | European 2P                    |
|                          | Output                                                                       | Plug   | 2.1φ x 5.5φ x 11mm, center+    |
|                          |                                                                              | Cable  | UL rated, UL1185 18AWG (180cm) |
| Dimension (LxWxH)(mm)    | 79x54x33                                                                     |        |                                |

## GSC18 Series



ENEC/CB/CE pending

| Model No.   | Output        | Io Tol. | R&N  | Effi. |
|-------------|---------------|---------|------|-------|
| GSC18□-350  | 26~52V, 350mA | ±8%     | 4.6V | 88%   |
| GSC18□-500  | 18~36V, 500mA | ±8%     | 3.0V | 87%   |
| GSC18□-700  | 13~26V, 700mA | ±8%     | 2.5V | 86%   |
| GSC18□-1050 | 8~17V, 1050mA | ±8%     | 1.5V | 85%   |
| GSC18□-1400 | 6~13V, 1400mA | ±8%     | 1.0V | 84%   |

□ = B / E ; B: IEC320-C8, E: European 2P

## GSC25 Series



ENEC/CB/CE pending

| Model No.  | Output        | Io Tol. | R&N  | Effi. |
|------------|---------------|---------|------|-------|
| GSC25□-350 | 36~72V, 350mA | ±8%     | 7.2V | 88%   |
| GSC25□-500 | 26~52V, 500mA | ±8%     | 5.0V | 87%   |
| GSC25□-700 | 18~36V, 700mA | ±8%     | 3.6V | 86%   |

| Model No.   | Output         | Io Tol. | R&N  | Effi. |
|-------------|----------------|---------|------|-------|
| GSC25□-1050 | 12~24V, 1050mA | ±8%     | 2.4V | 85%   |
| GSC25□-1400 | 9~18V, 1400mA  | ±8%     | 1.8V | 84%   |

□ = B / E ; B: IEC320-C8, E: European 2P

## GSC40 Series



ENEC/CB/CE pending

| Model No.   | Output         | Io Tol. | R&N   | Effi. |
|-------------|----------------|---------|-------|-------|
| GSC40□-350  | 50~100V, 350mA | ±8%     | 11.6V | 88%   |
| GSC40□-500  | 40~80V, 500mA  | ±8%     | 8.0V  | 87%   |
| GSC40□-700  | 29~58V, 700mA  | ±8%     | 5.8V  | 86%   |
| GSC40□-1050 | 19~38V, 1050mA | ±8%     | 3.8V  | 85%   |
| GSC40□-1400 | 14~28V, 1400mA | ±8%     | 2.9V  | 84%   |

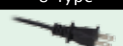
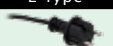
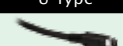
□ = B / E ; B: IEC320-C8, E: European 2P

# OWA series

60~120W External Power

## Features

- Universal AC input / Full range
- Built-in active PFC function (OWA-90/120)
- High efficiency up to 91%
- No load power consumption <0.15W
- NRCan (Level V) / EISA 2007 (Level VI) for U-Type
- ErP step 2 (Level V) for E-Type
- Protections: Short circuit / Over current / Over voltage / Over temp.
- Cooling by free air convection
- Fully isolated plastic case
- Fully encapsulated with IP67 level for main body
- Isolation class II, no F.G.
- Class 2 power unit (OWA-60 & OWA-90-20~54)
- Suitable for dry and damp location
- Suitable for LED lighting applications
- Optional IP44 AC plug for E-Type
- 5 years warranty

| INPUT                                                                             |                                                                                   |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| OWA-60/90/120                                                                     |                                                                                   |
| U-Type                                                                            | E-Type                                                                            |
|  |  |
| OUTPUT                                                                            |                                                                                   |
| OWA-60                                                                            |                                                                                   |
| U-Type                                                                            | E-Type                                                                            |
|  |  |
| OWA-90/120                                                                        |                                                                                   |
| U-Type                                                                            | E-Type                                                                            |
|  |  |



|                           |        |       |                                                                                                                                                                          |                           |                                                                      |                                                                      |
|---------------------------|--------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------|
| AC input voltage range    |        |       | 90~264VAC ; 127~370VDC                                                                                                                                                   |                           |                                                                      |                                                                      |
| AC inrush current (max.)  |        |       | Cold start, 55A at 230VAC                                                                                                                                                | Cold start, 60A at 230VAC |                                                                      |                                                                      |
| Over current protection   |        |       | 95%~108% constant current limiting, auto-recovery                                                                                                                        |                           |                                                                      |                                                                      |
| Over voltage protection   |        |       | 110%~140% rated output voltage                                                                                                                                           |                           |                                                                      |                                                                      |
| Over temp. protection     |        |       | Shut down output voltage, re-power on to recover                                                                                                                         |                           |                                                                      |                                                                      |
| Setup, rise, hold up time |        |       | 500ms, 80ms, 16ms at full load and 230VAC                                                                                                                                |                           |                                                                      |                                                                      |
| Withstand voltage         |        |       | I/P-O/P: 3.75KVAC                                                                                                                                                        |                           |                                                                      |                                                                      |
| Working temperature       |        |       | -40~+70°C (refer to output derating curve)                                                                                                                               |                           |                                                                      |                                                                      |
| Safety standards          |        |       | U-Type: UL8750 listed approved (OWA-60/120 pending)<br>E-Type: EN61558-1, EN61558-2-16 listed; EN60335-1 listed (except for OWA-90E-42~54) approved (OWA-60/120 pending) |                           |                                                                      |                                                                      |
| EMC standards             |        |       | U-Type: FCC Part 15; E-Type: EN55022 class B, EN55014-1, EN61000-3-2,-3 (OWA-60/120 pending)                                                                             |                           |                                                                      |                                                                      |
| Connection                | Input  | Plug  | U-Type: NEMA 1-15P plug; E-Type: Schuko EU plug                                                                                                                          |                           |                                                                      |                                                                      |
|                           |        | Cable | U-Type: UL rated, SVT 18AWGx2C (150cm); E-Type: H05RN-F 1.0mm² x2C (150cm)                                                                                               |                           |                                                                      |                                                                      |
|                           | Output | Plug  | 2.1φ x 5.5φ x 11mm / C+                                                                                                                                                  |                           | U-Type: Power DIN 4P with lock type; E-Type: XLR 4P, male type       |                                                                      |
|                           |        | Cable | U-Type : UL1185 16AWG x 2C (30cm);<br>E-Type : H05RN-F 1.0mm² x 2C (30cm)                                                                                                |                           | U-Type: UL2464 18AWGx4C (30cm);<br>E-Type: H05RN-F 1.0mm² x2C (30cm) | U-Type: UL2464 18AWGx4C (30cm);<br>E-Type: H07RN-F 1.5mm² x2C (30cm) |
| Dimension (LxWxH)(mm)     |        |       | 130× 53× 35                                                                                                                                                              |                           | 171× 63× 37.5                                                        | 191× 63× 37.5                                                        |

## OWA-60 Series

UL/CUL/TUV/FCC/CE pending

| Model No.  | Output       | Tol.  | R&N   | Effi. |
|------------|--------------|-------|-------|-------|
| OWA-60□-12 | 12V, 0~5A    | ±4.0% | 150mV | 89%   |
| OWA-60□-15 | 15V, 0~4A    | ±4.0% | 150mV | 90%   |
| OWA-60□-20 | 20V, 0~3A    | ±4.0% | 150mV | 90%   |
| OWA-60□-24 | 24V, 0~2.5A  | ±3.0% | 150mV | 90%   |
| OWA-60□-30 | 30V, 0~2A    | ±3.0% | 200mV | 90%   |
| OWA-60□-36 | 36V, 0~1.67A | ±2.0% | 200mV | 91%   |
| OWA-60□-42 | 42V, 0~1.43A | ±1.0% | 250mV | 91%   |
| OWA-60□-48 | 48V, 0~1.25A | ±1.0% | 250mV | 91%   |
| OWA-60□-54 | 54V, 0~1.12A | ±1.0% | 350mV | 91%   |

□ = U / E; U: American 2P, E: European 2P

## OWA-90 Series

(U-Type, 42~54V) (U-Type, 12~36V) (E-Type) (U-Type) (E-Type)

| Model No.  | Output       | Tol.  | R&N   | Effi. |
|------------|--------------|-------|-------|-------|
| OWA-90□-12 | 12V, 0~7.5A  | ±4.0% | 150mV | 89%   |
| OWA-90□-15 | 15V, 0~6A    | ±4.0% | 150mV | 90%   |
| OWA-90□-20 | 20V, 0~4.5A  | ±4.0% | 150mV | 90%   |
| OWA-90□-24 | 24V, 0~3.75A | ±3.0% | 150mV | 90%   |

| Model No.  | Output       | Tol.  | R&N   | Effi. |
|------------|--------------|-------|-------|-------|
| OWA-90□-30 | 30V, 0~3A    | ±3.0% | 200mV | 90%   |
| OWA-90□-36 | 36V, 0~2.5A  | ±2.0% | 200mV | 91%   |
| OWA-90□-42 | 42V, 0~2.15A | ±1.0% | 250mV | 91%   |
| OWA-90□-48 | 48V, 0~1.88A | ±1.0% | 250mV | 91%   |
| OWA-90□-54 | 54V, 0~1.67A | ±1.0% | 350mV | 91%   |

□ = U / E; U: American 2P, E: European 2P

## OWA-120 Series

UL/CUL/TUV/FCC/CE pending

| Model No.   | Output      | Tol.  | R&N   | Effi. |
|-------------|-------------|-------|-------|-------|
| OWA-120□-12 | 12V, 0~10A  | ±4.0% | 150mV | 89%   |
| OWA-120□-15 | 15V, 0~8A   | ±4.0% | 150mV | 89%   |
| OWA-120□-20 | 20V, 0~6A   | ±4.0% | 150mV | 89%   |
| OWA-120□-24 | 24V, 0~5A   | ±4.0% | 150mV | 90%   |
| OWA-120□-30 | 30V, 0~4A   | ±3.0% | 200mV | 90%   |
| OWA-120□-36 | 36V, 0~3.4A | ±2.0% | 200mV | 90%   |
| OWA-120□-42 | 42V, 0~2.9A | ±1.0% | 200mV | 90%   |
| OWA-120□-48 | 48V, 0~2.5A | ±1.0% | 250mV | 91%   |
| OWA-120□-54 | 54V, 0~2.3A | ±1.0% | 350mV | 91%   |

□ = U / E; U: American 2P, E: European 2P



# PCD series

16~60W Constant Current with AC Dimmable

## Features

- AC phase-cut dimming, work with leading edge and trailing edge TRIAC dimmers
- PCD-16/25: 115VAC or 230VAC input  
PCD-40/60: 230VAC input only
- Built-in active PFC function
- Fully isolated plastic case
- Constant current mode
- IP30 design
- Class 2 power unit / Pass LPS (PCD-16/25)
- Isolation class II, no F.G.
- Protections: Short circuit / Over temperature
- Cooling by free air convection
- 3 years warranty

|                          |                   | PCD-16/25                                                                                                                          | PCD-40/60                                                              |
|--------------------------|-------------------|------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| INPUT<br>(A type)        |                   |                                                                                                                                    |                                                                        |
|                          | INPUT<br>(B type) |                                                                                                                                    |                                                                        |
|                          | OUTPUT            |                                                                                                                                    |                                                                        |
| AC input voltage range   |                   | 115VAC (90~135VAC) or 230VAC (180~295VAC)                                                                                          | 230VAC (180~295VAC)                                                    |
| AC inrush current (max.) |                   | Cold start, 10A at 230VAC                                                                                                          | PCD-40: Cold start, 11A at 230VAC<br>PCD-60: Cold start, 13A at 230VAC |
| Setup time               |                   | 500ms at full load and 230VAC                                                                                                      |                                                                        |
| Withstand voltage        |                   | I/P - O/P: 3.75kVAC                                                                                                                |                                                                        |
| Working temperature      |                   | -30~+60°C (refer to output derating curve)                                                                                         | PCD-40: -30~+50°C ; PCD-60: -30~+45°C                                  |
| Safety standards         |                   | UL8750 (PCD-16/25 only), ENEC EN61347-1, EN61347-2-13, EN62384 (B-Type only) approved                                              |                                                                        |
| EMC standards            |                   | A-Type: FCC part 18 non-consumer equipment<br>B-Type: EN55015, EN61000-3-2 class C, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, EN61547 |                                                                        |
| Connection               | Input             | PCD-16/25 A-Type: UL1430 18AWGx2C (7.5cm); PCD-16/25 B-Type: NISPT-1 18AWGx2C (7.5cm);<br>PCD-40/60: H03VVH2-F 0.75mm² x2C (7.5cm) |                                                                        |
|                          | Output            | UL1430 18AWGx2C (15cm)                                                                                                             |                                                                        |
| Dimension (LxWxH)(mm)    |                   | 84x 57x 29.5                                                                                                                       | 128x 60x 31.5                                                          |

## PCD-16 Series

| Model No.     | Output         | Io Tol. | R&N  | Effi. |
|---------------|----------------|---------|------|-------|
| PCD-16-350 □  | 24~48V, 350mA  | ±5%     | 4.6V | 82.0% |
| PCD-16-700 □  | 16~24V, 700mA  | ±5%     | 2.7V | 81.0% |
| PCD-16-1050 □ | 12~16V, 1050mA | ±5%     | 2.2V | 80.5% |
| PCD-16-1400 □ | 8~12V, 1400mA  | ±5%     | 2.0V | 80.0% |

□ = A or B-Type ; A-Type: 90~135VAC, B-Type: 180~295VAC

## PCD-25 Series

| Model No.     | Output         | Io Tol. | R&N  | Effi. |
|---------------|----------------|---------|------|-------|
| PCD-25-350 □  | 40~58V, 350mA  | ±5%     | 4.6V | 82.0% |
| PCD-25-700 □  | 24~36V, 700mA  | ±5%     | 2.7V | 81.0% |
| PCD-25-1050 □ | 16~24V, 1050mA | ±5%     | 2.2V | 80.5% |
| PCD-25-1400 □ | 12~18V, 1400mA | ±5%     | 2.0V | 80.0% |

□ = A or B-Type ; A-Type: 90~135VAC, B-Type: 180~295VAC

## PCD-40 Series

| Model No.    | Output         | Io Tol. | R&N  | Effi. |
|--------------|----------------|---------|------|-------|
| PCD-40-350B  | 70~108V, 350mA | ±5%     | 9.5V | 87%   |
| PCD-40-500B  | 45~80V, 500mA  | ±5%     | 5.0V | 87%   |
| PCD-40-700B  | 34~57V, 700mA  | ±5%     | 3.1V | 86%   |
| PCD-40-1050B | 22~38V, 1050mA | ±5%     | 2.6V | 86%   |
| PCD-40-1400B | 17~29V, 1400mA | ±5%     | 2.5V | 85%   |
| PCD-40-1750B | 13~23V, 1750mA | ±5%     | 2.4V | 85%   |

## PCD-60 Series

| Model No.    | Output         | Io Tol. | R&N   | Effi. |
|--------------|----------------|---------|-------|-------|
| PCD-60-500B  | 70~108V, 500mA | ±5%     | 10.2V | 87%   |
| PCD-60-700B  | 50~86V, 700mA  | ±5%     | 5.6V  | 86%   |
| PCD-60-1050B | 34~57V, 1050mA | ±5%     | 3.8V  | 86%   |
| PCD-60-1400B | 25~43V, 1400mA | ±5%     | 3.4V  | 85%   |
| PCD-60-1750B | 20~34V, 1750mA | ±5%     | 3.3V  | 85%   |
| PCD-60-2000B | 18~30V, 2000mA | ±5%     | 2.4V  | 85%   |
| PCD-60-2400B | 15~25V, 2400mA | ±5%     | 2.4V  | 84%   |

## Dimmer Compatibility Chart

| Manufacturer   | Dimmer Model                |                     |
|----------------|-----------------------------|---------------------|
| LUTRON         | SKYLARK SF-12P-277          | (277VAC / 60Hz)     |
| LUTRON         | DVF-103P-277                | (277VAC / 60Hz)     |
| LUTRON         | SKYLARK SF-10P              | (120VAC / 60Hz)     |
| LUTRON         | SKYLARK S-600P              | (120VAC / 60Hz)     |
| LUTRON         | SKYLARK DVF-103P            | (120VAC / 60Hz)     |
| LEVITON        | ILLUMATECH TM Cat.No.IP106  | (120VAC / 60Hz)     |
| LEVITON        | SURESLIDE TM Cat.No.6633-P  | (120VAC / 60Hz)     |
| LEVITON        | SURESLIDE TM Cat. NO.6615-P | (120VAC / 60Hz)     |
| JUNG           | Licht-Management 225 T DE   | (230VAC / 50Hz)     |
| JUNG           | Licht-Management 225 NV DE  | (230VAC / 50Hz)     |
| BERKER         | Tronic-Drehdimmer 286710    | (230-240VAC / 50Hz) |
| BE LICHTREGLER | T39.01                      | (230VAC / 50Hz)     |
| BE LICHTREGLER | T46                         | (230VAC / 50Hz)     |
| CLIPSAL        | 32E450UDM                   | (220-240VAC / 50Hz) |
| CLIPSAL        | NO 32E450TM                 | (220-240VAC / 50Hz) |

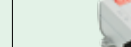
- ▶ Conduction angle: 30 degrees (min.) / 180 degrees (max.)
- ▶ For PCD-16/25/40/60 only

# PLD series

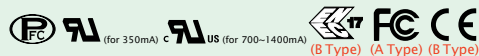
16~60W Constant Current with PFC

## Features

- PLD-16: 115VAC or 230VAC input  
PLD-25: 90~295VAC input  
PLD-40/60: 230VAC input only
- Built-in active PFC function
- Fully isolated plastic case
- **Constant current mode**
- IP30 design
- Class 2 power unit / Pass LPS (PLD-16/25)
- Isolation class II, no F.G.
- Protections: Short circuit / Over temperature
- Suitable for indoor LED lighting applications
- Cooling by free air convection
- 3 years warranty

|                          |        |                                                                                                                                                    | PLD-16                                                                                                                                               | PLD-25                                                                            | PLD-40                                                                            | PLD-60 |
|--------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--------|
| <b>INPUT</b>             |        |                                                                                                                                                    |                                                                      |  |  |        |
| A-Type                   | B-Type | PLD-25                                                                                                                                             |                                                                                                                                                      |                                                                                   |                                                                                   |        |
| <b>OUTPUT</b>            |        |                                                                                                                                                    |                                                                     |                                                                                   |                                                                                   |        |
| AC input voltage range   |        |                                                                                                                                                    | 115VAC (90~135VAC) or 230VAC (180~295VAC)                                                                                                            |                                                                                   | 90~295VAC                                                                         |        |
| AC inrush current (max.) |        |                                                                                                                                                    | Cold start, 20A at 230VAC                                                                                                                            |                                                                                   | Cold start, 25A at 230VAC                                                         |        |
| Setup time               |        |                                                                                                                                                    | 500ms at full load and 230VAC                                                                                                                        |                                                                                   |                                                                                   |        |
| Withstand voltage        |        |                                                                                                                                                    | I/P - O/P: 3.75kVAC                                                                                                                                  |                                                                                   |                                                                                   |        |
| Short circuit protection |        |                                                                                                                                                    | Hiccup mode, auto-recovery                                                                                                                           |                                                                                   |                                                                                   |        |
| Over temp. protection    |        |                                                                                                                                                    | Shut down o/p voltage, re-power on to recover                                                                                                        |                                                                                   | Shut down o/p voltage, auto-recovery                                              |        |
| Working temperature      |        |                                                                                                                                                    | -30~+50°C                                                                                                                                            |                                                                                   | -30~+60°C                                                                         |        |
| Safety standards         |        |                                                                                                                                                    | UL8750 (PLD-16/25 only), ENEC EN61347-1, EN61347-2-13, EN62384 (except for A-Type) approved                                                          |                                                                                   |                                                                                   |        |
| EMC standards            |        |                                                                                                                                                    | A-Type & PLD-25: FCC part 18 non-consumer equipment<br>B-Type & PLD-25: EN55015, EN61000-3-2 class C, EN61000-3-3, EN61000-4,2,3,4,5,6,8,11, EN61547 |                                                                                   |                                                                                   |        |
| Connection               | Input  | PLD-16 A-Type: UL1430 18AWGx2C (7.5cm)<br>PLD-16 B-Type & PLD-25: NISPT-1 18AWGx2C (7.5cm)<br>PLD-40/60: H03VVH2-F 0.75mm <sup>2</sup> x2C (7.5cm) |                                                                                                                                                      |                                                                                   |                                                                                   |        |
|                          | Output | UL1430 18AWGx2C (15cm)                                                                                                                             |                                                                                                                                                      |                                                                                   |                                                                                   |        |
| Dimension (LxWxH)(mm)    |        |                                                                                                                                                    | 84x 57x 29.5                                                                                                                                         |                                                                                   | 128x 60x 31.5                                                                     |        |

## PLD-16 Series



| Model No.     | Output         | Io Tol. | R&N  | Effi. |
|---------------|----------------|---------|------|-------|
| PLD-16-350 □  | 24~48V, 350mA  | ±5%     | 4.6V | 84.5% |
| PLD-16-700 □  | 16~24V, 700mA  | ±5%     | 2.7V | 84.5% |
| PLD-16-1050 □ | 12~16V, 1050mA | ±5%     | 2.2V | 84.0% |
| PLD-16-1400 □ | 8~12V, 1400mA  | ±5%     | 2.0V | 82.5% |

□ = A or B-Type ; A-Type: 90~135VAC, B-Type: 180~295VAC

## PLD-40 Series



| Model No.    | Output         | Io Tol. | R&N  | Effi. |
|--------------|----------------|---------|------|-------|
| PLD-40-350B  | 70~108V, 350mA | ±5%     | 9.5V | 88%   |
| PLD-40-500B  | 45~80V, 500mA  | ±5%     | 5.0V | 88%   |
| PLD-40-700B  | 34~57V, 700mA  | ±5%     | 3.1V | 87%   |
| PLD-40-1050B | 22~38V, 1050mA | ±5%     | 2.6V | 87%   |
| PLD-40-1400B | 17~29V, 1400mA | ±5%     | 2.5V | 86%   |
| PLD-40-1750B | 13~23V, 1750mA | ±5%     | 2.4V | 86%   |

## PLD-25 Series



| Model No.   | Output         | Io Tol. | R&N  | Effi. |
|-------------|----------------|---------|------|-------|
| PLD-25-350  | 36~58V, 350mA  | ±5%     | 4.6V | 85%   |
| PLD-25-700  | 24~36V, 700mA  | ±5%     | 2.7V | 86%   |
| PLD-25-1050 | 16~24V, 1050mA | ±5%     | 2.2V | 85%   |
| PLD-25-1400 | 12~18V, 1400mA | ±5%     | 2.0V | 84%   |

## PLD-60 Series



| Model No.    | Output         | Io Tol. | R&N   | Effi. |
|--------------|----------------|---------|-------|-------|
| PLD-60-500B  | 70~108V, 500mA | ±5%     | 10.2V | 88%   |
| PLD-60-700B  | 50~86V, 700mA  | ±5%     | 5.6V  | 87%   |
| PLD-60-1050B | 34~57V, 1050mA | ±5%     | 3.8V  | 87%   |
| PLD-60-1400B | 25~43V, 1400mA | ±5%     | 3.4V  | 86%   |
| PLD-60-1750B | 20~34V, 1750mA | ±5%     | 3.3V  | 86%   |
| PLD-60-2000B | 18~30V, 2000mA | ±5%     | 2.4V  | 86%   |
| PLD-60-2400B | 15~25V, 2400mA | ±5%     | 2.4V  | 85%   |

# PLM series

12~40W Constant Current with PFC

## Features

- 110~295VAC input
- Built-in active PFC function
- Protections: Short circuit / Over temperature (PLM-40)
- Fully isolated plastic case
- **Constant current mode**
- **No load power consumption <0.5W**
- Three-step analog dimming function (PLM-40)
- IP30 design
- Isolation class II, no F.G.
- Class 2 power unit (except for PLM-25-350 & PLM-40)
- Cooling by free air convection
- Low cost, high reliability
- Suitable for indoor LED lighting applications
- 2 years warranty

|                                                                                  |                                                                                   | PLM-12                                                                            | PLM-25                                     | PLM-40                                                                              |
|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--------------------------------------------|-------------------------------------------------------------------------------------|
|                                                                                  |                                                                                   |  |                                            |  |
| INPUT                                                                            | OUTPUT                                                                            |                                                                                   |                                            |                                                                                     |
|  |  |                                                                                   |                                            |                                                                                     |
| AC input voltage range                                                           |                                                                                   | 110~295VAC; 156~417VDC                                                            |                                            |                                                                                     |
| AC inrush current (max.)                                                         |                                                                                   | Cold start, 15A at 230VAC                                                         |                                            |                                                                                     |
| Setup time                                                                       |                                                                                   | 500ms at full load and 230VAC                                                     |                                            |                                                                                     |
| Short circuit protection                                                         |                                                                                   | Hiccup mode, auto-recovery                                                        |                                            |                                                                                     |
| Over temperature (PLM-40)                                                        |                                                                                   | Hiccup mode, auto-recovery                                                        |                                            |                                                                                     |
| Withstand voltage                                                                |                                                                                   | I/P-O/P: 3.75kVAC                                                                 |                                            |                                                                                     |
| Working temperature                                                              |                                                                                   | -30~+50°C                                                                         | -30~+45°C (refer to output derating curve) |                                                                                     |
| Safety standards                                                                 |                                                                                   | UL8750, ENEC EN61347-1, EN61347-2-13, EN62384 approved                            |                                            |                                                                                     |
| EMC standards                                                                    |                                                                                   | EN55015, EN61000-3-2 class C, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, EN61547      |                                            |                                                                                     |
| Connection (Input / Output)                                                      |                                                                                   | 2+2P push terminal block                                                          |                                            |                                                                                     |
| Dimension (LxWxH)(mm)                                                            |                                                                                   | 145x 38x 22                                                                       |                                            | 175x 42x 24                                                                         |

## PLM-12 Series



| Model No.   | Output        | Io Tol. | R&N  | Effi. |
|-------------|---------------|---------|------|-------|
| PLM-12-350  | 22~36V, 350mA | ±5%     | 3.6V | 85%   |
| PLM-12-500  | 15~24V, 500mA | ±5%     | 2.4V | 84%   |
| PLM-12-700  | 11~18V, 700mA | ±5%     | 2.4V | 83%   |
| PLM-12-1050 | 7~12V, 1050mA | ±5%     | 1.8V | 81%   |

## PLM-25 Series



| Model No.   | Output         | Io Tol. | R&N  | Effi. |
|-------------|----------------|---------|------|-------|
| PLM-25-350  | 42~72V, 350mA  | ±5%     | 7.2V | 87%   |
| PLM-25-500  | 30~50V, 500mA  | ±5%     | 5.0V | 86%   |
| PLM-25-700  | 21~36V, 700mA  | ±5%     | 3.6V | 86%   |
| PLM-25-1050 | 14~24V, 1050mA | ±5%     | 2.4V | 85%   |

## PLM-40 Series



| Model No.   | Output         | Io Tol. | R&N  | Effi. |
|-------------|----------------|---------|------|-------|
| PLM-40-350  | 53~105V, 350mA | ±5%     | 10V  | 88%   |
| PLM-40-500  | 40~80V, 500mA  | ±5%     | 8.0V | 88%   |
| PLM-40-700  | 29~57V, 700mA  | ±5%     | 6.0V | 87%   |
| PLM-40-1050 | 19~38V, 1050mA | ±5%     | 4.0V | 87%   |
| PLM-40-1400 | 15~29V, 1400mA | ±5%     | 3.0V | 86%   |
| PLM-40-1750 | 12~23V, 1750mA | ±5%     | 2.5V | 86%   |



# LPF series

16~90W Single Output with PFC

## Features

- Universal AC input (up to 305VAC) / Full range
- Protections: Short circuit / Over current / Over voltage / Over temperature
- Built-in active PFC function
- Fully isolated plastic case
- Isolation class II, no F.G.
- Class 2 power unit
- Built-in 3 in 1 dimming function (1~10VDC, PWM signal or resistance) for D type
- Fully encapsulated with IP67 level [optional for LPF-16(D)]
- Cooling by free air convection
- Suitable for LED lighting and moving sign applications
- Suitable for dry, damp, and wet location
- 5 years warranty

|                                                                                            |                                                                                   | LPF-16(D)/25(D)                                                                                                                                      | LPF-40(D)/60(D)                                                                                      | LPF-90(D)                                                                           |
|--------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>INPUT</b><br><b>OUTPUT</b><br>(Non-Dimming Models)<br><b>OUTPUT</b><br>(Dimming Models) |  |                                                                     |                    |  |
|                                                                                            |  |                                                                                                                                                      |                                                                                                      |                                                                                     |
|                                                                                            |  |                                                                                                                                                      |                                                                                                      |                                                                                     |
| AC input voltage range                                                                     |                                                                                   | 90~305VAC ; 127~431VDC                                                                                                                               |                                                                                                      |                                                                                     |
| AC inrush current (max.)                                                                   |                                                                                   | LPF-16(D): Cold start, 45A<br>LPF-25(D): Cold start, 50A                                                                                             | LPF-40(D): Cold start, 50A<br>LPF-60(D): Cold start, 55A                                             | Cold start, 55A at 230VAC                                                           |
| Over current protection                                                                    |                                                                                   | 95% ~108% constant current, auto-recovery                                                                                                            |                                                                                                      |                                                                                     |
| Over voltage protection                                                                    |                                                                                   | 110%~150% rated output voltage                                                                                                                       |                                                                                                      |                                                                                     |
| Setup, rise, hold up time                                                                  |                                                                                   | 500ms, 80ms, 16ms at full load and 230VAC                                                                                                            |                                                                                                      | 500ms, 200ms, 16ms at full load and 230VAC                                          |
| Withstand voltage                                                                          |                                                                                   | I/P - O/P: 3.75kVAC                                                                                                                                  |                                                                                                      |                                                                                     |
| Working temperature                                                                        |                                                                                   | -35~+70°C                                                                                                                                            | -40~+70°C (refer to output derating curve)                                                           |                                                                                     |
| Safety standards                                                                           |                                                                                   | UL8750, ENEC EN61347-1, EN61347-2-13, EN62384, PSE J61347-1, J61347-2-13 approved;<br>TUV EN61347-1, EN61347-2-13 approved for LPF-40(D)/60(D)/90(D) |                                                                                                      |                                                                                     |
| EMC standards                                                                              |                                                                                   | EN55015, EN61547, EN61000-3-2 class C, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11                                                                         |                                                                                                      |                                                                                     |
| Connection                                                                                 | Input                                                                             | UL rated, SJTW 18AWGx2C (30cm)                                                                                                                       |                                                                                                      |                                                                                     |
|                                                                                            | Output                                                                            | LPF-16/25:<br>UL rated, SVT 18AWGx2C (30cm)<br>LPF-16D/25D:<br>UL rated, SJTW 18AWGx4C (30cm)                                                        | LPF-40/60:<br>UL rated, SVT 18AWGx2C (30cm)<br>LPF-40D/60D: UL2464<br>18AWGx2C(30cm)+22AWGx2C (30cm) | LPF-90:<br>UL rated, SVT 18AWGx2C (30cm)<br>LPF-90D:<br>UL2464 18AWGx4C (30cm)      |
| Dimension (LxWxH)(mm)                                                                      |                                                                                   | 148x 40x 32                                                                                                                                          | 162.5x 43x 32                                                                                        | 161x 61x 36                                                                         |

## LPF-16 Series



| Model No. | Output       | Tol.  | R&N   | Effi. |
|-----------|--------------|-------|-------|-------|
| LPF-16-12 | 12V, 0~1.34A | ±4.0% | 150mV | 83.0% |
| LPF-16-15 | 15V, 0~1.07A | ±4.0% | 150mV | 83.0% |
| LPF-16-20 | 20V, 0~0.80A | ±4.0% | 150mV | 84.5% |
| LPF-16-24 | 24V, 0~0.67A | ±4.0% | 150mV | 84.5% |
| LPF-16-30 | 30V, 0~0.54A | ±4.0% | 200mV | 84.5% |
| LPF-16-36 | 36V, 0~0.45A | ±4.0% | 250mV | 85.0% |
| LPF-16-42 | 42V, 0~0.39A | ±4.0% | 250mV | 85.0% |
| LPF-16-48 | 48V, 0~0.34A | ±4.0% | 250mV | 85.0% |
| LPF-16-54 | 54V, 0~0.30A | ±4.0% | 350mV | 84.5% |

## LPF-25 Series



| Model No. | Output       | Tol.  | R&N   | Effi. |
|-----------|--------------|-------|-------|-------|
| LPF-25-12 | 12V, 0~2.10A | ±4.0% | 150mV | 84.0% |
| LPF-25-15 | 15V, 0~1.67A | ±4.0% | 150mV | 84.0% |
| LPF-25-20 | 20V, 0~1.25A | ±4.0% | 150mV | 85.0% |
| LPF-25-24 | 24V, 0~1.05A | ±4.0% | 150mV | 85.5% |
| LPF-25-30 | 30V, 0~0.84A | ±4.0% | 200mV | 85.5% |
| LPF-25-36 | 36V, 0~0.70A | ±4.0% | 250mV | 85.5% |
| LPF-25-42 | 42V, 0~0.60A | ±4.0% | 250mV | 85.5% |
| LPF-25-48 | 48V, 0~0.53A | ±4.0% | 250mV | 86.0% |
| LPF-25-54 | 54V, 0~0.47A | ±4.0% | 350mV | 86.0% |

## LPF-40 Series



| Model No. | Output       | Tol.  | R&N   | Effi. |
|-----------|--------------|-------|-------|-------|
| LPF-40-12 | 12V, 0~3.34A | ±4.0% | 150mV | 84.0% |
| LPF-40-15 | 15V, 0~2.67A | ±4.0% | 150mV | 85.0% |
| LPF-40-20 | 20V, 0~2.00A | ±4.0% | 150mV | 86.0% |

| Model No. | Output       | Tol.  | R&N   | Effi. |
|-----------|--------------|-------|-------|-------|
| LPF-40-24 | 24V, 0~1.67A | ±4.0% | 150mV | 87.0% |
| LPF-40-30 | 30V, 0~1.34A | ±4.0% | 200mV | 88.0% |
| LPF-40-36 | 36V, 0~1.12A | ±4.0% | 250mV | 88.0% |
| LPF-40-42 | 42V, 0~0.96A | ±4.0% | 250mV | 88.5% |
| LPF-40-48 | 48V, 0~0.84A | ±4.0% | 250mV | 89.0% |
| LPF-40-54 | 54V, 0~0.76A | ±4.0% | 350mV | 89.0% |

## LPF-60 Series



| Model No. | Output       | Tol.  | R&N   | Effi. |
|-----------|--------------|-------|-------|-------|
| LPF-60-12 | 12V, 0~5.00A | ±4.0% | 150mV | 86%   |
| LPF-60-15 | 15V, 0~4.00A | ±4.0% | 150mV | 87%   |
| LPF-60-20 | 20V, 0~3.00A | ±4.0% | 150mV | 88%   |
| LPF-60-24 | 24V, 0~2.50A | ±4.0% | 150mV | 89%   |
| LPF-60-30 | 30V, 0~2.00A | ±4.0% | 200mV | 90%   |
| LPF-60-36 | 36V, 0~1.67A | ±4.0% | 250mV | 90%   |
| LPF-60-42 | 42V, 0~1.43A | ±4.0% | 250mV | 90%   |
| LPF-60-48 | 48V, 0~1.25A | ±4.0% | 250mV | 90%   |
| LPF-60-54 | 54V, 0~1.12A | ±4.0% | 350mV | 90%   |

## LPF-90 Series



| Model No. | Output       | Tol.  | R&N   | Effi. |
|-----------|--------------|-------|-------|-------|
| LPF-90-15 | 15V, 0~5.00A | ±4.0% | 150mV | 89.0% |
| LPF-90-20 | 20V, 0~4.50A | ±4.0% | 150mV | 89.5% |
| LPF-90-24 | 24V, 0~3.75A | ±4.0% | 150mV | 90.0% |
| LPF-90-30 | 30V, 0~3.00A | ±4.0% | 200mV | 90.5% |
| LPF-90-36 | 36V, 0~2.50A | ±4.0% | 200mV | 90.5% |
| LPF-90-42 | 42V, 0~2.15A | ±4.0% | 200mV | 90.5% |
| LPF-90-48 | 48V, 0~1.88A | ±4.0% | 200mV | 90.5% |
| LPF-90-54 | 54V, 0~1.67A | ±4.0% | 200mV | 90.5% |

□ = Blank, D ; Blank: without dimming function , D: with dimming function

# NPF series

40~120W Single Output with PFC

## Features

- Universal AC input (up to 305VAC) / Full range
- Built-in active PFC function
- High efficiency up to 91%
- No load power consumption <0.15W (<0.5W for D-Type)
- Protections:
  - Short circuit / Over current / Over voltage / Over temperature
- Cooling by free air convection
- Fully isolated plastic case with IP67 level
- Class 2 power unit [except for NPF-90(D)-12/15 & NPF-120(D)]
- Isolation class II, no F.G.
- Built-in 3 in 1 dimming function (0~10VDC, PWM signal or resistance) for D type
- Suitable for dry, damp, and wet location
- 5 years warranty

|                                    |                           | NPF-40(D)/60(D)                                                                   | NPF-90(D)                                                                          | NPF-120(D)                                                                          |
|------------------------------------|---------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <div>INPUT</div> <div>OUTPUT</div> | OUTPUT (NPF-40D/60D)      |  |  |  |
|                                    | OUTPUT (NPF-40/60/90/120) |                                                                                   |                                                                                    |                                                                                     |

|                           |        |                                                                                                                    |                                                                                                |                                                                                                  |
|---------------------------|--------|--------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| AC input voltage range    |        | 90~305VAC; 127~431VDC                                                                                              |                                                                                                |                                                                                                  |
| AC inrush current (max.)  |        | Cold start, 50A at 230VAC                                                                                          | Cold start, 60A at 230VAC                                                                      |                                                                                                  |
| Over current protection   |        | 95%~108% constant current limiting, auto-recovery                                                                  |                                                                                                |                                                                                                  |
| Over voltage protection   |        | 110%~140% rated output voltage                                                                                     |                                                                                                |                                                                                                  |
| Over temp. protection     |        | Shut down output voltage, re-power on to recover                                                                   |                                                                                                |                                                                                                  |
| Setup, rise, hold up time |        | 500ms, 80ms, 16ms at full load and 230VAC                                                                          |                                                                                                |                                                                                                  |
| Withstand voltage         |        | I/P-O/P: 3.75kVAC                                                                                                  |                                                                                                |                                                                                                  |
| Working temperature       |        | -40~+70°C (refer to output dearting curve)                                                                         |                                                                                                |                                                                                                  |
| Safety standards          |        | UL8750, ENEC EN61347-1, EN61347-2-13, EN62384 approved [NPF-40(D)/60(D)/120(D)/pending]; Design refer to EN60335-1 |                                                                                                |                                                                                                  |
| EMC standards             |        | EN55015, EN61000-3-2 class C, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, EN61547, [NPF-40(D)/60(D)/120(D)/pending]     |                                                                                                |                                                                                                  |
| Connection                | Input  | UL rated, SJTW 18AWGx2C (30cm)                                                                                     |                                                                                                |                                                                                                  |
|                           | Output | NPF-40/60:<br>SVT 18AWGx 2C (30cm)<br>NPF-40D/60D:<br>UL2464 18AWG x2C (30cm)+<br>22AWG x2C (30cm)                 | NPF-90:<br>SJTW 16AWGx2C (30cm)<br>NPF-90D:<br>SJTW 16AWGx2C (30cm)+<br>UL2464 18AWGx2C (30cm) | NPF-120:<br>SJTW 14AWGx2C (30cm)<br>NPF-120D:<br>SJTW 14AWGx2C (30cm)+<br>UL2464 18AWGx2C (30cm) |
| Dimension (LxWxH) (mm)    |        | 150x 53x 35                                                                                                        | 171x 63x 37.5                                                                                  | 191x 63x 37.5                                                                                    |

## NPF-40 Series



UL/CUL/ENEC/CB/CE pending

| Model No.  | Output       | Tol. | R&N   | Effi. |
|------------|--------------|------|-------|-------|
| NPF-40□-12 | 12V, 0~3.34A | ±4%  | 150mV | 86.0% |
| NPF-40□-15 | 15V, 0~2.67A | ±4%  | 150mV | 87.0% |
| NPF-40□-20 | 20V, 0~2A    | ±4%  | 150mV | 88.0% |
| NPF-40□-24 | 24V, 0~1.67A | ±3%  | 150mV | 89.0% |
| NPF-40□-30 | 30V, 0~1.34A | ±3%  | 200mV | 90.0% |
| NPF-40□-36 | 36V, 0~1.12A | ±2%  | 200mV | 90.0% |
| NPF-40□-42 | 42V, 0~0.96A | ±1%  | 200mV | 90.0% |
| NPF-40□-48 | 48V, 0~0.84A | ±1%  | 200mV | 90.0% |
| NPF-40□-54 | 54V, 0~0.76A | ±1%  | 350mV | 90.0% |

## NPF-60 Series



UL/CUL/ENEC/CB/CE pending

| Model No.  | Output       | Tol. | R&N   | Effi. |
|------------|--------------|------|-------|-------|
| NPF-60□-12 | 12V, 0~5A    | ±4%  | 150mV | 86.0% |
| NPF-60□-15 | 15V, 0~4A    | ±4%  | 150mV | 87.0% |
| NPF-60□-20 | 20V, 0~3A    | ±4%  | 150mV | 88.0% |
| NPF-60□-24 | 24V, 0~2.5A  | ±3%  | 150mV | 89.0% |
| NPF-60□-30 | 30V, 0~2A    | ±3%  | 200mV | 90.0% |
| NPF-60□-36 | 36V, 0~1.67A | ±2%  | 200mV | 90.0% |
| NPF-60□-42 | 42V, 0~1.43A | ±1%  | 200mV | 90.0% |
| NPF-60□-48 | 48V, 0~1.25A | ±1%  | 200mV | 90.0% |
| NPF-60□-54 | 54V, 0~1.12A | ±1%  | 350mV | 90.0% |

## NPF-90 Series



UL/CUL/ENEC/CB/CE pending

| Model No.  | Output       | Tol. | R&N   | Effi. |
|------------|--------------|------|-------|-------|
| NPF-90□-12 | 12V, 0~7.5A  | ±4%  | 150mV | 89.0% |
| NPF-90□-15 | 15V, 0~6A    | ±4%  | 150mV | 89.5% |
| NPF-90□-20 | 20V, 0~4.5A  | ±4%  | 150mV | 90.5% |
| NPF-90□-24 | 24V, 0~3.75A | ±3%  | 150mV | 91.0% |
| NPF-90□-30 | 30V, 0~3A    | ±3%  | 200mV | 89.5% |
| NPF-90□-36 | 36V, 0~2.5A  | ±2%  | 200mV | 90.5% |
| NPF-90□-42 | 42V, 0~2.15A | ±1%  | 250mV | 90.5% |
| NPF-90□-48 | 48V, 0~1.88A | ±1%  | 250mV | 90.5% |
| NPF-90□-54 | 54V, 0~1.67A | ±1%  | 350mV | 90.5% |

## NPF-120 Series



UL/CUL/ENEC/CB/CE pending

| Model No.   | Output      | Tol. | R&N   | Effi. |
|-------------|-------------|------|-------|-------|
| NPF-120□-12 | 12V, 0~10A  | ±4%  | 150mV | 89.0% |
| NPF-120□-15 | 15V, 0~8A   | ±4%  | 150mV | 89.0% |
| NPF-120□-20 | 20V, 0~6A   | ±4%  | 150mV | 89.0% |
| NPF-120□-24 | 24V, 0~5A   | ±4%  | 150mV | 90.0% |
| NPF-120□-30 | 30V, 0~4A   | ±3%  | 200mV | 90.0% |
| NPF-120□-36 | 36V, 0~3.4A | ±2%  | 200mV | 90.0% |
| NPF-120□-42 | 42V, 0~2.9A | ±1%  | 250mV | 90.0% |
| NPF-120□-48 | 48V, 0~2.5A | ±1%  | 250mV | 91.0% |
| NPF-120□-54 | 54V, 0~2.3A | ±1%  | 350mV | 91.0% |

□ = Blank, D ; Blank: without dimming function , D: with dimming function

# PWM series

40~120W PWM Output with PFC

## Features

- Universal AC input (up to 305VAC) / Full range
- **Constant voltage PWM style output**
- Built-in active PFC function
- High efficiency up to 91%
- **No load power consumption <0.5W**
- Protections:
  - Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- Fully isolated plastic case
- Fully encapsulated with IP67 level
- Class 2 power unit (except for PWM-90-12 & PWM-120)
- Isolation class II, no F.G.
- **Built-in 2 in 1 dimming function (0~10VDC or PWM signal)**
- Suitable for dry, damp, and wet location
- Suitable for LED strip lighting
- **5 years warranty**

|                                                                                                                                                                                                                                                                                                                                                                            |        | PWM-40/60                                                                                                 | PWM-90                                                                             | PWM-120                                                                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <div> <div>INPUT</div>  </div> <div> <div>OUTPUT (PWM-40/60)</div>  </div> <div> <div>OUTPUT (PWM-90/120)</div>  </div> |        |                          |  |  |
| AC input voltage range                                                                                                                                                                                                                                                                                                                                                     |        | 90~305VAC; 127~431VDC                                                                                     |                                                                                    |                                                                                     |
| AC inrush current (max.)                                                                                                                                                                                                                                                                                                                                                   |        | Cold start, 50A at 230VAC                                                                                 |                                                                                    | Cold start, 60A at 230VAC                                                           |
| Overload protection                                                                                                                                                                                                                                                                                                                                                        |        | 108%~120% hiccup mode, auto-recovery                                                                      |                                                                                    |                                                                                     |
| Over voltage protection                                                                                                                                                                                                                                                                                                                                                    |        | 113%~142% rated output voltage                                                                            |                                                                                    |                                                                                     |
| Over temp. protection                                                                                                                                                                                                                                                                                                                                                      |        | Shut down output voltage, re-power on to recover                                                          |                                                                                    |                                                                                     |
| Setup, rise, hold up time                                                                                                                                                                                                                                                                                                                                                  |        | 500ms, 80ms, 16ms at full load and 230VAC                                                                 |                                                                                    |                                                                                     |
| Withstand voltage                                                                                                                                                                                                                                                                                                                                                          |        | I/P-O/P: 3.75kVAC                                                                                         |                                                                                    |                                                                                     |
| Working temperature                                                                                                                                                                                                                                                                                                                                                        |        | -40~+70°C ( refer to output dearting curve)                                                               |                                                                                    |                                                                                     |
| Safety standards                                                                                                                                                                                                                                                                                                                                                           |        | UL8750, ENEC EN61347-1, EN61347-2-13, EN62384 approved (PWM-40/60/120 pending); Design refer to EN60335-1 |                                                                                    |                                                                                     |
| EMC standards                                                                                                                                                                                                                                                                                                                                                              |        | EN55015, EN61000-3-2 class C, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, EN61547 (PWM-40/60/120 pending)      |                                                                                    |                                                                                     |
| Connection                                                                                                                                                                                                                                                                                                                                                                 | Input  | UL rated, SJTW 18AWGx2C (30cm)                                                                            |                                                                                    |                                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                            | Output | UL2464 18AWG x2C (30cm)+ 22AWG x2C (30cm)                                                                 | SJTW 16AWGx2C (30cm)+ UL2464 18AWGx2C (30cm)                                       | SJTW 14AWGx2C (30cm)+ UL2464 18AWGx2C (30cm)                                        |
| Dimension (LxWxH) (mm)                                                                                                                                                                                                                                                                                                                                                     |        | 150x 53x 35                                                                                               | 171x 63x 37.5                                                                      | 191x 63x 37.5                                                                       |

## PWM-40 Series



UL/CUL/ENEC/CB/CE pending

| Model No. | Output       | Tol. | Effi. |
|-----------|--------------|------|-------|
| PWM-40-12 | 12V, 0~3.34A | ±4%  | 86.0% |
| PWM-40-24 | 24V, 0~1.67A | ±3%  | 89.0% |
| PWM-40-36 | 36V, 0~1.12A | ±2%  | 90.0% |
| PWM-40-48 | 48V, 0~0.84A | ±1%  | 90.0% |

## PWM-90 Series



UL/CUL/ENEC/CB/CE pending

| Model No. | Output       | Tol. | Effi. |
|-----------|--------------|------|-------|
| PWM-90-12 | 12V, 0~7.5A  | ±4%  | 88.0% |
| PWM-90-24 | 24V, 0~3.75A | ±3%  | 90.5% |
| PWM-90-36 | 36V, 0~2.5A  | ±2%  | 90.5% |
| PWM-90-48 | 48V, 0~1.88A | ±1%  | 90.5% |

## PWM-60 Series



UL/CUL/ENEC/CB/CE pending

| Model No. | Output       | Tol. | Effi. |
|-----------|--------------|------|-------|
| PWM-60-12 | 12V, 0~5A    | ±4%  | 86.0% |
| PWM-60-24 | 24V, 0~2.5A  | ±3%  | 89.0% |
| PWM-60-36 | 36V, 0~1.67A | ±2%  | 90.0% |
| PWM-60-48 | 48V, 0~1.25A | ±1%  | 90.0% |

## PWM-120 Series



UL/CUL/ENEC/CB/CE pending

| Model No.  | Output      | Tol. | Effi. |
|------------|-------------|------|-------|
| PWM-120-12 | 12V, 0~10A  | ±4%  | 89.0% |
| PWM-120-24 | 24V, 0~5A   | ±4%  | 90.0% |
| PWM-120-36 | 36V, 0~3.4A | ±2%  | 90.0% |
| PWM-120-48 | 48V, 0~2.5A | ±1%  | 91.0% |



# PLC series

30~96W Single Output with PFC

## Features

- Universal AC input / Full range
- Fully isolated plastic case with screw terminal style of I/O
- Adjustable output voltage and current level
- Built-in active PFC function
- High efficiency up to 89%
- Class 2 power unit / Pass LPS
- Isolation class II, no F.G. for PLC-30
- Cooling by free air convection
- Protections: Short circuit / Over current / Over voltage / Over temperature
- 100% full load burn-in test
- Suitable for LED lighting and moving sign applications
- 2 years warranty

|                                              |                                                                                                                  | PLC-30                                                                            | PLC-45/60                                                                          | PLC-100                                                                             |
|----------------------------------------------|------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <div><div>INPUT</div><div>OUTPUT</div></div> |                                                                                                                  |  |  |  |
| AC input voltage range                       | 90~264VAC ; 127~370VDC                                                                                           |                                                                                   |                                                                                    |                                                                                     |
| AC inrush current (max.)                     | Cold start, 35A at 230VAC                                                                                        |                                                                                   |                                                                                    | Cold start, 40A at 230VAC                                                           |
| DC adjustment range                          | 95%~110% rated output voltage                                                                                    | 90%~110% rated output voltage                                                     | 85%~100% rated output voltage                                                      |                                                                                     |
| Current adjustment range                     | 75%~103%                                                                                                         |                                                                                   | 75%~100%                                                                           |                                                                                     |
| Over current protection                      | 100%~110% constant current limiting, auto-recovery                                                               | 95%~110% constant current limiting, auto-recovery                                 | 95%~102% constant current limiting, auto-recovery                                  |                                                                                     |
| Over voltage protection                      | 110%~155% rated output voltage                                                                                   | 115%~140% rated output voltage                                                    | 107%~135% rated output voltage                                                     |                                                                                     |
| Setup time                                   | 500ms at full load and 230VAC                                                                                    |                                                                                   |                                                                                    |                                                                                     |
| Withstand voltage                            | I/P-O/P: 3.75kVAC                                                                                                | I/P-O/P: 3.75kVAC, I/P-FG: 2kVAC, O/P-FG:1.5kVAC                                  |                                                                                    |                                                                                     |
| Working temperature                          | -30~+50°C (refer to output derating curve)                                                                       |                                                                                   |                                                                                    |                                                                                     |
| Safety standards                             | UL1310, TUV EN61347-1, EN61347-2-13, PSE J61347-1, J61347-2-13 approved; TUV EN60950-1 approved for PLC-100 only |                                                                                   |                                                                                    |                                                                                     |
| EMC standards                                | EN55015, EN55022 class B (PLC-45/60/100), EN61000-3-2 class C, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, EN61547    |                                                                                   |                                                                                    |                                                                                     |
| Connection (Input / Output)                  | 2+2P screw terminal block                                                                                        | 3+2P screw terminal block                                                         |                                                                                    |                                                                                     |
| Dimension (LxWxH)(mm)                        | 160x 46x 30                                                                                                      | 181.5x 62x 35                                                                     | 200.5x 69.5x 35                                                                    |                                                                                     |
| Packing                                      | 0.2kg ; 70pcs / 15kg                                                                                             | 0.41kg ; 30pcs / 13.3kg                                                           | 0.52kg ; 25pcs / 14kg                                                              |                                                                                     |

## PLC-30 Series

| Model No. | Output       | Tol. | R&N  | Effi. |
|-----------|--------------|------|------|-------|
| PLC-30-9  | 9V, 0~3.3A   | ±10% | 2.6V | 80.0% |
| PLC-30-12 | 12V, 0~2.5A  | ±10% | 2.0V | 82.5% |
| PLC-30-15 | 15V, 0~2.0A  | ±10% | 2.6V | 83.5% |
| PLC-30-20 | 20V, 0~1.5A  | ±10% | 2.6V | 84.0% |
| PLC-30-24 | 24V, 0~1.25A | ±10% | 2.4V | 84.0% |
| PLC-30-27 | 27V, 0~1.12A | ±10% | 2.3V | 84.5% |
| PLC-30-36 | 36V, 0~0.84A | ±10% | 3.6V | 85.0% |
| PLC-30-48 | 48V, 0~0.63A | ±10% | 3.7V | 85.5% |

## PLC-60 Series

| Model No. | Output      | Tol. | R&N  | Effi. |
|-----------|-------------|------|------|-------|
| PLC-60-12 | 12V, 0~5.0A | ±10% | 2.0V | 85.0% |
| PLC-60-15 | 15V, 0~4.0A | ±10% | 2.4V | 86.0% |
| PLC-60-20 | 20V, 0~3.0A | ±10% | 1.8V | 87.5% |
| PLC-60-24 | 24V, 0~2.5A | ±10% | 2.4V | 87.0% |
| PLC-60-27 | 27V, 0~2.3A | ±10% | 2.7V | 88.0% |
| PLC-60-36 | 36V, 0~1.7A | ±10% | 3.6V | 89.0% |
| PLC-60-48 | 48V, 0~1.3A | ±10% | 4.6V | 89.0% |

## PLC-45 Series

| Model No. | Output       | Tol. | R&N  | Effi. |
|-----------|--------------|------|------|-------|
| PLC-45-12 | 12V, 0~3.8A  | ±10% | 2.0V | 83.5% |
| PLC-45-15 | 15V, 0~3.0A  | ±10% | 2.4V | 85.0% |
| PLC-45-20 | 20V, 0~2.3A  | ±10% | 1.8V | 86.5% |
| PLC-45-24 | 24V, 0~1.9A  | ±10% | 2.7V | 86.5% |
| PLC-45-27 | 27V, 0~1.7A  | ±10% | 2.7V | 86.5% |
| PLC-45-36 | 36V, 0~1.25A | ±10% | 3.6V | 87.5% |
| PLC-45-48 | 48V, 0~0.95A | ±10% | 4.6V | 87.5% |

## PLC-100 Series

| Model No.  | Output       | Tol. | R&N   | Effi. |
|------------|--------------|------|-------|-------|
| PLC-100-12 | 12V, 0~5.0A  | ±3%  | 150mV | 83.0% |
| PLC-100-15 | 15V, 0~5.0A  | ±3%  | 150mV | 85.0% |
| PLC-100-20 | 20V, 0~4.8A  | ±3%  | 150mV | 88.5% |
| PLC-100-24 | 24V, 0~4.0A  | ±3%  | 150mV | 88.5% |
| PLC-100-27 | 27V, 0~3.55A | ±3%  | 150mV | 88.0% |
| PLC-100-36 | 36V, 0~2.65A | ±2%  | 150mV | 88.0% |
| PLC-100-48 | 48V, 0~2.0A  | ±2%  | 200mV | 88.5% |

# PLN series

20~96W Single Output with PFC

## Features

- Universal AC input (up to 295VAC) / Full range
- Fully isolated plastic case with IP64 level
- Built-in active PFC function
- Protections: Short circuit / Over current / Over voltage / Over temperature
- Class 2 power unit / Pass LPS
- Isolation class II, no F.G. for PLN-20/30
- User adjustable output voltage (except for PLN-20) and current protection level
- Cooling by free air convection
- Suitable for LED lighting and moving sign applications
- 2 years warranty

|                          |                  | PLN-20                                                                                                                                                                                                                                                                                                                   | PLN-30                                             | PLN-45/60                                         | PLN-100                                           |
|--------------------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|---------------------------------------------------|---------------------------------------------------|
| <b>INPUT</b>             |                  |                                                                                                                                                                                                                                                                                                                          |                                                    |                                                   |                                                   |
| PLN-20                   | PLN-30           | PLN-45/60/100                                                                                                                                                                                                                                                                                                            |                                                    |                                                   |                                                   |
| <b>OUTPUT</b>            |                  |                                                                                                                                                                                                                                                                                                                          |                                                    |                                                   |                                                   |
| PLN-20                   | PLN-30/45/60/100 |                                                                                                                                                                                                                                                                                                                          |                                                    |                                                   |                                                   |
|                          |                  |                                                                                                                                                                                                                                                                                                                          |                                                    |                                                   |                                                   |
| AC input voltage range   |                  | 90~277VAC; 127~392VDC                                                                                                                                                                                                                                                                                                    |                                                    | 90~295VAC ; 127~417VDC                            |                                                   |
| AC inrush current (max.) |                  | Cold start, 35A at 230VAC                                                                                                                                                                                                                                                                                                |                                                    |                                                   | Cold start, 40A at 230VAC                         |
| DC adjustment range      |                  | None                                                                                                                                                                                                                                                                                                                     | 95%~108% rated output voltage                      |                                                   | 85%~100% rated output voltage                     |
| Current adjustment range |                  | 75%~100%                                                                                                                                                                                                                                                                                                                 | 75%~103%                                           |                                                   |                                                   |
| Over current protection  |                  | 95%~110% constant current limiting, auto-recovery                                                                                                                                                                                                                                                                        | 100%~110% constant current limiting, auto-recovery | 95%~110% constant current limiting, auto-recovery | 95%~102% constant current limiting, auto-recovery |
| Over voltage protection  |                  | 105%~142% rated output voltage                                                                                                                                                                                                                                                                                           | 110%~155% rated output voltage                     | 115%~140% rated output voltage                    | 107%~135% rated output voltage                    |
| Setup time               |                  | 500ms at full load and 230VAC                                                                                                                                                                                                                                                                                            |                                                    |                                                   |                                                   |
| Withstand voltage        |                  | I/P-O/P: 3.75kVAC                                                                                                                                                                                                                                                                                                        |                                                    | I/P-O/P: 3.75kVAC I/P-FG: 2kVAC O/P-FG: 1.5kVAC   |                                                   |
| Working temperature      |                  | -30~+60℃                                                                                                                                                                                                                                                                                                                 | -30~+50℃ (refer to output derating curve)          |                                                   |                                                   |
| Safety standards         |                  | UL8750, TUV EN61347-1, EN61347-2-13, PSE J61347-1, J61347-2-13 approved for PLN-20<br>UL879, UL1310, UL8750(PLN-45/60), TUV EN61347-1, EN61347-2-13,PSE J61347-1, J61347-2-13 approved for PLN-30/45/60<br>UL879, UL1310, UL8750, TUV EN61347-1, EN61347-2-13, EN60950-1, PSE J61347-1, J61347-2-13 approved for PLN-100 |                                                    |                                                   |                                                   |
| EMC standards            |                  | EN55015, EN55022 class B (PLN-60/100 only), EN61000-3-2 class C, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, EN61547                                                                                                                                                                                                          |                                                    |                                                   |                                                   |
| Connection               | Input            | UL rated, UL1015 18AWGx2C (32cm)                                                                                                                                                                                                                                                                                         | UL rated, SVT 18AWGx2C (32cm)                      | UL rated, SVT 18AWGx3C (30cm)                     | UL rated, SVT 18AWGx3C (31cm)                     |
|                          | Output           |                                                                                                                                                                                                                                                                                                                          |                                                    | UL rated, SVT 18AWGx2C (30cm)                     | UL rated, SVT 18AWGx2C (31cm)                     |
| Dimension (LxWxH) (mm)   |                  | 148.5x 38.5x 28                                                                                                                                                                                                                                                                                                          | 145x 47x 30                                        | 181x 61.5x 35                                     | 200x 70.5x 35                                     |

## PLN-20 Series



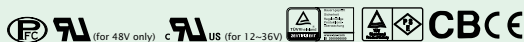
| Model No. | Output       | Tol. | R&N  | Effi. |
|-----------|--------------|------|------|-------|
| PLN-20-12 | 12V, 0~1.6A  | ±10% | 2.5V | 80.0% |
| PLN-20-18 | 18V, 0~1.1A  | ±10% | 3.0V | 81.0% |
| PLN-20-24 | 24V, 0~0.8A  | ±10% | 3.0V | 82.0% |
| PLN-20-36 | 36V, 0~0.55A | ±10% | 3.0V | 83.0% |
| PLN-20-48 | 48V, 0~0.42A | ±10% | 3.8V | 83.5% |

## PLN-30 Series



| Model No. | Output       | Tol. | R&N  | Effi. |
|-----------|--------------|------|------|-------|
| PLN-30-9  | 9V, 0~3.3A   | ±10% | 2.6V | 80.0% |
| PLN-30-12 | 12V, 0~2.5A  | ±10% | 2.0V | 82.5% |
| PLN-30-15 | 15V, 0~2.0A  | ±10% | 2.6V | 83.5% |
| PLN-30-20 | 20V, 0~1.5A  | ±10% | 2.6V | 84.0% |
| PLN-30-24 | 24V, 0~1.25A | ±10% | 2.6V | 84.0% |
| PLN-30-27 | 27V, 0~1.12A | ±10% | 2.3V | 84.5% |
| PLN-30-36 | 36V, 0~0.84A | ±10% | 4.5V | 85.0% |
| PLN-30-48 | 48V, 0~0.63A | ±10% | 3.7V | 85.5% |

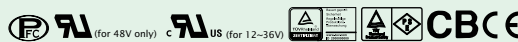
## PLN-45 Series



| Model No. | Output      | Tol. | R&N  | Effi. |
|-----------|-------------|------|------|-------|
| PLN-45-12 | 12V, 0~3.8A | ±10% | 2.0V | 83.5% |
| PLN-45-15 | 15V, 0~3.0A | ±10% | 2.4V | 85.0% |
| PLN-45-20 | 20V, 0~2.3A | ±10% | 1.8V | 86.5% |

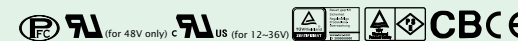
| Model No. | Output       | Tol. | R&N  | Effi. |
|-----------|--------------|------|------|-------|
| PLN-45-24 | 24V, 0~1.9A  | ±10% | 2.7V | 86.5% |
| PLN-45-27 | 27V, 0~1.7A  | ±10% | 2.7V | 86.5% |
| PLN-45-36 | 36V, 0~1.25A | ±10% | 3.6V | 87.5% |
| PLN-45-48 | 48V, 0~0.95A | ±10% | 4.6V | 87.5% |

## PLN-60 Series



| Model No. | Output      | Tol. | R&N  | Effi. |
|-----------|-------------|------|------|-------|
| PLN-60-12 | 12V, 0~5.0A | ±10% | 2.0V | 85.0% |
| PLN-60-15 | 15V, 0~4.0A | ±10% | 2.4V | 86.0% |
| PLN-60-20 | 20V, 0~3.0A | ±10% | 1.8V | 87.5% |
| PLN-60-24 | 24V, 0~2.5A | ±10% | 2.7V | 87.0% |
| PLN-60-27 | 27V, 0~2.3A | ±10% | 2.7V | 88.0% |
| PLN-60-36 | 36V, 0~1.7A | ±10% | 3.6V | 89.0% |
| PLN-60-48 | 48V, 0~1.3A | ±10% | 4.6V | 89.0% |

## PLN-100 Series



| Model No.  | Output       | Tol. | R&N   | Effi. |
|------------|--------------|------|-------|-------|
| PLN-100-12 | 12V, 0~5.0A  | ±3%  | 150mV | 83.0% |
| PLN-100-15 | 15V, 0~5.0A  | ±3%  | 150mV | 85.0% |
| PLN-100-20 | 20V, 0~4.8A  | ±3%  | 150mV | 88.5% |
| PLN-100-24 | 24V, 0~4.0A  | ±3%  | 150mV | 88.5% |
| PLN-100-27 | 27V, 0~3.55A | ±3%  | 150mV | 88.0% |
| PLN-100-36 | 36V, 0~2.65A | ±2%  | 150mV | 88.0% |
| PLN-100-48 | 48V, 0~2.0A  | ±2%  | 200mV | 88.5% |

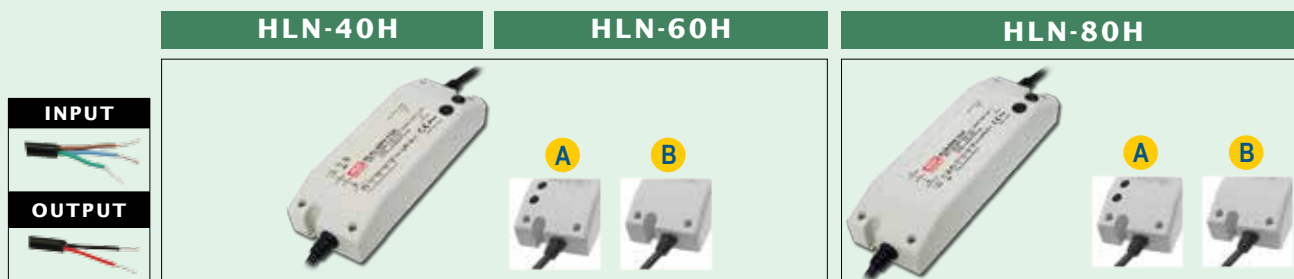
# HLN series

40~80W Single Output with PFC

## Features

- Universal AC input (up to 305VAC) / Full range
- Fully isolated plastic case with IP64 level
- Built-in active PFC function
- Protections:
  - Short circuit / Over current / Over voltage / Over temperature
- Class 2 power unit / Pass LPS
- High efficiency up to 91%
- Cooling by free air convection

- Suitable for dry, damp location
- Suitable for LED lighting and moving sign applications
- Multiple models for choice:
  - A-Type: IP64 rated. Output voltage and constant current level can be adjusted through internal potentiometer
  - B-Type: IP64 rated and **built-in 3 in 1 dimming function** (1~10VDC, PWM signal, or resistance)
- 3 years warranty



|                           |        |                                                                                                                                    |                           |                           |
|---------------------------|--------|------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------|
| AC input voltage range    |        | 90~305VAC; 127~431VDC                                                                                                              |                           |                           |
| AC inrush current (max.)  |        | Cold start, 50A at 230VAC                                                                                                          | Cold start, 55A at 230VAC | Cold start, 70A at 230VAC |
| DC adjustment range       |        | ±10% rated output voltage (A-Type only)                                                                                            |                           |                           |
| Current adjustment range  |        | 60%~100%                                                                                                                           |                           |                           |
| Over current protection   |        | 95%~108% constant current limiting, auto-recovery                                                                                  |                           |                           |
| Over voltage protection   |        | 109%~150% rated output voltage                                                                                                     |                           |                           |
| Setup, rise, hold up time |        | 500ms, 80ms, 16ms at full load and 230VAC                                                                                          |                           |                           |
| Withstand voltage         |        | I/P-O/P: 3.75kVAC, I/P-FG: 2kVAC, O/P-FG:1.5kVAC                                                                                   |                           |                           |
| Working temperature       |        | -40~+50°C (refer to output derating curve)                                                                                         |                           |                           |
| Safety standards          |        | UL8750, TUV EN61347-1, EN61347-2-13, PSE J61347-1, J61347-2-13 approved;<br>Design refer to UL/EN60950-1, EN60335-1for HLN-40H/60H |                           |                           |
| EMC standards             |        | EN55015, EN61000-3-2 class C, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, EN61547                                                       |                           |                           |
| Connection                | Input  | UL rated, SVT 18AWGx3C (30cm)                                                                                                      |                           |                           |
|                           | Output | A-Type: UL rated, SVT 18AWGx2C (30cm) ; B-Type: UL rated, SVT 18AWGx4C (30cm)                                                      |                           |                           |
| Dimension (LxWxH) (mm)    |        | 161x 61.5x 35                                                                                                                      |                           | 181x 61.5x 35             |

## HLN-40H Series

| Model No.     | Output       | Tol.  | R&N   | Effi. |
|---------------|--------------|-------|-------|-------|
| HLN-40H-12(A) | 12V, 0~3.33A | ±2.5% | 150mV | 86.5% |
| HLN-40H-15(A) | 15V, 0~2.67A | ±2.0% | 150mV | 86.5% |
| HLN-40H-20(A) | 20V, 0~2.00A | ±1.0% | 150mV | 87.5% |
| HLN-40H-24(A) | 24V, 0~1.67A | ±1.0% | 150mV | 88.0% |
| HLN-40H-30(A) | 30V, 0~1.34A | ±1.0% | 200mV | 88.5% |
| HLN-40H-36(A) | 36V, 0~1.12A | ±1.0% | 200mV | 88.5% |
| HLN-40H-42(A) | 42V, 0~0.96A | ±1.0% | 300mV | 88.5% |
| HLN-40H-48(A) | 48V, 0~0.84A | ±1.0% | 300mV | 89.0% |
| HLN-40H-54(A) | 54V, 0~0.75A | ±1.0% | 300mV | 89.0% |

○ = A or B

## HLN-60H Series

| Model No.     | Output      | Tol.  | R&N   | Effi. |
|---------------|-------------|-------|-------|-------|
| HLN-60H-15(A) | 15V, 0~4.0A | ±2.0% | 150mV | 87.0% |
| HLN-60H-20(A) | 20V, 0~3.0A | ±1.0% | 150mV | 88.5% |
| HLN-60H-24(A) | 24V, 0~2.5A | ±1.0% | 150mV | 89.0% |
| HLN-60H-30(A) | 30V, 0~2.0A | ±1.0% | 200mV | 89.5% |

| Model No.     | Output       | Tol.  | R&N   | Effi. |
|---------------|--------------|-------|-------|-------|
| HLN-60H-36(A) | 36V, 0~1.70A | ±1.0% | 200mV | 90.0% |
| HLN-60H-42(A) | 42V, 0~1.45A | ±1.0% | 300mV | 90.0% |
| HLN-60H-48(A) | 48V, 0~1.30A | ±1.0% | 300mV | 90.5% |
| HLN-60H-54(A) | 54V, 0~1.15A | ±1.0% | 300mV | 90.5% |

○ = A or B

## HLN-80H Series

| Model No.     | Output       | Tol.  | R&N   | Effi. |
|---------------|--------------|-------|-------|-------|
| HLN-80H-12(A) | 12V, 0~5.0A  | ±2.5% | 150mV | 88.0% |
| HLN-80H-15(A) | 15V, 0~5.0A  | ±2.0% | 150mV | 89.0% |
| HLN-80H-20(A) | 20V, 0~4.0A  | ±1.0% | 150mV | 90.0% |
| HLN-80H-24(A) | 24V, 0~3.4A  | ±1.0% | 150mV | 90.5% |
| HLN-80H-30(A) | 30V, 0~2.7A  | ±1.0% | 200mV | 91.0% |
| HLN-80H-36(A) | 36V, 0~2.3A  | ±1.0% | 200mV | 91.0% |
| HLN-80H-42(A) | 42V, 0~1.95A | ±1.0% | 200mV | 91.0% |
| HLN-80H-48(A) | 48V, 0~1.7A  | ±1.0% | 200mV | 91.0% |
| HLN-80H-54(A) | 54V, 0~1.5A  | ±1.0% | 200mV | 91.0% |

○ = A or B



# LCM series

## 25~60W Multiple-Stage Output Current LED Power Supply

### ► Features

- Output current level selectable by DIP switch
- LCM-25(DA): 180~277VAC input only  
LCM-40(DA)/60(DA): 180~295VAC input only
- Built-in active PFC function
- Protections: Short circuit / Over voltage (40W/60W only) / Over temp.
- Cooling by free air convection
- Fully isolated plastic case
- No load power consumption <0.5W (LCM-25/25DA/40DA/60DA)  
No load power consumption <1W (LCM-40/60)
- Class II power unit, no F.G.
- Logarithm or linear dimming curve selectable (meet IEC62386-207) for DA-Type
- Built-in 0~10Vdc and PWM signal dimming function (non DA-Type)
- Built-in DALI interface and push dimming function (DA-Type)
- 12V/50mA auxiliary output for LCM-40/60 (optional for LCM-40DA/60DA)
- Temperature compensation function by external NTC (40W/60W only)
- Power supplies synchronization function up to 10 units
- Suitable for indoor LED lighting applications
- 3 years warranty

| INPUT       |             | OUTPUT |         | LCM-25(DA)                                                                            | LCM-40(DA) / 60(DA)                                                                 |
|-------------|-------------|--------|---------|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Non-DA Type | 25W/40W/60W | 25W    | 40W/60W |  NEW |  |
|             |             |        |         |                                                                                       |                                                                                     |
| DA-Type     |             |        |         |                                                                                       |                                                                                     |

|                             |                                                                                                                                                            |  |                                           |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------|
| AC input voltage range      | 180~277VAC; 254~392VDC                                                                                                                                     |  | 180~295VAC; 254~417VDC                    |
| AC inrush current (Typ.)    | Cold start, 20A at 230VAC                                                                                                                                  |  |                                           |
| Short circuit protection    | Constant current limiting, recovers automatically after fault condition is removed                                                                         |  |                                           |
| Over voltage protection     | LCM-40/40DA: 110~130VDC, LCM-60/60DA: 105~125VDC                                                                                                           |  |                                           |
| Over temperature protection | LCM-25(DA): Shut down o/p voltage, recovers automatically after fault condition is removed<br>LCM-40/60(DA): Shut down o/p voltage, re-power on to recover |  |                                           |
| Setup, rise, hold up time   | 500ms, 50ms, 30ms                                                                                                                                          |  | 500ms, 80ms, 16ms at full load and 230VAC |
| Withstand voltage           | I/P-O/P: 3.75kVAC                                                                                                                                          |  |                                           |
| Working temperature         | -30~+60°C (refer to output derating curve)                                                                                                                 |  |                                           |
| Safety standards            | UL8750, ENEC EN61347-1, EN61347-2-13, EN62384 approved; CQC GB19510.1, GB19510.14 for LCM-40(DA)/60(DA)                                                    |  |                                           |
| DALI standards              | Comply with IEC62386-101, 102, 207 (LCM-25DA/40DA/60DA only)                                                                                               |  |                                           |
| EMC standards               | EN55015, EN61000-3-2 class C, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, EN61547; GB17743, GB17625.1 for LCM-40(DA)/60(DA)                                     |  |                                           |
| Dimension (LxWxH)(mm)       | 105x 68x 23                                                                                                                                                |  | 123.5x 81.5x 23                           |

### LCM-25(DA) Series



| Output                         | Io Tol. | R&N   | Effi. | DIP Switch |      |      |      |      |      |
|--------------------------------|---------|-------|-------|------------|------|------|------|------|------|
|                                |         |       |       | 1          | 2    | 3    | 4    | 5    | 6    |
| 350mA, 6~54V                   | ±5%     | 400mV | 86%   | ----       | ---- | ---- | ---- | ---- | ---- |
| 500mA, 6~50V                   |         |       |       | ON         | ---- | ---- | ---- | ---- | ---- |
| 600mA, 6~42V                   |         |       |       | ON         | ON   | ---- | ---- | ---- | ---- |
| 700mA, 6~36V (Factory setting) |         |       |       | ON         | ON   | ON   | ---- | ---- | ON   |
| 900mA, 6~28V                   |         |       |       | ON         | ON   | ON   | ON   | ---- | ON   |
| 1050mA, 6~24V                  |         |       |       | ON         | ON   | ON   | ON   | ON   | ON   |

### LCM-40(DA) Series



| Output                         | Io Tol. | R&N   | Effi. | DIP Switch |      |      |      |      |      |
|--------------------------------|---------|-------|-------|------------|------|------|------|------|------|
|                                |         |       |       | 1          | 2    | 3    | 4    | 5    | 6    |
| 350mA, 2~100V                  | ±5%     | 700mV | 91%   | ----       | ---- | ---- | ---- | ---- | ---- |
| 500mA, 2~80V                   |         |       |       | ON         | ---- | ---- | ---- | ---- | ---- |
| 600mA, 2~67V                   |         |       |       | ON         | ON   | ---- | ---- | ---- | ---- |
| 700mA, 2~57V (Factory setting) |         |       |       | ON         | ON   | ON   | ---- | ---- | ON   |
| 900mA, 2~45V                   |         |       |       | ON         | ON   | ON   | ON   | ---- | ON   |
| 1050mA, 2~40V                  |         |       |       | ON         | ON   | ON   | ON   | ON   | ON   |

### LCM-60(DA) Series



| Output                         | Io Tol. | R&N   | Effi. | DIP Switch |      |      |      |      |      |
|--------------------------------|---------|-------|-------|------------|------|------|------|------|------|
|                                |         |       |       | 1          | 2    | 3    | 4    | 5    | 6    |
| 500mA, 2~90V                   | ±5%     | 700mV | 92%   | ----       | ---- | ---- | ---- | ---- | ---- |
| 600mA, 2~90V                   |         |       |       | ON         | ---- | ---- | ---- | ---- | ---- |
| 700mA, 2~86V (Factory setting) |         |       |       | ON         | ON   | ---- | ---- | ---- | ---- |
| 900mA, 2~67V                   |         |       |       | ON         | ON   | ON   | ---- | ---- | ON   |
| 1050mA, 2~57V                  |         |       |       | ON         | ON   | ON   | ON   | ---- | ON   |
| 1400mA, 2~42V                  |         |       |       | ON         | ON   | ON   | ON   | ON   | ON   |

- LCM-25/40/60 are primary models with 0~10Vdc and PWM signal dimming function.
- LCM-25DA/40DA/60DA have DALI interface and push dimming function.

# PLP series

20~60W Single Output with PFC

## Features

- Universal AC input / Full range
- Protections: Short circuit / Over current / Over voltage / Over temperature (PLP-20 only)
- Built-in active PFC function
- Cooling by free air convection
- Class 2 power unit / Pass LPS
- Isolation class II, no F.G. for PLP-20
- Suitable for building in LED lighting systems
- 2 years warranty

|                          |       | PLP-20                                                                            | PLP-30                                                                             | PLP-45/60                                                                           |
|--------------------------|-------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                          |       |  |  |  |
| AC input voltage range   |       | 90~277VAC; 127~392VDC                                                             | 90~264VAC; 127~370VDC                                                              |                                                                                     |
| AC inrush current (max.) |       | Cold start, 25A at 230VAC                                                         |                                                                                    | PLP-45: Cold start, 30A at 230VAC<br>PLP-60: Cold start, 35A at 230VAC              |
| Current adjustable range |       | 75%~100%                                                                          |                                                                                    |                                                                                     |
| Over current protection  | Range | 95%~110%                                                                          | 100%~110%                                                                          |                                                                                     |
|                          | Type  | Constant current limiting, auto-recovery                                          |                                                                                    |                                                                                     |
| Setup time               |       | 500ms at full load and 230VAC                                                     |                                                                                    |                                                                                     |
| Withstand voltage        |       | I/P-O/P: 3.75kVAC                                                                 | I/P-O/P: 3.75kVAC, I/P-FG: 2kVAC, O/P-FG: 1.5kVAC                                  |                                                                                     |
| Working temperature      |       | -30~+60°C                                                                         | -30~+70°C (refer to output derating curve)                                         |                                                                                     |
| Safety standards         |       | UL8750, TUV EN61347-1, EN61347-2-13 approved                                      |                                                                                    |                                                                                     |
| EMC standards            |       | EN55015, EN61000-3-2 class C, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, EN61547      |                                                                                    |                                                                                     |
| Connection               |       | UL1015 18AWGx2C (30cm)                                                            | 3+2P / 3.96mm pitch, JST P/N: B3P / B2P-VH                                         |                                                                                     |
| Dimension (LxWxH)(mm)    |       | 140x 32x 22                                                                       | 101.6x 50.8x 26.6                                                                  | 101.6x 50.8x 29.6                                                                   |

## PLP-20 Series



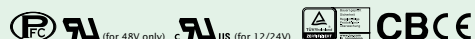
| Model No. | Output       | Tol. | R&N  | Effi. |
|-----------|--------------|------|------|-------|
| PLP-20-12 | 12V, 0~1.6A  | ±10% | 2.5V | 80.0% |
| PLP-20-18 | 18V, 0~1.1A  | ±10% | 3.0V | 81.0% |
| PLP-20-24 | 24V, 0~0.8A  | ±10% | 3.0V | 82.0% |
| PLP-20-36 | 36V, 0~0.55A | ±10% | 3.0V | 83.0% |
| PLP-20-48 | 48V, 0~0.42A | ±10% | 3.8V | 83.5% |

## PLP-45 Series



| Model No. | Output       | Tol. | R&N  | Effi. |
|-----------|--------------|------|------|-------|
| PLP-45-12 | 12V, 0~3.8A  | ±10% | 4.2V | 86%   |
| PLP-45-24 | 24V, 0~1.9A  | ±10% | 3.8V | 89%   |
| PLP-45-48 | 48V, 0~0.95A | ±10% | 4.8V | 89%   |

## PLP-30 Series



| Model No. | Output       | Tol. | R&N  | Effi. |
|-----------|--------------|------|------|-------|
| PLP-30-12 | 12V, 0~2.5A  | ±10% | 2.0V | 83.0% |
| PLP-30-24 | 24V, 0~1.3A  | ±10% | 2.4V | 85.5% |
| PLP-30-48 | 48V, 0~0.63A | ±10% | 4.8V | 86.5% |

## PLP-60 Series



| Model No. | Output      | Tol. | R&N  | Effi. |
|-----------|-------------|------|------|-------|
| PLP-60-12 | 12V, 0~5.0A | ±10% | 4.5V | 84%   |
| PLP-60-24 | 24V, 0~2.5A | ±10% | 4.5V | 88%   |
| PLP-60-48 | 48V, 0~1.3A | ±10% | 4.8V | 89%   |

## Special Symbols for EN61347-2-13

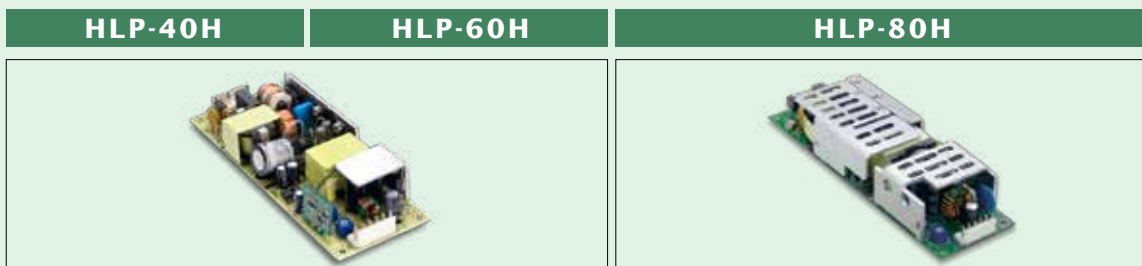
|                                                                                     |                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | Protection against overheating to prevent the lamp controlgear case temperature under any conditions of use from exceeding the indicated value (110°C)                             |
|  | Suitable for direct mounting on normally flammable surfaces, such as wood (>2mm)                                                                                                   |
|  | Based on VDE0710-14, can be installed inside a wooden material like wooden cabinet. The minimum distance between the product enclosure to wooden material in each side is defined. |
| <b>LPS</b>                                                                          | Limited power source                                                                                                                                                               |
| t <sub>c</sub> : 80°C<br>t <sub>a</sub> : 40°C                                      | Full load operation up to 40°C with surface temperature of case < 80°C                                                                                                             |
| <b>SELV</b>                                                                         | Vo < 120VDC can have this mark on the unit                                                                                                                                         |

# HLP series

40~80W Single Output with PFC

## Features

- Universal AC input (up to 305VAC) / Full range
- Protections:
  - Short circuit / Over current / Over voltage / Over temperature
- Built-in active PFC function
- Output constant current level adjustable
- Class 2 power unit / Pass LPS
- Cooling by free air convection
- Suitable for built-in LED lighting system
- Built-in 3 in 1 dimming function (1~10VDC, PWM signal, or resistance)
- 3 years warranty



|                           |                                                                                                            |                                    |                                            |
|---------------------------|------------------------------------------------------------------------------------------------------------|------------------------------------|--------------------------------------------|
| AC input voltage range    | 90~305VAC ; 127~431VDC                                                                                     |                                    |                                            |
| AC inrush current (max.)  | Cold start, 50A at 230VAC                                                                                  | Cold start, 55A at 230VAC          | Cold start, 70A at 230VAC                  |
| DC adjustment range       | ±10% rated output voltage                                                                                  |                                    |                                            |
| Current adjustment range  | 60%~100%                                                                                                   |                                    | 80%~100%                                   |
| Over current protection   | 95%~108% constant current limiting, auto-recovery                                                          |                                    |                                            |
| Over voltage protection   | 109%~145% rated output voltage                                                                             |                                    |                                            |
| Setup, rise, hold up time | 500ms, 80ms, 16ms at full load and 230VAC                                                                  |                                    | 500ms, 200ms, 16ms at full load and 230VAC |
| Withstand voltage         | I/P-O/P: 3.75kVAC, I/P-FG: 2kVAC, O/P-FG: 1.5kVAC                                                          |                                    |                                            |
| Working temperature       | -40~+70°C (refer to output derating curve)                                                                 |                                    |                                            |
| Safety standards          | UL8750, TUV EN61347-1, EN61347-2-13 approved; Design refer to EN60335-1(HLP-40H/60H), UL60950-1, EN60950-1 |                                    |                                            |
| EMC standards             | EN55015, EN61000-3-2 class C, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, EN61547                               |                                    |                                            |
| Connection                | Input                                                                                                      | 6+6P/3.96mm pitch, JST P/N: B6P-VH |                                            |
|                           | Output                                                                                                     |                                    |                                            |
| Dimension (LxWxH) (mm)    | 147x 53x 27                                                                                                |                                    | 167x 53x 29.5                              |

## HLP-40H Series



| Model No.  | Output       | Tol.  | R&N   | Effi. |
|------------|--------------|-------|-------|-------|
| HLP-40H-12 | 12V, 0~3.33A | ±2.5% | 150mV | 87.0% |
| HLP-40H-15 | 15V, 0~2.67A | ±2.0% | 150mV | 87.0% |
| HLP-40H-20 | 20V, 0~2.00A | ±1.0% | 150mV | 88.0% |
| HLP-40H-24 | 24V, 0~1.67A | ±1.0% | 150mV | 88.0% |
| HLP-40H-30 | 30V, 0~1.34A | ±1.0% | 200mV | 88.5% |
| HLP-40H-36 | 36V, 0~1.12A | ±1.0% | 200mV | 89.0% |
| HLP-40H-42 | 42V, 0~0.96A | ±1.0% | 300mV | 89.0% |
| HLP-40H-48 | 48V, 0~0.84A | ±1.0% | 300mV | 89.5% |
| HLP-40H-54 | 54V, 0~0.75A | ±1.0% | 300mV | 89.5% |

## HLP-60H Series



| Model No.  | Output      | Tol.  | R&N   | Effi. |
|------------|-------------|-------|-------|-------|
| HLP-60H-15 | 15V, 0~4.0A | ±2.0% | 150mV | 88.0% |
| HLP-60H-20 | 20V, 0~3.0A | ±1.0% | 150mV | 89.0% |
| HLP-60H-24 | 24V, 0~2.5A | ±1.0% | 150mV | 89.5% |
| HLP-60H-30 | 30V, 0~2.0A | ±1.0% | 200mV | 90.0% |

| Model No.  | Output       | Tol.  | R&N   | Effi. |
|------------|--------------|-------|-------|-------|
| HLP-60H-36 | 36V, 0~1.70A | ±1.0% | 200mV | 90.0% |
| HLP-60H-42 | 42V, 0~1.45A | ±1.0% | 300mV | 90.0% |
| HLP-60H-48 | 48V, 0~1.30A | ±1.0% | 300mV | 90.5% |
| HLP-60H-54 | 54V, 0~1.15A | ±1.0% | 300mV | 90.5% |

## HLP-80H Series



| Model No.  | Output       | Tol.  | R&N   | Effi. |
|------------|--------------|-------|-------|-------|
| HLP-80H-12 | 12V, 0~5.0A  | ±2.5% | 150mV | 87.5% |
| HLP-80H-15 | 15V, 0~5.0A  | ±2.0% | 150mV | 88.5% |
| HLP-80H-20 | 20V, 0~4.0A  | ±1.0% | 150mV | 89.5% |
| HLP-80H-24 | 24V, 0~3.4A  | ±1.0% | 150mV | 90.0% |
| HLP-80H-30 | 30V, 0~2.7A  | ±1.0% | 200mV | 90.0% |
| HLP-80H-36 | 36V, 0~2.3A  | ±1.0% | 200mV | 90.0% |
| HLP-80H-42 | 42V, 0~1.95A | ±1.0% | 200mV | 90.0% |
| HLP-80H-48 | 48V, 0~1.7A  | ±1.0% | 200mV | 90.0% |
| HLP-80H-54 | 54V, 0~1.5A  | ±1.0% | 200mV | 90.0% |

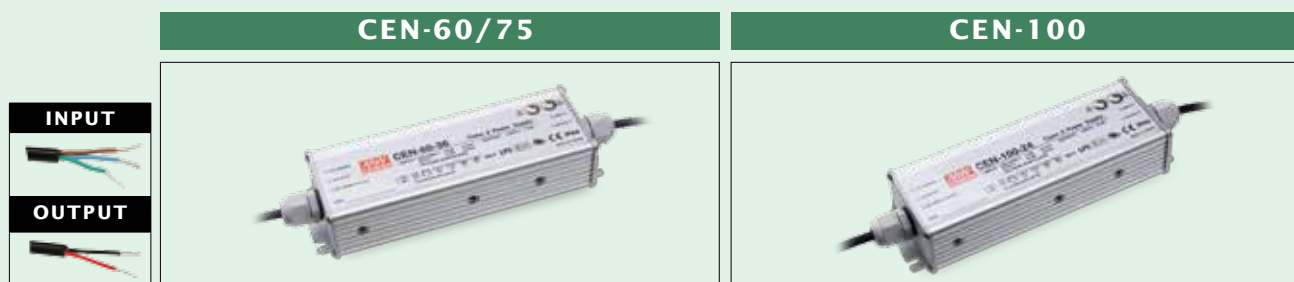


# CEN series

60~96W Single Output with PFC

## ► Features

- Universal AC input (up to 295VAC) / Full range
- Protections:
  - Short circuit / Over current / Over voltage / Over temperature
- Built-in active PFC function
- IP66 design
- Meet 4kV surge immunity level (IEC61000-4-5)
- Class 2 power unit / Pass LPS
- Cooling by free air convection
- Suitable for dry, damp, and wet location
- Suitable for LED lighting and moving sign applications
- 3 years warranty



|                          |                                                                                                     |                                                |
|--------------------------|-----------------------------------------------------------------------------------------------------|------------------------------------------------|
| AC input voltage range   | 90~295VAC ; 127~417VDC                                                                              |                                                |
| AC inrush current (max.) | Cold start, 45A at 230VAC                                                                           |                                                |
| DC adjustment range      | ±10% rated output voltage                                                                           |                                                |
| Current adjustment range | 75%~100%                                                                                            | 65%~100%                                       |
| Over current protection  | 95%~110% constant current limiting, auto-recovery                                                   |                                                |
| Over voltage protection  | 110%~140% rated output voltage                                                                      | 110%~135% rated output voltage                 |
| Over temp. protection    | Shut down o/p voltage, re-power on to recover                                                       |                                                |
| Setup time               | 500ms at full load and 230VAC, no hold up time                                                      | 500ms at full load and 230VAC, no hold up time |
| Withstand voltage        | I/P-O/P: 3.75kVAC, I/P-FG: 2kVAC, O/P-FG: 1.5kVAC                                                   |                                                |
| Working temperature      | -30~+70°C (refer to output derating curve)                                                          |                                                |
| Safety standards         | UL8750, UL879 (except for CEN-100), TUV EN61347-1, EN61347-2-13, PSE J61347-1, J61347-2-13 approved |                                                |
| EMC standards            | EN55015, EN61000-3-2 class C, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, EN61547                        |                                                |
| Connection               | Input                                                                                               | UL rated, SJTW 18AWGx3C (30cm)                 |
|                          | Output                                                                                              | UL rated, SVT 18AWGx2C (30cm)                  |
| Dimension (LxWxH) (mm)   | 185x 62.5x 40.5                                                                                     | 195x 62.5x 40.5                                |

## CEN-60 Series



| Model No. | Output       | Tol. | R&N  | Effi. |
|-----------|--------------|------|------|-------|
| CEN-60-12 | 12V, 0~5.0A  | ±10% | 2.0V | 86%   |
| CEN-60-15 | 15V, 0~4.0A  | ±10% | 2.4V | 87%   |
| CEN-60-20 | 20V, 0~3.0A  | ±10% | 1.8V | 88%   |
| CEN-60-24 | 24V, 0~2.5A  | ±10% | 2.4V | 89%   |
| CEN-60-30 | 30V, 0~2.0A  | ±10% | 3.0V | 90%   |
| CEN-60-36 | 36V, 0~1.7A  | ±10% | 3.6V | 90%   |
| CEN-60-42 | 42V, 0~1.45A | ±10% | 4.0V | 90%   |
| CEN-60-48 | 48V, 0~1.3A  | ±10% | 4.6V | 91%   |
| CEN-60-54 | 54V, 0~1.15A | ±10% | 5.0V | 91%   |

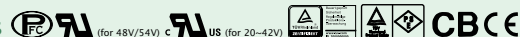
## CEN-75 Series



| Model No. | Output       | Tol. | R&N  | Effi. |
|-----------|--------------|------|------|-------|
| CEN-75-15 | 15V, 0~5.00A | ±10% | 2.7V | 87%   |
| CEN-75-20 | 20V, 0~3.75A | ±10% | 2.0V | 88%   |
| CEN-75-24 | 24V, 0~3.15A | ±10% | 2.7V | 89%   |

| Model No. | Output       | Tol. | R&N  | Effi. |
|-----------|--------------|------|------|-------|
| CEN-75-30 | 30V, 0~2.50A | ±10% | 3.0V | 90%   |
| CEN-75-36 | 36V, 0~2.10A | ±10% | 3.6V | 90%   |
| CEN-75-42 | 42V, 0~1.80A | ±10% | 4.0V | 90%   |
| CEN-75-48 | 48V, 0~1.57A | ±10% | 4.6V | 91%   |
| CEN-75-54 | 54V, 0~1.40A | ±10% | 5.0V | 91%   |

## CEN-100 Series



| Model No.  | Output       | Tol. | R&N  | Effi. |
|------------|--------------|------|------|-------|
| CEN-100-20 | 20V, 0~4.80A | ±10% | 2.0V | 88%   |
| CEN-100-24 | 24V, 0~4.00A | ±10% | 2.7V | 89%   |
| CEN-100-30 | 30V, 0~3.20A | ±10% | 3.0V | 90%   |
| CEN-100-36 | 36V, 0~2.65A | ±10% | 3.6V | 90%   |
| CEN-100-42 | 42V, 0~2.28A | ±10% | 4.0V | 90%   |
| CEN-100-48 | 48V, 0~2.00A | ±10% | 4.6V | 91%   |
| CEN-100-54 | 54V, 0~1.77A | ±10% | 5.0V | 91%   |

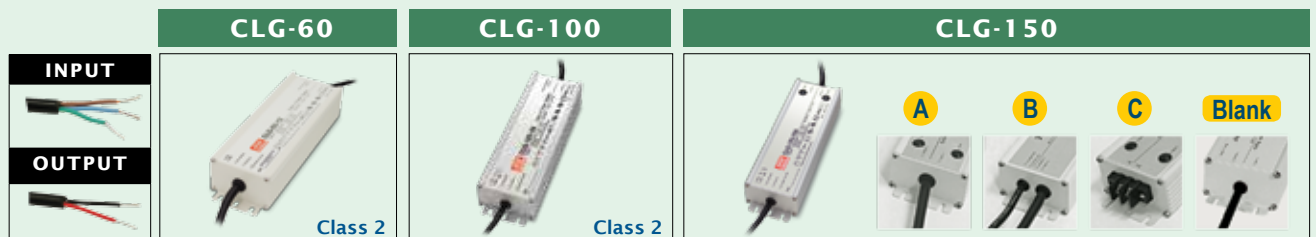
# CLG series

60~150W Single Output with PFC

## Features

- Universal AC input (up to 295VAC) / Full range
- Protections:  
Short circuit / Over current / Over voltage / Over temperature
- Built-in active PFC function
- IP67/IP65 design for indoor or outdoor installations (except for C-Type)
- Output current adjustable through output cable or internal potentiometer (CLG-150)
- Class 2 power unit / Pass LPS (CLG-60&100)
- Cooling by free air convection

- Suitable for LED lighting, street lighting and moving sign applications
- Meet 4kV surge immunity level (IEC 61000-4-5)
- Multiple models for CLG-150 :  
**A-Type:** IP65 rated. Output voltage and constant current level can be adjusted through internal potentiometer  
**B-Type:** IP67 rated. Constant current level adjustable through output cable  
**C-Type:** Non IP. Terminal block for I/O connection  
**Blank-Type:** IP67 rated. Cable for I/O connection
- 3 years warranty



|                           |        | CLG-60                                                                                                                 | CLG-100                                   | CLG-150                                                |
|---------------------------|--------|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------|
| INPUT                     |        |                                                                                                                        |                                           |                                                        |
| OUTPUT                    |        |                                                                                                                        |                                           |                                                        |
| AC input voltage range    |        | 90~295VAC; 127~417VDC                                                                                                  |                                           |                                                        |
| AC inrush current (max.)  |        | Cold start, 35A at 230VAC                                                                                              | Cold start, 40A at 230VAC                 | Cold start, 65A at 230VAC                              |
| DC adjustment range       |        | Fixed. Can be modified between 90%~110% (CLG-60) or 85%~100% (CLG-100) rated output voltage                            |                                           |                                                        |
| Current adjustment range  |        | Fixed. Can be modified between 75%~103% rated output current                                                           |                                           |                                                        |
| Over current protection   |        | 95%~110% constant current, auto-recovery                                                                               | 95%~102% constant current, auto-recovery  | 95%~108% constant current limiting, auto-recovery      |
| Over voltage protection   |        | 110%~140% rated output voltage                                                                                         |                                           |                                                        |
| Setup, rise, hold up time |        | 500ms(setup time), no hold up time                                                                                     | 500ms, 80ms, 60ms at full load and 230VAC | 500ms, 80ms, 16ms at full load and 230VAC              |
| Withstand voltage         |        | I/P-O/P: 3.75kVAC, I/P-FG: 2kVAC, O/P-FG: 1.5kVAC                                                                      |                                           |                                                        |
| Working temperature       |        | -30~+70°C (refer to output derating curve)                                                                             |                                           |                                                        |
| Safety standards          |        | UL1310, UL8750, UL879, TUV EN61347-1, EN61347-2-13, PSE J61347-1, J61347-2-13 approved; TUV EN60950-1 for CLG-100 only |                                           |                                                        |
| EMC standards             |        | EN55015, EN55022 class B, EN61000-3-2 class C, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, EN61547                          |                                           |                                                        |
| Connection                | Input  | UL rated, SJTW 18AWGx3C (30cm)                                                                                         |                                           |                                                        |
|                           | Output | UL rated, SVT 18AWGx2C (30cm)                                                                                          |                                           |                                                        |
| Dimension (LxWxH)(mm)     |        | 195.6x 61.5x 38.8                                                                                                      | 222.2x 68x 38.8                           | A/B/Blank-Type: 222.2x 68x 38.8; C-Type: 229x 68x 38.8 |
| Packing                   |        | 0.86kg; 16pcs / 14.8kg                                                                                                 | 1.0kg; 12pcs / 13kg                       | 1.0kg; 12pcs / 13kg                                    |

## CLG-60 Series



| Model No.   | Output      | Tol. | R&N  | Effi. |
|-------------|-------------|------|------|-------|
| ★ CLG-60-12 | 12V, 0~5.0A | ±10% | 2.0V | 85.0% |
| CLG-60-15   | 15V, 0~4.0A | ±10% | 2.4V | 86.0% |
| CLG-60-20   | 20V, 0~3.0A | ±10% | 1.8V | 87.5% |
| ★ CLG-60-24 | 24V, 0~2.5A | ±10% | 2.7V | 87.0% |
| CLG-60-27   | 27V, 0~2.3A | ±10% | 2.7V | 88.0% |
| CLG-60-36   | 36V, 0~1.7A | ±10% | 3.6V | 89.0% |
| ★ CLG-60-48 | 48V, 0~1.3A | ±10% | 4.6V | 89.0% |

## CLG-100 Series



| Model No.    | Output       | Tol. | R&N   | Effi. |
|--------------|--------------|------|-------|-------|
| ★ CLG-100-12 | 12V, 0~5.00A | ±3%  | 150mV | 83.0% |
| CLG-100-15   | 15V, 0~5.00A | ±3%  | 150mV | 85.0% |
| CLG-100-20   | 20V, 0~4.80A | ±3%  | 150mV | 88.5% |
| ★ CLG-100-24 | 24V, 0~4.00A | ±3%  | 150mV | 88.5% |

| Model No.    | Output       | Tol. | R&N   | Effi. |
|--------------|--------------|------|-------|-------|
| CLG-100-27   | 27V, 0~3.55A | ±3%  | 150mV | 88.0% |
| CLG-100-36   | 36V, 0~2.65A | ±2%  | 150mV | 88.0% |
| ★ CLG-100-48 | 48V, 0~2.00A | ±2%  | 200mV | 88.5% |

## CLG-150 Series



| Model No.       | Output       | Tol. | R&N   | Effi. |
|-----------------|--------------|------|-------|-------|
| ★ CLG-150-12[A] | 12V, 0~11.0A | ±2%  | 150mV | 88%   |
| CLG-150-15[A]   | 15V, 0~9.50A | ±2%  | 150mV | 88%   |
| CLG-150-20[A]   | 20V, 0~7.50A | ±2%  | 150mV | 90%   |
| ★ CLG-150-24[A] | 24V, 0~6.30A | ±1%  | 150mV | 90%   |
| CLG-150-30[A]   | 30V, 0~5.00A | ±1%  | 150mV | 91%   |
| ★ CLG-150-36[A] | 36V, 0~4.20A | ±1%  | 150mV | 91%   |
| ★ CLG-150-48[A] | 48V, 0~3.20A | ±1%  | 200mV | 91%   |

□ = A, B, C or blank

★ CLG-60-12/24/48, CLG-100-12/24/48 & CLG-150-12A/24A/36A/48A are our popular models. We will keep sufficient stock for prompt delivery of high quantity orders.

# HLG series

40~60W High Efficiency with PFC

## Features

- Universal AC input (up to 305VAC) / Full range
- Protections:
  - Short circuit / Over current / Over voltage / Over temperature
- Built-in active PFC function
- High efficiency up to 90.5%
- IP67 / IP65 design for indoor or outdoor installations
- Output current adjustable through output cable or internal potentiometer
- Cooling by free air convection
- Suitable for dry, damp, and wet location
- Suitable for LED lighting and street lighting applications
- Meet 4kV surge immunity level (IEC61000-4-5)

- Class 2 power unit
- Multiple models for choice:
  - A-Type:** IP65 rated. Output voltage and constant current level can be adjusted through internal potentiometer
  - B-Type:** IP67 rated and **built-in 3 in 1 dimming function** (1~10VDC, PWM signal, or resistance)
  - Blank-Type:** IP67 rated. Cable for I/O connection
  - D-Type(option):** IP67 rated. Timer dimming function, contact MEAN WELL for details.
- Optional CQC models available (HLG-40H/60H-A/Blank-Type)
- **5 years warranty**



|                           |                                                                                                    |                                                                                         |
|---------------------------|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| AC input voltage range    | 90~305VAC ; 127~431VDC                                                                             |                                                                                         |
| AC inrush current (max.)  | Cold start, 50A at 230VAC                                                                          | Cold start, 55A at 230VAC                                                               |
| DC adjustment range       | ±10% rated output voltage (A-Type only)                                                            |                                                                                         |
| Current adjustment range  | 60%~100%                                                                                           |                                                                                         |
| Over current protection   | 95%~108% constant current limiting, auto-recovery                                                  |                                                                                         |
| Over voltage protection   | 109%~145% rated output voltage                                                                     |                                                                                         |
| Setup, rise, hold up time | 500ms, 80ms, 16ms at full load and 230VAC                                                          |                                                                                         |
| Withstand voltage         | I/P-O/P: 3.75kVAC, I/P-FG: 2kVAC, O/P-FG: 1.5kVAC                                                  |                                                                                         |
| Working temperature       | -40~+70°C (refer to output derating curve)                                                         |                                                                                         |
| Safety standards          | UL8750, TUV EN61347-1, EN61347-2-13, PSE J61347-1, J61347-2-13 approved; Design refer to EN60335-1 |                                                                                         |
| EMC standards             | EN55015, EN61000-3-2 class C, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, EN61547                       |                                                                                         |
| Connection                | Input                                                                                              | UL rated, SJTW 18AWGx3C (30cm)                                                          |
|                           | Output                                                                                             | A/D/Blank-Type: SVT 18AWGx2C (30cm); B-Type: SVT 18AWGx2C (30cm)+UL2517 18AWGx2C (30cm) |
| Dimension (LxWxH) (mm)    | 171x 61.5x 36.8                                                                                    |                                                                                         |

## HLG-40H Series

| Model No.     | Output       | Tol.  | R&N   | Effi. |
|---------------|--------------|-------|-------|-------|
| HLG-40H-12(A) | 12V, 0~3.33A | ±2.5% | 150mV | 86.5% |
| HLG-40H-15(A) | 15V, 0~2.67A | ±2.0% | 150mV | 86.5% |
| HLG-40H-20(A) | 20V, 0~2.00A | ±1.0% | 150mV | 88.0% |
| HLG-40H-24(A) | 24V, 0~1.67A | ±1.0% | 200mV | 88.0% |
| HLG-40H-30(A) | 30V, 0~1.34A | ±1.0% | 200mV | 88.5% |
| HLG-40H-36(A) | 36V, 0~1.12A | ±1.0% | 200mV | 88.5% |
| HLG-40H-42(A) | 42V, 0~0.96A | ±1.0% | 200mV | 88.5% |
| HLG-40H-48(A) | 48V, 0~0.84A | ±1.0% | 300mV | 89.5% |
| HLG-40H-54(A) | 54V, 0~0.75A | ±1.0% | 300mV | 89.5% |

○ = A, B, D or Blank

## HLG-60H Series

| Model No.     | Output      | Tol.  | R&N   | Effi. |
|---------------|-------------|-------|-------|-------|
| HLG-60H-15(A) | 15V, 0~4.0A | ±2.0% | 150mV | 87.5% |
| HLG-60H-20(A) | 20V, 0~3.0A | ±1.0% | 150mV | 89.0% |
| HLG-60H-24(A) | 24V, 0~2.5A | ±1.0% | 150mV | 89.5% |
| HLG-60H-30(A) | 30V, 0~2.0A | ±1.0% | 200mV | 90.0% |

| Model No.     | Output       | Tol.  | R&N   | Effi. |
|---------------|--------------|-------|-------|-------|
| HLG-60H-36(A) | 36V, 0~1.70A | ±1.0% | 200mV | 90.0% |
| HLG-60H-42(A) | 42V, 0~1.45A | ±1.0% | 300mV | 90.0% |
| HLG-60H-48(A) | 48V, 0~1.30A | ±1.0% | 300mV | 90.5% |
| HLG-60H-54(A) | 54V, 0~1.15A | ±1.0% | 300mV | 90.5% |

○ = A, B, D or Blank

## Junction Box for HLG Series



- Optional junction box available for HLG-80H~320H series (A/B/Blank-Type only). Please contact MEAN WELL for details.
- "UL8750 listed" safety & IP66 approved for HLG-80H-□BL (modified from B-Type only)



# HLG series

80~120W High Efficiency with PFC

## Features

- Universal AC input (up to 305VAC) / Full range
- Protections:
  - Short circuit / Over current / Over voltage / Over temperature
- Built-in active PFC function
- High efficiency up to 93.5%
- IP67 / IP65 design for indoor or outdoor installations
- Output current adjustable through output cable or internal potentiometer
- Cooling by free air convection
- Suitable for dry, damp, and wet location
- Suitable for LED lighting and street lighting applications
- Meet 4kV surge immunity level (IEC61000-4-5)
- Class 2 power unit / Pass LPS (except for HLG-120H)

- Multiple models for choice:

**A-Type:** IP65 rated. Output voltage and constant current level can be adjusted through internal potentiometer

**B-Type:** IP67 rated and **built-in 3 in 1 dimming function** (1~10VDC, PWM signal, or resistance)

**Blank-Type:** IP67 rated. Cable for I/O connection

**BL-Type(option):** for HLG-80H B-Type only, "UL8750 listed" safety & IP66 approved, contact MEAN WELL for details

**D-Type(option):** IP67 rated. Timer dimming function, contact MEAN WELL for details (safety pending for 100W/120W)

- Optional CQC models available (HLG-80H/100H/120H-A/Blank type)

• 5 years warranty



|                           |        |                                                                                                                                                                |                                                                                             |
|---------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| AC input voltage range    |        | 90~305VAC ; 127~431VDC                                                                                                                                         |                                                                                             |
| AC inrush current (max.)  |        | Cold start, 70A at 230VAC                                                                                                                                      | Cold start, 60A at 230VAC                                                                   |
| DC adjustment range       |        | ±10% rated output voltage (A-Type only)                                                                                                                        |                                                                                             |
| Current adjustment range  |        | HLG-80H/100H: 60%~100% ; HLG-120H: 50%~100%                                                                                                                    |                                                                                             |
| Over current protection   |        | 95%~108% constant current limiting, auto-recovery                                                                                                              |                                                                                             |
| Over voltage protection   |        | 110%~140% rated output voltage                                                                                                                                 |                                                                                             |
| Setup, rise, hold up time |        | 500ms, 80ms, 16ms at full load and 230VAC                                                                                                                      | 500ms, 50ms, 16ms at full load and 230VAC                                                   |
| Withstand voltage         |        | I/P-O/P: 3.75kVAC, I/P-FG: 2kVAC, O/P-FG:1.5kVAC                                                                                                               |                                                                                             |
| Working temperature       |        | -40~+70℃ (refer to output derating curve)                                                                                                                      |                                                                                             |
| Safety standards          |        | UL8750, TUV EN61347-1, EN61347-2-13, PSE J61347-1, J61347-2-13 approved;<br>UL8750 listed for HLG-80H-□BL only; ENEC EN61347-1, EN61347-2-13 for HLG-120H only |                                                                                             |
| EMC standards             |        | EN55015, EN55022 class B (except for HLG-80H), EN61000-3-2 class C, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, EN61547                                             |                                                                                             |
| Connection                | Input  | UL rated, SJTW 18AWGx3C (30cm)                                                                                                                                 |                                                                                             |
|                           | Output | A/D/Blank-Type: SVT 18AWGx2C (30cm) ;<br>B-Type: SVT 18AWGx2C (30cm)+UL2517 18AWGx2C (30cm)                                                                    | A/D/Blank-Type: SJTW 14AWGx2C (30cm) ;<br>B-Type: SJTW 14AWGx2C (30cm)+SJTW 18AWGx2C (30cm) |
| Dimension (LxWxH) (mm)    |        | 195.6x 61.5x 38.8                                                                                                                                              | 220x 68x 38.8                                                                               |

## HLG-80H Series

| Model No.     | Output       | Tol.  | R&N   | Effi. |
|---------------|--------------|-------|-------|-------|
| HLG-80H-12(A) | 12V, 0~5.0A  | ±2.5% | 150mV | 88.0% |
| HLG-80H-15(A) | 15V, 0~5.0A  | ±2.0% | 150mV | 89.0% |
| HLG-80H-20(A) | 20V, 0~4.0A  | ±1.0% | 150mV | 90.0% |
| HLG-80H-24(A) | 24V, 0~3.4A  | ±1.0% | 150mV | 90.5% |
| HLG-80H-30(A) | 30V, 0~2.7A  | ±1.0% | 200mV | 91.0% |
| HLG-80H-36(A) | 36V, 0~2.3A  | ±1.0% | 200mV | 91.0% |
| HLG-80H-42(A) | 42V, 0~1.95A | ±1.0% | 200mV | 91.0% |
| HLG-80H-48(A) | 48V, 0~1.7A  | ±1.0% | 200mV | 91.0% |
| HLG-80H-54(A) | 54V, 0~1.5A  | ±1.0% | 200mV | 91.0% |

○ = A, B, BL, D or Blank

## HLG-100H Series

| Model No.      | Output       | Tol.  | R&N   | Effi. |
|----------------|--------------|-------|-------|-------|
| HLG-100H-20(A) | 20V, 0~4.8A  | ±1.0% | 150mV | 93%   |
| HLG-100H-24(A) | 24V, 0~4.0A  | ±1.0% | 150mV | 93%   |
| HLG-100H-30(A) | 30V, 0~3.2A  | ±1.0% | 200mV | 93%   |
| HLG-100H-36(A) | 36V, 0~2.65A | ±1.0% | 200mV | 93%   |

| Model No.      | Output       | Tol.  | R&N   | Effi. |
|----------------|--------------|-------|-------|-------|
| HLG-100H-42(A) | 42V, 0~2.28A | ±1.0% | 200mV | 93%   |
| HLG-100H-48(A) | 48V, 0~2.0A  | ±1.0% | 200mV | 93%   |
| HLG-100H-54(A) | 54V, 0~1.77A | ±1.0% | 200mV | 93%   |

○ = A, B, D or Blank

## HLG-120H Series

| Model No.        | Output      | Tol.  | R&N   | Effi. |
|------------------|-------------|-------|-------|-------|
| ★ HLG-120H-12(A) | 12V, 0~10A  | ±2.5% | 150mV | 92.0% |
| HLG-120H-15(A)   | 15V, 0~8.0A | ±2.0% | 150mV | 92.0% |
| HLG-120H-20(A)   | 20V, 0~6.0A | ±1.0% | 150mV | 93.0% |
| ★ HLG-120H-24(A) | 24V, 0~5.0A | ±1.0% | 150mV | 93.0% |
| HLG-120H-30(A)   | 30V, 0~4.0A | ±1.0% | 200mV | 93.0% |
| HLG-120H-36(A)   | 36V, 0~3.4A | ±1.0% | 200mV | 93.0% |
| HLG-120H-42(A)   | 42V, 0~2.9A | ±1.0% | 200mV | 93.0% |
| ★ HLG-120H-48(A) | 48V, 0~2.5A | ±1.0% | 200mV | 93.5% |
| HLG-120H-54(A)   | 54V, 0~2.3A | ±1.0% | 200mV | 93.5% |

○ = A, B, D or Blank

- ★ HLG-120H-12A/24A/48A are our popular models. We will keep sufficient stock for prompt delivery of high quantity orders.

# HLG series

150~240W High Efficiency with PFC

## Features

- Universal AC input (up to 305VAC) / Full range
- Protections:  
Short circuit / Over current / Over voltage / Over temp.
- Built-in active PFC function
- High efficiency up to 94%
- IP67 / IP65 design for indoor or outdoor installations (except for HLG-240H C-Type)
- Output current adjustable
- Cooling by free air convection
- Suitable for LED lighting and street lighting applications
- Meet 4kV surge immunity level (IEC61000-4-5)
- Type HL LED Driver for use in Class I, Division 2 hazardous location luminaires

- Multiple models for choice:

**A-Type:** IP65 rated. Output voltage and constant current level can be adjusted through internal potentiometer

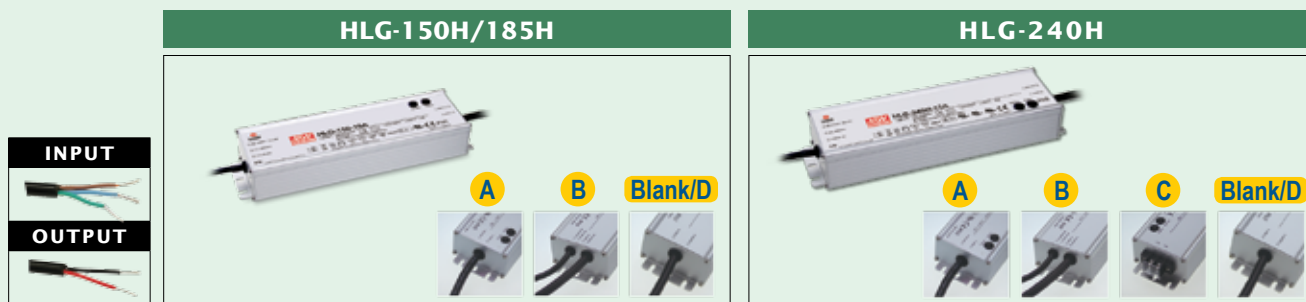
**B-Type:** IP67 rated and built-in 3 in 1 dimming function (1~10VDC, PWM signal, or resistance)

**C-Type:** Terminal block for I/O connection (HLG-240H)

**Blank-Type:** IP67 rated. Cable for I/O connection

**D-Type(option):** IP67 rated. Timer dimming function, contact MEAN WELL for details (safety pending)

- Optional CQC models available (HLG-150H/185H/240H-A/Blank-Type)
- 5 years warranty



|                           |                                                                                                                                                                   |                                                                                                                             |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| AC input voltage range    | 90~305VAC; 127~431VDC                                                                                                                                             |                                                                                                                             |
| AC inrush current (max.)  | Cold start, 65A at 230VAC                                                                                                                                         | Cold start, 75A at 230VAC                                                                                                   |
| DC adjustment range       | ±10% rated output voltage                                                                                                                                         |                                                                                                                             |
| Current adjustment range  | HLG-150H: 60%~100% ; HLG-185H/240H: 50%~100%                                                                                                                      |                                                                                                                             |
| Over current protection   | 95%~108% constant current limiting, auto-recovery                                                                                                                 |                                                                                                                             |
| Over voltage protection   | 110%~140% rated output voltage                                                                                                                                    |                                                                                                                             |
| Setup, rise, hold up time | 500ms, 50ms, 16ms                                                                                                                                                 | 500ms, 80ms, 15ms at full load and 230VAC                                                                                   |
| Withstand voltage         | I/P-O/P: 3.75kVAC, I/P-FG: 2kVAC, O/P-FG: 1.5kVAC                                                                                                                 |                                                                                                                             |
| Working temperature       | -40~+70°C (refer to output derating curve)                                                                                                                        |                                                                                                                             |
| Safety standards          | UL8750, TUV EN61347-1, EN61347-2-13, PSE J61347-1, J61347-2-13 (except for HLG-240H C-Type) approved; UL1012, UL60950-1, TUV EN60950-1 approved for HLG-240H only |                                                                                                                             |
| EMC standards             | EN55015, EN55022 class B, EN61000-3-2 class C, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, EN61547                                                                     |                                                                                                                             |
| Connection                | Input                                                                                                                                                             | UL rated, SJTW 18AWGx3C (30cm); Terminal block for HLG-240H C-Type                                                          |
|                           | Output                                                                                                                                                            | A/D/Blank-Type: SJTW 14AWGx2C (30cm) ; B-Type: SJTW 14AWGx2C (30cm)+SJTW 18AWGx2C (30cm); C-Type: Terminal block (HLG-240H) |
| Dimension (LxWxH)(mm)     | A/B/D/Blank-Type: 228x 68x 38.8<br>C-Type: 251x 68x 38.8                                                                                                          |                                                                                                                             |

## HLG-150H Series



| Model No.      | Output       | Tol.  | R&N   | Effi. |
|----------------|--------------|-------|-------|-------|
| HLG-150H-12(A) | 12V, 0~12.5A | ±2.5% | 150mV | 91.5% |
| HLG-150H-15(A) | 15V, 0~10.0A | ±2.0% | 150mV | 92.0% |
| HLG-150H-20(A) | 20V, 0~7.50A | ±1.0% | 150mV | 93.0% |
| HLG-150H-24(A) | 24V, 0~6.30A | ±1.0% | 150mV | 93.0% |
| HLG-150H-30(A) | 30V, 0~5.00A | ±1.0% | 200mV | 93.5% |
| HLG-150H-36(A) | 36V, 0~4.20A | ±1.0% | 200mV | 93.5% |
| HLG-150H-42(A) | 42V, 0~3.60A | ±1.0% | 200mV | 94.0% |
| HLG-150H-48(A) | 48V, 0~3.20A | ±1.0% | 200mV | 94.0% |
| HLG-150H-54(A) | 54V, 0~2.80A | ±1.0% | 200mV | 94.0% |

○ = A, B, D or Blank

## HLG-185H Series



| Model No.        | Output       | Tol.  | R&N   | Effi. |
|------------------|--------------|-------|-------|-------|
| ★ HLG-185H-12(A) | 12V, 0~13.0A | ±2.5% | 150mV | 91.5% |
| HLG-185H-15(A)   | 15V, 0~11.5A | ±2.0% | 150mV | 92.0% |
| HLG-185H-20(A)   | 20V, 0~9.30A | ±1.0% | 150mV | 93.0% |
| ★ HLG-185H-24(A) | 24V, 0~7.80A | ±1.0% | 150mV | 93.5% |
| HLG-185H-30(A)   | 30V, 0~6.20A | ±1.0% | 200mV | 93.5% |

★ HLG-185H-12A/24A/48A & HLG-240H-12A/24A/48A are our popular models. We will keep sufficient stock for prompt delivery of high quantity orders.

| Model No.        | Output       | Tol.  | R&N   | Effi. |
|------------------|--------------|-------|-------|-------|
| HLG-185H-36(A)   | 36V, 0~5.20A | ±1.0% | 200mV | 93.5% |
| HLG-185H-42(A)   | 42V, 0~4.40A | ±1.0% | 200mV | 94.0% |
| HLG-185H-48(A)   | 48V, 0~3.90A | ±1.0% | 200mV | 94.0% |
| ★ HLG-185H-54(A) | 54V, 0~3.45A | ±1.0% | 200mV | 94.0% |

○ = A, B, D or Blank

## HLG-240H Series



| Model No.        | Output       | Tol.  | R&N   | Effi. |
|------------------|--------------|-------|-------|-------|
| ★ HLG-240H-12(A) | 12V, 0~16.0A | ±2.5% | 150mV | 90.0% |
| HLG-240H-15(A)   | 15V, 0~15.0A | ±2.0% | 150mV | 90.0% |
| HLG-240H-20(A)   | 20V, 0~12.0A | ±1.0% | 150mV | 91.5% |
| ★ HLG-240H-24(A) | 24V, 0~10.0A | ±1.0% | 150mV | 92.5% |
| HLG-240H-30(A)   | 30V, 0~8.00A | ±1.0% | 200mV | 92.5% |
| HLG-240H-36(A)   | 36V, 0~6.70A | ±1.0% | 250mV | 92.5% |
| HLG-240H-42(A)   | 42V, 0~5.72A | ±1.0% | 250mV | 92.5% |
| ★ HLG-240H-48(A) | 48V, 0~5.00A | ±1.0% | 250mV | 93.0% |
| HLG-240H-54(A)   | 54V, 0~4.45A | ±1.0% | 350mV | 93.5% |

○ = A, B, C, D or Blank

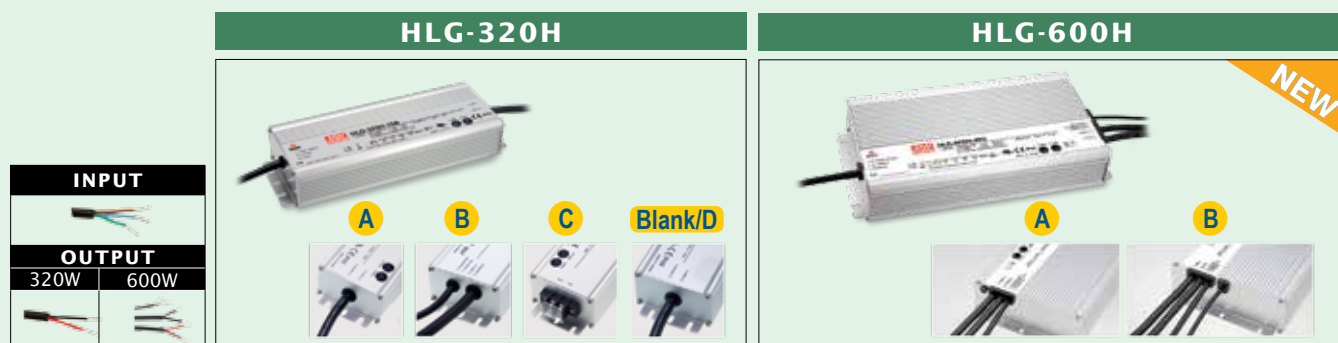
# HLC series

320~600W High efficiency with PFC

## Features

- Universal AC input (up to 305VAC) / Full range
- Protections:  
Short circuit / Over current / Over voltage / Over temp.
- Built-in active PFC function
- High efficiency up to 96%
- IP67 / IP65 design for indoor or outdoor installations (except for HLG-320H C-Type)
- Output current adjustable through output cable or internal potentiometer
- Cooling by free air convection
- Suitable for LED lighting and street lighting applications
- Meet 4kV surge immunity level (IEC61000-4-5)
- No load power consumption <0.5W at remote off (HLG-600H)

- Type HL LED Driver for use in Class I, Division 2 hazardous location luminaires
- LED indicator for power on (HLG-600H A-Type only)
- Multiple models for choice:  
**A-Type:** IP65 rated. Output voltage and constant current level can be adjusted through internal potentiometer  
**B-Type:** IP67 rated and built-in 3 in 1 dimming function (1~10VDC, PWM signal, or resistance)  
**C-Type:** Terminal block for I/O connection (HLG-320H only)  
**Blank-Type:** IP67 rated. Cable for I/O connection (HLG-320H only)  
**D-Type(option):** IP67 rated. Timer dimming function, contact MEAN WELL for details (HLG-320H only)
- 5 years warranty



|                           |                                                                                                   |                                                                                                                                |                                                                                                                                                                                              |
|---------------------------|---------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AC input voltage range    | 90~305VAC; 127~431VDC                                                                             |                                                                                                                                |                                                                                                                                                                                              |
| AC inrush current (max.)  | Cold start, 70A at 230VAC                                                                         |                                                                                                                                |                                                                                                                                                                                              |
| DC adjustment range       | -15%~+13.3% rated output voltage (A-Type & C-Type)                                                | -15%~+5% rated output voltage (A-Type only)                                                                                    |                                                                                                                                                                                              |
| Current adjustment range  | 50%~100% rated output current adjustable by internal potentiometer (for A-Type & HLG-320H C-Type) |                                                                                                                                |                                                                                                                                                                                              |
| Over current protection   | 95%~108% constant current limiting, auto- recovery                                                |                                                                                                                                |                                                                                                                                                                                              |
| Over voltage protection   | 110%~140% rated output voltage                                                                    |                                                                                                                                |                                                                                                                                                                                              |
| Setup, rise, hold up time | 500ms, 80ms, 15ms at full load and 230VAC                                                         |                                                                                                                                |                                                                                                                                                                                              |
| Withstand voltage         | I/P-O/P: 3.75kVAC, I/P-FG: 2kVAC, O/P-FG: 1.5kVAC                                                 |                                                                                                                                |                                                                                                                                                                                              |
| Working temperature       | -40~+70°C ( refer to output dearting curve)                                                       |                                                                                                                                |                                                                                                                                                                                              |
| Safety standards          | UL8750, TUV EN61347-1/2-13, PSE J61347-1/2-13 (HLG-320H A/B/D/Blank-Type only) approved           | UL60950-1, UL8750, ENEC EN61347-1/2-13, EN62384 approved                                                                       |                                                                                                                                                                                              |
| EMC standards             | EN55015, EN55022 class B, EN61000-3-2 class C, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11,EN61547      |                                                                                                                                |                                                                                                                                                                                              |
| Connection                | Input                                                                                             | A/B/D/Blank-Type:<br>UL rated, SJTW 18AWGx3C (30cm);<br>C-Type: Terminal block                                                 | UL rated, SJTW 18AWGx3C (30cm)                                                                                                                                                               |
|                           | Output                                                                                            | A/D/Blank-Type:<br>SJTW 14AWGx2C (30cm)<br>B-Type:<br>SJTW 14AWGx2C (30cm) + SJTW 18AWGx2C (30cm)<br>C-Type:<br>Terminal block | A-Type:<br>SJTW 14AWGx2C (30cm)+ SJTW 14AWGx2C (30cm)<br>+ UL2517 22AWGx3C(30cm)<br>B-Type:<br>SJTW 14AWGx2C (30cm)+ SJTW 14AWGx2C (30cm) +<br>UL2517 22AWGx3C(30cm)+ UL2517 18AWGx2C (30cm) |
| Dimension (LxWxH)(mm)     | 252x 90x 43.8                                                                                     |                                                                                                                                | 280x 144x 48.5                                                                                                                                                                               |

## HLG-320H Series



| Model No.      | Output        | Tol.  | R&N   | Effi. |
|----------------|---------------|-------|-------|-------|
| HLG-320H-12(A) | 12V, 0~22.0A  | ±3.0% | 150mV | 91.0% |
| HLG-320H-15(A) | 15V, 0~19.0A  | ±2.0% | 150mV | 92.5% |
| HLG-320H-20(A) | 20V, 0~15.0A  | ±1.5% | 150mV | 93.5% |
| HLG-320H-24(A) | 24V, 0~13.34A | ±1.0% | 150mV | 94.0% |
| HLG-320H-30(A) | 30V, 0~10.7A  | ±1.0% | 200mV | 94.0% |
| HLG-320H-36(A) | 36V, 0~8.90A  | ±1.0% | 250mV | 94.5% |
| HLG-320H-42(A) | 42V, 0~7.65A  | ±1.0% | 250mV | 95.0% |
| HLG-320H-48(A) | 48V, 0~6.70A  | ±1.0% | 250mV | 95.0% |
| HLG-320H-54(A) | 54V, 0~5.95A  | ±1.0% | 350mV | 95.0% |

○ = A, B, C, D or Blank

## HLG-600H Series



| Model No.      | Output       | Tol.  | R&N   | Effi. |
|----------------|--------------|-------|-------|-------|
| HLG-600H-12(A) | 12V, 0~40A   | ±3%   | 150mV | 92.0% |
| HLG-600H-15(A) | 15V, 0~36A   | ±2%   | 150mV | 93.5% |
| HLG-600H-20(A) | 20V, 0~28A   | ±1.5% | 150mV | 94.5% |
| HLG-600H-24(A) | 24V, 0~25A   | ±1.0% | 150mV | 95.0% |
| HLG-600H-30(A) | 30V, 0~20A   | ±1.0% | 200mV | 95.0% |
| HLG-600H-36(A) | 36V, 0~16.7A | ±1.0% | 250mV | 95.5% |
| HLG-600H-42(A) | 42V, 0~14.3A | ±1.0% | 250mV | 96.0% |
| HLG-600H-48(A) | 48V, 0~12.5A | ±1.0% | 250mV | 96.0% |
| HLG-600H-54(A) | 54V, 0~11.2A | ±1.0% | 350mV | 96.0% |

○ = A, B



# HLG-C series

70~200W Constant Current with PFC

## ► Features

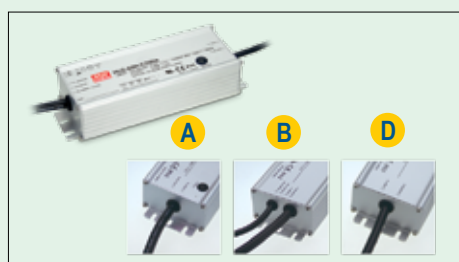
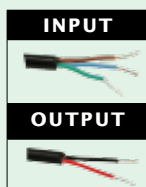
- Constant current output with high output voltage >60VDC
- Universal AC input (up to 305VAC) / Full range
- Built-in active PFC function
- High efficiency up to 94%
- Protections: Short circuit / Over voltage / Over temperature
- Cooling by free air convection
- Output current adjustable through output cable or internal potentiometer
- IP67 / IP65 design for indoor or outdoor installations
- Suitable for dry, damp, and wet location
- Suitable for LED lighting and street lighting applications
- Multiple models for choice:
  - A-Type:** IP65 rated. Constant current level can be adjusted through internal potentiometer
  - B-Type:** IP67 rated and built-in 3 in 1 dimming function (1~10VDC, PWM signal, or resistance)
  - D-Type (option):** IP67 rated. Timer dimming function, contact MEAN WELL for details
- 5 years warranty

### HLG-60H-C

### HLG-80H-C

### HLG-120H-C

### HLG-185H-C



|                           |        |                                                                                                                                            |                   |                                                                                                                                                                                                                                                            |                           |
|---------------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| AC input voltage range    |        | 90~305VAC; 127VDC~431VDC                                                                                                                   |                   |                                                                                                                                                                                                                                                            |                           |
| AC inrush current (max.)  |        | Cold start, 60A at 230VAC                                                                                                                  |                   | Cold start, 50A at 230VAC                                                                                                                                                                                                                                  | Cold start, 55A at 230VAC |
| Current adjustment range  |        | 60%~100%                                                                                                                                   |                   | 50%~100%                                                                                                                                                                                                                                                   |                           |
| Short circuit protection  |        | Hiccup mode, auto-recovery                                                                                                                 |                   | Constant current limiting, auto-recovery                                                                                                                                                                                                                   |                           |
| Over temp. protection     |        | Shut down o/p voltage, re-power on to recover                                                                                              |                   | Shut down o/p voltage, auto-recovery                                                                                                                                                                                                                       |                           |
| Setup, rise, hold up time |        | 500ms, 80ms, 16ms at full load and 230VAC                                                                                                  |                   |                                                                                                                                                                                                                                                            |                           |
| Withstand voltage         |        | I/P-O/P:3.75kVAC, I/P-FG:2kVAC, O/P-FG:1.5kVAC                                                                                             |                   |                                                                                                                                                                                                                                                            |                           |
| Working temperature       |        | -40~+70°C (refer to output derating curve)                                                                                                 |                   |                                                                                                                                                                                                                                                            |                           |
| Safety standards          |        | HLG-60H-C/80H-C: UL8750, TUV EN61347-1, EN61347-2-13 approved<br>HLG-120H-C/185H-C: UL8750, ENEC EN61347-1, EN61347-2-13, EN62384 approved |                   |                                                                                                                                                                                                                                                            |                           |
| EMC standards             |        | EN55015, EN61000-3-2 class C, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, EN61547                                                               |                   |                                                                                                                                                                                                                                                            |                           |
| Connection                | Input  | UL rated, SJTW 16AWGx3C(30cm)                                                                                                              |                   |                                                                                                                                                                                                                                                            |                           |
|                           | Output | A&D-Type: SJTW 16AWGx2C(30cm)<br>B-Type: SJTW 16AWGx2C(30cm)+<br>SJTW 16AWGx2C(30cm)                                                       |                   | A&D-Type: STW 16AWGx2C(30cm) for HLG-120H-C350 and<br>HLG-185H-C500; SJTW 16AWGx2C(30cm) for others<br>B-Type: STW 16AWGx2C(30cm) + SJTW 16AWGx2C(30cm)<br>for HLG-120H-C350 and HLG-185H-C500;<br>SJTW 16AWGx2C(30cm) + SJTW 16AWGx2C(30cm)<br>for others |                           |
| Dimension (LxWxH)(mm)     |        | 171x 61.5x 36.8                                                                                                                            | 195.6x 61.5x 38.8 | 220x 68x 38.8                                                                                                                                                                                                                                              | 228x 68x 38.8             |

## HLG-60H-C Series (70W)



| Model No.       | Output          | Io Tol. | R&N  | Effi. |
|-----------------|-----------------|---------|------|-------|
| HLG-60H-C350(A) | 100~200V, 350mA | ±5%     | 1V   | 91%   |
| HLG-60H-C700(A) | 50~100V, 700mA  | ±5%     | 0.5V | 90.5% |

○ = A, B or D

## HLG-120H-C Series (150W)



| Model No.         | Output          | Io Tol. | R&N  | Effi. |
|-------------------|-----------------|---------|------|-------|
| HLG-120H-C350(A)  | 215~430V, 350mA | ±5%     | 2V   | 94%   |
| HLG-120H-C500(A)  | 150~300V, 500mA | ±5%     | 1.5V | 94%   |
| HLG-120H-C700(A)  | 107~215V, 700mA | ±5%     | 1V   | 94%   |
| HLG-120H-C1050(A) | 74~148V, 1050mA | ±5%     | 1V   | 94%   |
| HLG-120H-C1400(A) | 54~108V, 1400mA | ±5%     | 1V   | 93.5% |

○ = A, B or D

## HLG-80H-C Series (90W)



| Model No.       | Output          | Io Tol. | R&N  | Effi. |
|-----------------|-----------------|---------|------|-------|
| HLG-80H-C350(A) | 167~257V, 350mA | ±5%     | 1V   | 91.5% |
| HLG-80H-C700(A) | 84~129V, 700mA  | ±5%     | 0.5V | 91.5% |

○ = A, B or D

## HLG-185H-C Series (200W)



| Model No.         | Output          | Io Tol. | R&N  | Effi. |
|-------------------|-----------------|---------|------|-------|
| HLG-185H-C500(A)  | 200~400V, 500mA | ±5%     | 2V   | 94%   |
| HLG-185H-C700(A)  | 143~286V, 700mA | ±5%     | 1.5V | 94%   |
| HLG-185H-C1050(A) | 95~190V, 1050mA | ±5%     | 1V   | 94%   |
| HLG-185H-C1400(A) | 71~143V, 1400mA | ±5%     | 1V   | 94%   |

○ = A, B or D

# HVG series

65~150W Wide Input Range with PFC

## ► Features

- 180~528VAC wide input range
- Protections: Short circuit / Over current / Over voltage / Over temperature
- Built-in active PFC function
- High efficiency up to 91.5%
- IP67 / IP65 design for indoor or outdoor installations
- Cooling by free air convection
- Output current adjustable through output cable or internal potentiometer
- Class 2 power unit / Pass LPS for HVG-65/100

- Suitable for dry, damp, and wet location
- Suitable for LED lighting and street lighting applications
- Multiple models for choice:
  - A-Type:** IP65 rated. Output voltage and constant current level can be adjusted through internal potentiometer
  - B-Type:** IP67 rated and **built-in 3 in 1 dimming function** (0~10VDC, PWM signal, or resistance)
  - D-Type (option):** IP67 rated. Timer dimming function, contact MEAN WELL for details
- 5 years warranty



|                           |        |          |                                                                                                   |  |                                                  |                                                  |
|---------------------------|--------|----------|---------------------------------------------------------------------------------------------------|--|--------------------------------------------------|--------------------------------------------------|
| AC input voltage range    |        |          | 180~528VAC (single phase); 254~747VDC                                                             |  |                                                  |                                                  |
| AC inrush current (max.)  |        |          | Cold start, 25A at 480VAC                                                                         |  | Cold start, 25A at 480VAC                        | Cold start, 35A at 480VAC                        |
| DC adjustment range       |        |          | ±10% rated output voltage                                                                         |  |                                                  |                                                  |
| Current adjustment range  |        |          | 60%~100%                                                                                          |  | 55%~100%                                         |                                                  |
| Over current protection   |        |          | 95%~108% constant current limiting, auto-recovery                                                 |  |                                                  |                                                  |
| Over voltage protection   |        |          | 110%~140% rated output voltage                                                                    |  |                                                  |                                                  |
| Setup, rise, hold up time |        |          | 400ms, 80ms, 16ms at full load and 347VAC/480VAC                                                  |  | 500ms, 80ms, 30ms at full load and 347VAC/480VAC | 400ms, 80ms, 18ms at full load and 347VAC/480VAC |
| Withstand voltage         |        |          | I/P-O/P: 3.75kVAC, I/P-FG: 2kVAC, O/P-FG: 1.5kVAC                                                 |  |                                                  |                                                  |
| Working temperature       |        |          | -40~+70°C (refer to output derating curve)                                                        |  |                                                  |                                                  |
| Safety standards          |        |          | UL8750 approved                                                                                   |  |                                                  |                                                  |
| EMC standards             |        |          | EN55015, EN61000-3-2 class C, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, EN61547, FCC part 15 class B |  |                                                  |                                                  |
| Connection                | Input  |          | UL rated, STW 18AWGx3C (30cm)                                                                     |  |                                                  |                                                  |
|                           | Output | A&D-Type | SVT 18AWGx2C (30cm)                                                                               |  | SJTW 14AWGx2C (30cm)                             |                                                  |
|                           |        | B-Type   | SVT 18AWGx2C (30cm)+UL2517 18AWGx2C (30cm)                                                        |  | SJTW 14AWGx2C (30cm)+UL2517 18AWGx2C (30cm)      |                                                  |
| Dimension (LxWxH)(mm)     |        |          | 189x 61.5x 36.8                                                                                   |  | 236x 68x 38.8                                    | 245x 68x 38.8                                    |

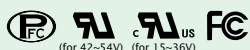
## HVG-65 Series



| Model No.    | Output       | Tol.  | R&N   | Effi. |
|--------------|--------------|-------|-------|-------|
| HVG-65-12(A) | 12V, 0~5A    | ±2.0% | 120mV | 86.5% |
| HVG-65-15(A) | 15V, 0~4.3A  | ±2.0% | 150mV | 87.5% |
| HVG-65-20(A) | 20V, 0~3.25A | ±1.0% | 150mV | 88.5% |
| HVG-65-24(A) | 24V, 0~2.71A | ±1.0% | 150mV | 89.0% |
| HVG-65-30(A) | 30V, 0~2.17A | ±1.0% | 200mV | 89.0% |
| HVG-65-36(A) | 36V, 0~1.81A | ±1.0% | 200mV | 89.5% |
| HVG-65-42(A) | 42V, 0~1.55A | ±1.0% | 300mV | 89.5% |
| HVG-65-48(A) | 48V, 0~1.36A | ±1.0% | 300mV | 90.0% |
| HVG-65-54(A) | 54V, 0~1.21A | ±1.0% | 300mV | 90.0% |

○ = A, B or D

## HVG-100 Series



| Model No.     | Output      | Tol.  | R&N   | Effi. |
|---------------|-------------|-------|-------|-------|
| HVG-100-15(A) | 15V, 0~5A   | ±2.0% | 150mV | 89.0% |
| HVG-100-20(A) | 20V, 0~4.8A | ±1.0% | 150mV | 90.0% |
| HVG-100-24(A) | 24V, 0~4A   | ±1.0% | 150mV | 91.0% |
| HVG-100-30(A) | 30V, 0~3.2A | ±1.0% | 200mV | 91.0% |

| Model No.     | Output       | Tol.  | R&N   | Effi. |
|---------------|--------------|-------|-------|-------|
| HVG-100-36(A) | 36V, 0~2.65A | ±1.0% | 200mV | 90.5% |
| HVG-100-42(A) | 42V, 0~2.28A | ±1.0% | 200mV | 90.5% |
| HVG-100-48(A) | 48V, 0~2A    | ±1.0% | 200mV | 91.0% |
| HVG-100-54(A) | 54V, 0~1.77A | ±1.0% | 200mV | 91.0% |

○ = A, B or D

## HVG-150 Series



| Model No.     | Output       | Tol.  | R&N   | Effi. |
|---------------|--------------|-------|-------|-------|
| HVG-150-12(A) | 12V, 0~10A   | ±2.5% | 150mV | 87.0% |
| HVG-150-15(A) | 15V, 0~10A   | ±2.0% | 150mV | 89.0% |
| HVG-150-20(A) | 20V, 0~7.5A  | ±1.0% | 150mV | 90.5% |
| HVG-150-24(A) | 24V, 0~6.25A | ±1.0% | 150mV | 91.0% |
| HVG-150-30(A) | 30V, 0~5A    | ±1.0% | 200mV | 91.0% |
| HVG-150-36(A) | 36V, 0~4.17A | ±1.0% | 200mV | 91.0% |
| HVG-150-42(A) | 42V, 0~3.58A | ±1.0% | 200mV | 91.0% |
| HVG-150-48(A) | 48V, 0~3.13A | ±1.0% | 200mV | 91.5% |
| HVG-150-54(A) | 54V, 0~2.78A | ±1.0% | 200mV | 91.5% |

○ = A, B or D

# HVGC series

65~150W Wide Input Range with C.C. Output

## Features

- 180~528VAC wide input range
- Protections: Short circuit / Over voltage / Over temperature
- Built-in active PFC function
- High efficiency up to 91%
- IP67 / IP65 design for indoor or outdoor installations
- Cooling by free air convection
- Constant current mode
- Output current adjustable through output cable or internal potentiometer
- Suitable for dry, damp, and wet location
- Suitable for LED lighting and street lighting applications
- Multiple models for choice:
  - A-Type:** IP65 rated. Constant current level can be adjusted through internal potentiometer
  - B-Type:** IP67 rated and built-in 3 in 1 dimming function (0~10VDC, PWM signal, or resistance)
  - D-Type (option):** IP67 rated. Timer dimming function, contact MEAN WELL for details
- 5 years warranty

|                                              |        | HVGC-65                                                                                                                       |                                             | HVGC-100                                         |  | HVGC-150                                          |  |
|----------------------------------------------|--------|-------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|--------------------------------------------------|--|---------------------------------------------------|--|
| <div><div>INPUT</div><div>OUTPUT</div></div> |        | <div><div>NEW</div><div></div></div>        |                                             |                                                  |  |                                                   |  |
| AC input voltage range                       |        | 180~528VAC (single phase); 254~747VDC                                                                                         |                                             |                                                  |  |                                                   |  |
| AC inrush current (max.)                     |        | Cold start, 25A at 480VAC                                                                                                     |                                             |                                                  |  | Cold start, 35A at 480VAC                         |  |
| Current adjustment range                     |        | 60%~100%                                                                                                                      |                                             |                                                  |  |                                                   |  |
| Over voltage protection                      |        | 105%~115% rated output voltage                                                                                                |                                             |                                                  |  |                                                   |  |
| Setup, rise, hold up time                    |        | 400ms, 80ms, 16ms at full load and 347VAC/480VAC                                                                              |                                             | 500ms, 80ms, 30ms at full load and 347VAC/480VAC |  | 400ms, 150ms, 18ms at full load and 347VAC/480VAC |  |
| Withstand voltage                            |        | I/P-O/P: 3.75kVAC, I/P-FG: 2kVAC, O/P-FG: 1.5kVAC                                                                             |                                             |                                                  |  |                                                   |  |
| Working temperature                          |        | -40~+70℃ (refer to output derating curve)                                                                                     |                                             |                                                  |  |                                                   |  |
| Safety standards                             |        | HVGC-65: UL8750, ENEC EN61347-1, EN61347-2-13, EN62384 approved<br>HVGC-100/150: UL8750, TUV EN61347-1, EN61347-2-13 approved |                                             |                                                  |  |                                                   |  |
| EMC standards                                |        | EN55015, EN61000-3-2 class C, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, EN61547, FCC part 15 class B                             |                                             |                                                  |  |                                                   |  |
| Connection                                   | Input  |                                                                                                                               | UL rated, STW 18AWGx3C (30cm)               |                                                  |  |                                                   |  |
|                                              | Output | A&D-Type                                                                                                                      | SJTW 18AWGx2C (30cm)                        |                                                  |  | STW 18AWGx2C (30cm)                               |  |
|                                              |        | B-Type                                                                                                                        | SJTW 18AWGx2C (30cm)+UL2517 18AWGx2C (30cm) |                                                  |  | STW 18AWGx2C (30cm)+UL2517 18AWGx2C (30cm)        |  |
| Dimension (LxWxH)(mm)                        |        | 189x 61.5x 36.8                                                                                                               |                                             | 236x 68x 38.8                                    |  | 245x 68x 38.8                                     |  |

## HVGC-65 Series



| Model No.       | Output         | Io Tol. | R&N  | Effi. |
|-----------------|----------------|---------|------|-------|
| HVGC-65-350(A)  | 18~186V, 350mA | ±5%     | 1.0V | 90.0% |
| HVGC-65-500(A)  | 13~130V, 500mA | ±5%     | 0.7V | 90.5% |
| HVGC-65-700(A)  | 9~93V, 700mA   | ±5%     | 0.5V | 90.5% |
| HVGC-65-1050(A) | 6~62V, 1050mA  | ±5%     | 0.3V | 90.0% |

○ = A, B or D

## HVGC-100 Series



| Model No.       | Output         | Io Tol. | R&N  | Effi. |
|-----------------|----------------|---------|------|-------|
| HVGC-100-350(A) | 29~285V, 350mA | ±5%     | 1V   | 91%   |
| HVGC-100-700(A) | 15~142V, 700mA | ±5%     | 0.5V | 91%   |

○ = A, B or D

## HVGC-150 Series



| Model No.        | Output          | Io Tol. | R&N  | Effi. |
|------------------|-----------------|---------|------|-------|
| HVGC-150-350(A)  | 42~428V, 350mA  | ±5%     | 2.0V | 91%   |
| HVGC-150-500(A)  | 30~300V, 500mA  | ±5%     | 1.5V | 91%   |
| HVGC-150-700(A)  | 21~215V, 700mA  | ±5%     | 1.0V | 91%   |
| HVGC-150-1050(A) | 15~143V, 1050mA | ±5%     | 0.7V | 90%   |
| HVGC-150-1400(A) | 12~107V, 1400mA | ±5%     | 0.5V | 90%   |

○ = A, B or D



# HBG series

## 60~240W Circular Shape for Bay Lighting

### Description

HBG series are high performance LED power supplies specially designed for the high/low bay lighting and spot lighting applications. Featuring with circular shape, these series are easy to be assembled with the mechanical structure of high/low bay lighting fixtures. The enclosures can be perfectly configured with the heat sink of lighting fixtures and provide excellent heat dissipation ability, which solve the mechanism limits of old style bay lighting systems using slim shape LED power supplies. (HBG-60 also offers models in PCB type, allowing a better variety for lighting module design consideration.) As long as the temperature on the top of the enclosure can be controlled under 70°C, the power supply service life could be guaranteed up to 40,000 hours. For more detail information, please visit our website: [www.meanwell.com/product/HBG/HBG.html](http://www.meanwell.com/product/HBG/HBG.html)

| HBG-60                                                                                                                                                      | HBG-100                                                                                                                    | HBG-160                                                                                                                        | HBG-240                                                                                                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| <br>DxH: $\phi 100 \times 25 \text{mm}$ DxH: $\phi 110 \times 40 \text{mm}$ | <br>DxH: $\phi 130 \times 66.5 \text{mm}$ | <br>DxH: $\phi 151.68 \times 66.5 \text{mm}$ | <br>DxH: $\phi 191.5 \times 69 \text{mm}$ |

### Features

- HBG-60: 90~295VAC input; HBG-100~240: 90~305VAC input
- Built-in active PFC function
- High efficiency up to 93.5%
- Protections: Short circuit / Over current / Over voltage / Over temp. (Short circuit / Over temp. for HBG-60)
- Output current adjustable through internal potentiometer
- Suitable for dry, damp, and wet location
- Two configurations for HBG-60 (constant current mode):  
**Blank-Type:** Enclosed type (plastic enclosure); **P-Type:** PCB type
- Multiple models for HBG-100/160/240 (aluminum case)  
**A-Type:** IP65 rated. Constant current level can be adjusted through internal potentiometer  
**B-Type:** IP67 rated and **built-in 3 in 1 dimming function** (1~10VDC, PWM signal, or resistance)  
**Blank-Type:** IP67 rated. Cable for I/O connection  
**E-Type(option):** IP67 rated. Can be fixed by steel support, contact MEAN WELL for details (HBG-100/160 only)
- 5 years warranty

### HBG-60 Series

UL/CUL/ENEC/CE pending

| Model No.     | Output         | Io Tol. | Effi. |
|---------------|----------------|---------|-------|
| HBG-60-1050 ○ | 37~55V, 1050mA | ±5%     | 91%   |
| HBG-60-1400 ○ | 28~43V, 1400mA | ±5%     | 90%   |
| HBG-60-2100 ○ | 19~29V, 2100mA | ±5%     | 89%   |

○ = Blank, P; Blank: Enclosed type, P: PCB type

### HBG-100 Series

UL/CUL/ENEC/CE pending

| Model No.     | Output      | Tol. | Effi. |
|---------------|-------------|------|-------|
| HBG-100-24(A) | 24V, 0~4A   | ±2%  | 90.5% |
| HBG-100-36(A) | 36V, 0~2.7A | ±2%  | 91.0% |
| HBG-100-48(A) | 48V, 0~2A   | ±2%  | 91.0% |
| HBG-100-60(A) | 60V, 0~1.6A | ±2%  | 91.5% |

○ = A, B, E or Blank

### HBG-160 Series

UL/CUL/ENEC/CE pending

| Model No.     | Output      | Tol. | Effi. |
|---------------|-------------|------|-------|
| HBG-160-24(A) | 24V, 0~6.5A | ±2%  | 92.0% |
| HBG-160-36(A) | 36V, 0~4.4A | ±2%  | 92.0% |
| HBG-160-48(A) | 48V, 0~3.3A | ±2%  | 93.0% |
| HBG-160-60(A) | 60V, 0~2.6A | ±2%  | 93.5% |

○ = A, B, E or Blank

### HBG-240 Series

UL/CUL/ENEC/CE pending

| Model No.     | Output      | Tol. | Effi. |
|---------------|-------------|------|-------|
| HBG-240-24(A) | 24V, 0~10A  | ±2%  | 92.5% |
| HBG-240-36(A) | 36V, 0~6.7A | ±2%  | 92.5% |
| HBG-240-48(A) | 48V, 0~5A   | ±2%  | 93.0% |
| HBG-240-60(A) | 60V, 0~4A   | ±2%  | 93.5% |

○ = A, B or Blank

### Construction of High Bay Light with HBG-100/160/240

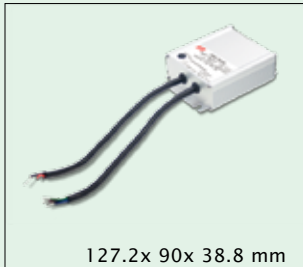


### Installations with HBG-100/160/240

| Spot Light                                                                          | Stage Light                                                                         | High Bay Light                                                                        |                                                                                       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |  |
|                                                                                     |                                                                                     | Chain Type                                                                            | Hanger Type                                                                           |

# HSG/ULP series & Surge Protection Device

## HSG-70 series 70W Rectangular Metal Case



127.2x 90x 38.8 mm

- Universal AC input (up to 305VAC)
- Protections:
  - Short circuit / Over current / Over voltage / Over temperature
- Built-in active PFC function
- Output current adjustable through internal potentiometer
- IP65 design
- Cooling by free air convection
- Suitable for LED lighting and moving sign applications
- 3 years warranty

|                          |        |                                                                                    |
|--------------------------|--------|------------------------------------------------------------------------------------|
| AC input voltage range   |        | 90~305VAC; 127~431VDC                                                              |
| Current adjustment range |        | 60%~100%                                                                           |
| Over current protection  |        | 95%~108% constant current limiting                                                 |
| Over voltage protection  |        | 112%~140% rated output voltage                                                     |
| Withstand voltage        |        | I/P-O/P: 3.75kVAC,<br>I/P-FG: 2kVAC, O/P-FG: 0.5kVAC                               |
| Working temperature      |        | -40~+70℃<br>(refer to output derating curve)                                       |
| Safety standards         |        | Design refer to UL 8750,<br>EN61347-1, EN61347-2-13                                |
| EMC standards            |        | EN55015, EN61000-3-2 class C,<br>EN61000-3-3, EN61547,<br>EN61000-4-2,3,4,5,6,8,11 |
| Connection               | Input  | CCC 1.5mm²x2C (30cm)                                                               |
|                          | Output | H05RN-F 1.0mm²x3C (30cm)                                                           |

| Model No. | Output      | Tol.  | R&N   | Effi. |
|-----------|-------------|-------|-------|-------|
| HSG-70-12 | 12V, 0~5A   | ±2.5% | 150mV | 88%   |
| HSG-70-18 | 18V, 0~4A   | ±2.0% | 200mV | 89%   |
| HSG-70-24 | 24V, 0~3A   | ±1.0% | 200mV | 89%   |
| HSG-70-36 | 36V, 0~2A   | ±1.0% | 200mV | 90%   |
| HSG-70-48 | 48V, 0~1.5A | ±1.0% | 200mV | 90%   |

## ULP-150 series 150W U-Bracket Single Output with PFC



215x 67.4x 33 mm

- Universal AC input (up to 295VAC)
- Built-in active PFC function
- High efficiency up to 93%
- Protections:
  - Short circuit / Overload / Over voltage / Over temperature
- **Constant voltage mode**
- Cooling by free air convection
- U-bracket low profile: 33mm
- 3 years warranty

|                           |                                                                              |
|---------------------------|------------------------------------------------------------------------------|
| AC input voltage range    | 90~295VAC; 127~417VDC                                                        |
| AC inrush current (max.)  | Cold start, 65A at 230VAC                                                    |
| Overload protection       | 130%~185% hiccup mode, auto-recovery                                         |
| Over voltage protection   | 110%~135% rated output voltage                                               |
| Setup, rise, hold up time | 500ms, 100ms, 16ms at full load and 230VAC                                   |
| Withstand voltage         | I/P-O/P: 3.75kVAC, I/P-FG: 2kVAC, O/P-FG: 0.5kVAC                            |
| Working temperature       | -30~+70°C (refer to output derating curve)                                   |
| Safety standards          | Design refer to UL8750, EN61347-1, EN61347-2-13                              |
| EMC standards             | EN55015, EN61000-3-2 class C, EN61000-3-3, EN61547, EN61000-4-2,3,4,5,6,8,11 |

| Model No.  | Output       | Tol. | R&N   | Effi. |
|------------|--------------|------|-------|-------|
| ULP-150-12 | 12V, 0~12.5A | ±2%  | 100mV | 91.5% |
| ULP-150-15 | 15V, 0~10A   | ±2%  | 150mV | 91.5% |
| ULP-150-24 | 24V, 0~6.3A  | ±2%  | 150mV | 93.0% |
| ULP-150-36 | 36V, 0~4.2A  | ±2%  | 250mV | 93.0% |
| ULP-150-48 | 48V, 0~3.2A  | ±2%  | 250mV | 93.0% |

## SPD-20

## 20kA Surge Protection Device



90x 70x 50 mm

- UL1449 3<sup>rd</sup> Edition, Type 2 component assemblies
- Line to Ground & Line to Line protected
- Parallel (3 wires) connection style
- LED status indicators
- IP67 design
- Suitable for surge protection of LED drivers



(SPD-20-240P)

|                                          |                                                         |                  |                                         |
|------------------------------------------|---------------------------------------------------------|------------------|-----------------------------------------|
| Model No.                                | SPD-20-240P                                             |                  | SPD-20-277P                             |
| Operating voltage                        | 240VAC, 50/60Hz                                         |                  | 277VAC, 50/60Hz                         |
| MCOV (Max. Continuous Operating Voltage) | 300VAC                                                  |                  | 320VAC                                  |
| VPR (Voltage Protection Rating)          | ≤1500V (L-FG, N-FG, L-N)                                |                  |                                         |
| IN (Nominal Discharge Current)           | 5kA                                                     |                  |                                         |
| Max. Surge Current (8/20μs)              | 20kA                                                    |                  |                                         |
| SCCR (Short Circuit Current Rating)      | 5kA                                                     |                  |                                         |
| Response time                            | <25ns                                                   |                  |                                         |
| Operating temperature                    | -40~+70°C                                               |                  |                                         |
| Safety standard                          | UL1449 3 <sup>rd</sup> Edition, TUV EN61643-11 approved |                  | UL1449 3 <sup>rd</sup> Edition approved |
| Connection                               | L (Black)                                               | FEP 10AWG (15cm) |                                         |
|                                          | N (White)                                               |                  |                                         |
|                                          | FG (Green)                                              |                  |                                         |

# DALI to PWM Converter & DC/DC Driver

## DAP-04

## 4 Channel DALI to PWM Converter



**NEW**



165x 46x 23 mm

### INPUT



### OUTPUT



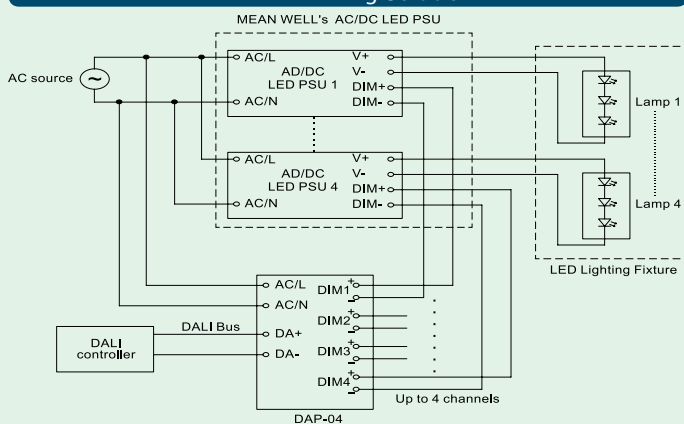
- Universal AC input (up to 305VAC)
- **Convert DALI signal to PWM signal**
- 4 DALI addressable output channels
- Built-in push dim function
- Dimming range: 1~100%
- Comply with DALI standards (IEC62386-101,102,207)
- PWM active high or active low selectable
- Linear or logarithm dimming curve selectable (comply with IEC62386-207)

- Built-in relay for ON/OFF control of LED PSU
- Fully isolated plastic case
- Class II power unit, no FG
- Power consumption < 0.5W
- Suitable to use along with MEAN WELL's AC/DC LED PSU with 3-in-1 dimming function
- 3 years warranty

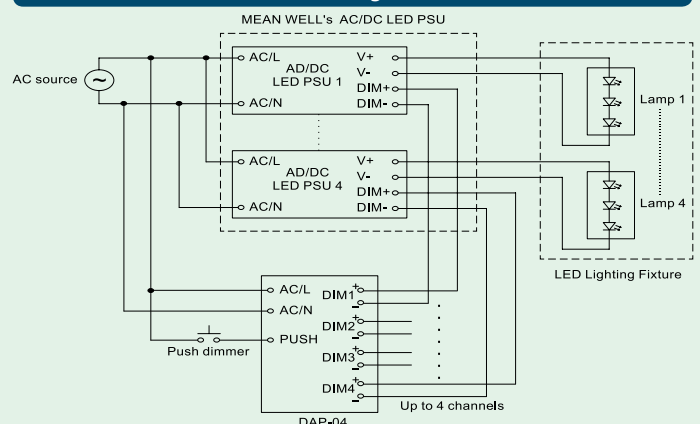
|                         |                                                                                 |
|-------------------------|---------------------------------------------------------------------------------|
| AC input voltage range  | 90~305VAC ; 127~431VDC                                                          |
| Power consumption(typ.) | 0.5W                                                                            |
| Input signal            | DALI or push dim                                                                |
| Output signal           | PWM, 1 KHz                                                                      |
| Output channel          | 4 channels                                                                      |
| Output PWM logic        | Active high or active low selectable by jumper (Factory setting is active high) |
| Working temperature     | -30~+60°C (refer to output derating curve)                                      |
| Safety standards        | EN61347-1, EN61347-2-11, EN61058-1 clause 8/17/20/25 approved                   |
| DALI standards          | Comply with IEC62386-101, 102, 207                                              |
| EMC standards           | EN55015, EN61000-3-2,3, EN61000-4-2,3,4,5,6,8,11, EN61547                       |

### Connection of Dimming Operation

#### DALI Dimming Solution



#### Push Dimming Solution



## LDH-45 Series

## DC-DC Constant Current LED Driver



75x53x22.7 mm

- **Constant current step-up LED driver**
- Wide input and output voltage range
- High efficiency up to 95%
- PWM + analog dimming and remote ON/OFF control
- Protections: Short circuit / Over voltage / Under voltage

- Cooling by free air convection
- Operating temperature range: -40~+70°C
- Fully enclosed plastic case (UL 94V-0)
- 3 years warranty



|                                 |                                                                                                                                                                  |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output current accuracy         | ±5%                                                                                                                                                              |
| PWM dimming & ON/OFF control    | Remote ON/OFF: Leave open if not used<br>▪ Power ON with dimming: DIM ~ DIM- > 2~8VDC or open circuit ▪ Power OFF: DIM ~ DIM- < 0.5VDC or short                  |
|                                 | PWM frequency: 1K~10KHz                                                                                                                                          |
| Analog dimming & ON/OFF control | Remote ON/OFF: Leave open if not used<br>▪ Power ON with dimming: Analog DIM ~ DIM- > 0.25~8VDC or open circuit ▪ Power OFF: Analog DIM ~ DIM- < 0.2VDC or short |
|                                 | Short circuit protection: Power OFF and fuse open                                                                                                                |
| Over voltage protection         | >116% rated output voltage                                                                                                                                       |
| Working temperature             | -40~+70°C (refer to output derating curve)                                                                                                                       |
| EMC standards                   | EN55015, EN61547, EN61000-4-2,3,4,6,8                                                                                                                            |

### LDH-45A Series

| Model No.     | Input (VDC) | Output        |              | Io Tol. | Effi. |
|---------------|-------------|---------------|--------------|---------|-------|
|               |             | Voltage (VDC) | Current (mA) |         |       |
| LDH-45A-350□  | 9~18        | 12~86         | 350mA        | ±5%     | 91%   |
| LDH-45A-500□  | 9~18        | 12~86         | 500mA        | ±5%     | 90%   |
| LDH-45A-700□  | 9~18        | 12~64         | 700mA        | ±5%     | 90%   |
| LDH-45A-1050□ | 9~18        | 12~43         | 1050mA       | ±5%     | 91%   |

### LDH-45B Series

| Model No.     | Input (VDC) | Output        |              | Io Tol. | Effi. |
|---------------|-------------|---------------|--------------|---------|-------|
|               |             | Voltage (VDC) | Current (mA) |         |       |
| LDH-45B-350□  | 18~32       | 21~126        | 350mA        | ±5%     | 93%   |
| LDH-45B-500□  | 18~32       | 21~86         | 500mA        | ±5%     | 94%   |
| LDH-45B-700□  | 18~32       | 21~64         | 700mA        | ±5%     | 95%   |
| LDH-45B-1050□ | 18~32       | 21~43         | 1050mA       | ±5%     | 95%   |

□ = Blank, W ; Blank: pin style, W: wire style

□ = Blank, W ; Blank: pin style, W: wire style



# LDD-L series

## DC-DC Constant Current LED Driver

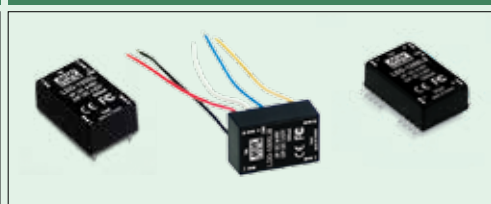
### Features

- Constant current step-down LED driver
- Wide input and output voltage range
- High efficiency up to 95%
- Comply with EN55015 and FCC part 15 without additional input filter and capacitors
- 300~700mA: PWM dimming and remote ON/OFF control
- 1000~1500mA: PWM + analog dimming and remote ON/OFF control
- Protections: Short circuit / Over temperature (300~700mA only)
- Compact size
- Operating temperature range:  
300 ~ 700mA: -40~+85°C  
1000~1500mA: -40~+71°C
- Cooling by free air convection
- Fully enclosed plastic case (UL 94V-0)
- Low cost, high reliability
- 3 years warranty

### LDD-300~700L/LW/LS



### LDD-1000~1500L/LW/LS



|                                 |               |                                                                                                                                           |                                                                                                                                            |
|---------------------------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Output current accuracy         |               | ±5% at 24VDC input                                                                                                                        |                                                                                                                                            |
| PWM dimming & ON/OFF control    | Remote ON/OFF | Leave open if not used<br>■ Power ON with dimming:<br>DIM ~ -Vin >3.5~8VDC or open circuit<br>■ Power OFF:<br>DIM ~ -Vin <0.5VDC or short | ■ Power ON with dimming:<br>DIM ~ -Vin >2.6~5.5VDC or open circuit<br>■ Power OFF:<br>DIM ~ -Vin <0.4VDC or short                          |
|                                 | PWM frequency | 100~1KHz                                                                                                                                  | 100~500Hz                                                                                                                                  |
| Analog dimming & ON/OFF control | Remote ON/OFF | Non                                                                                                                                       | Leave open if not use<br>■ Power ON with dimming:<br>DIM ~ -Vin >0.5~2.5VDC or open circuit<br>■ Power OFF:<br>DIM ~ -Vin <0.4VDC or short |
|                                 |               |                                                                                                                                           |                                                                                                                                            |
| Short circuit protection        |               | Regulated at rated output current, can be continued, auto-recovery                                                                        |                                                                                                                                            |
| Over temp.protection            |               | Shut down, recovers automatically after temperature goes down                                                                             | Non                                                                                                                                        |
| Working temperature             |               | -40~+85°C<br>(refer to output derating curve)                                                                                             | -40~+71°C<br>(refer to output derating curve)                                                                                              |
| EMC standards                   |               | EN55015, EN61547, EN61000-4-2,3,4,6,8, FCC part 15 class B                                                                                |                                                                                                                                            |
| Operating case temp. (max.)     |               | 100°C                                                                                                                                     |                                                                                                                                            |
| Dimension (LxWxH) (mm)          |               | LDD-300~700L/LW: 22.6x 9.9x 8.9<br>LDD-300~700LS: 25.4x 10.5x 9.3                                                                         | LDD-1000~1500L/LW: 31.8x 20.3x 12.2<br>LDD-1000~1500LS: 31.8x 20.3x 10.9                                                                   |

### LDD-L Series



| Model No.   | Input (VDC)                   | Output                        |              | Io Tol. | Effi. | Dimming      |
|-------------|-------------------------------|-------------------------------|--------------|---------|-------|--------------|
|             |                               | Voltage (VDC)                 | Current (mA) |         |       |              |
| LDD-300L □  | 9~36<br>(LDD-300~700LS: 9~32) | 2~32<br>(LDD-300~700LS: 2~28) | 300          | ±5%     | 95%   | PWM          |
| LDD-350L □  |                               |                               | 350          |         |       |              |
| LDD-500L □  |                               |                               | 500          |         |       |              |
| LDD-600L □  |                               |                               | 600          |         |       |              |
| LDD-700L □  |                               |                               | 700          |         |       |              |
| LDD-1000L □ | 6~36                          | 2~30                          | 1000         | ±5%     | 95%   | PWM + Analog |
| LDD-1200L □ |                               |                               | 1200         |         |       |              |
| LDD-1500L □ |                               |                               | 1500         |         |       |              |

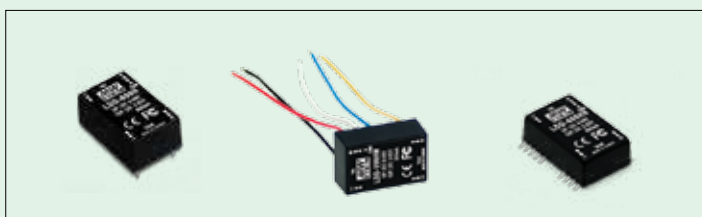
□ = Blank, W, S ; Blank: pin style, W: wire style, S: SMD style

# LDD-H&LDB-L series

## DC-DC Constant Current LED Driver

### LDD-H/HW/HS

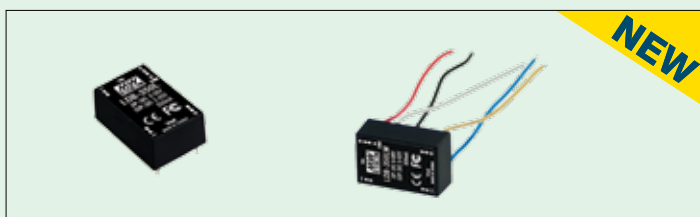
- Constant current step-down LED driver
- Wide input and output voltage range
- High efficiency up to 97%
- Comply with EN55015 and FCC part 15 without additional input filter and capacitors
- PWM dimming and remote ON/OFF control
- Protections: Short circuit / Over temp.
- Compact size
- Operating temperature range: -40~+85°C
- Cooling by free air convection
- Fully enclosed plastic case (UL 94V-0)
- 3 years warranty



|                              |               |                                                                                                                                                                         |
|------------------------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output current accuracy      |               | ±3% at 24VDC input;<br>±4% at 48VDC input for LDD-H/HW;<br>±5% at 48VDC input for LDD-HS                                                                                |
| PWM dimming & ON/OFF control | Remote ON/OFF | Leave open if not used                                                                                                                                                  |
|                              |               | <ul style="list-style-type: none"> <li>▪ Power ON with dimming: DIM ~ -Vin &gt;2.5~6VDC or open circuit</li> <li>▪ Power OFF: DIM ~ -Vin &lt;0.8VDC or short</li> </ul> |
|                              | PWM frequency | 100~1KHz                                                                                                                                                                |
| Short circuit                |               | Regulated at rated output current, can be continued, auto-recovery                                                                                                      |
| Over temperature protection  |               | Shut down, recovers automatically after temperature goes down                                                                                                           |
| Working temperature          |               | -40~+85°C                                                                                                                                                               |
| EMC standards                |               | EN55015, EN61547, EN61000-4-2,3,4,6,8, FCC part 15 class B                                                                                                              |
| Operating case temp. (max.)  |               | 100°C                                                                                                                                                                   |
| Dimension (LxWxH)(mm)        |               | LDD-H/HW: 31.8x 20.3x 12.2<br>LDD-HS: 31.8x 20.3x 10.9                                                                                                                  |

### LDB-L/LW

- Constant current buck-boost LED driver
- Wide input and output voltage range
- High efficiency up to 90%
- Comply with EN55015 and FCC part 15 without additional input filter and capacitors
- PWM dimming and remote ON/OFF control
- Protections: Short circuit / Over temp.
- Operating temperature range: -40~+71°C
- Cooling by free air convection
- Fully enclosed plastic case (UL 94V-0)
- 3 years warranty



|                              |               |                                                                                                                                                                       |
|------------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output current accuracy      |               | ±5%                                                                                                                                                                   |
| PWM dimming & ON/OFF control | Remote ON/OFF | Leave open if not used                                                                                                                                                |
|                              |               | <ul style="list-style-type: none"> <li>▪ Power ON with dimming: DIM ~ -Vin &gt;2~5VDC or open circuit</li> <li>▪ Power OFF: DIM ~ -Vin &lt;0.1VDC or short</li> </ul> |
|                              | PWM frequency | 1 KHz                                                                                                                                                                 |
| Short circuit                |               | Regulated at rated output current, can be continued, auto-recovery                                                                                                    |
| Over temperature protection  |               | Shut down, recovers automatically after temperature goes down                                                                                                         |
| Working temperature          |               | -40~+71°C                                                                                                                                                             |
| EMC standards                |               | EN55015, EN61547, EN61000-4-2,3,4,6,8, FCC part 15 class B                                                                                                            |
| Operating case temp. (max.)  |               | 110°C                                                                                                                                                                 |
| Dimension (LxWxH)(mm)        |               | 31.8x 20.3x 12.2                                                                                                                                                      |

### LDD-H Series



| Model No.  | Input (VDC) | Output        |              | Io Tol. | Effi. |
|------------|-------------|---------------|--------------|---------|-------|
|            |             | Voltage (VDC) | Current (mA) |         |       |
| LDD-300H□  | 9~56        | 2~52          | 300          | ±4%     | 97%   |
| LDD-350H□  | 9~56        | 2~52          | 350          | ±4%     | 97%   |
| LDD-500H□  | 9~56        | 2~52          | 500          | ±4%     | 97%   |
| LDD-600H□  | 9~56        | 2~52          | 600          | ±4%     | 97%   |
| LDD-700H□  | 9~56        | 2~52          | 700          | ±4%     | 97%   |
| LDD-1000H□ | 9~56        | 2~52          | 1000         | ±4%     | 97%   |

□ = Blank, W, S ; Blank: pin style, W: wire style, S: SMD style

### LDB-L Series



| Model No. | Input (VDC) | Output        |              | Io Tol. | Effi. |
|-----------|-------------|---------------|--------------|---------|-------|
|           |             | Voltage (VDC) | Current (mA) |         |       |
| LDB-300L□ | 9~36        | 2~40          | 300          | ±5%     | 90%   |
| LDB-350L□ | 9~36        | 2~40          | 350          | ±5%     | 90%   |
| LDB-500L□ | 9~30        | 2~32          | 500          | ±5%     | 90%   |
| LDB-600L□ | 9~28        | 2~30          | 600          | ±5%     | 90%   |

□ = Blank, W ; Blank: pin style, W: wire style

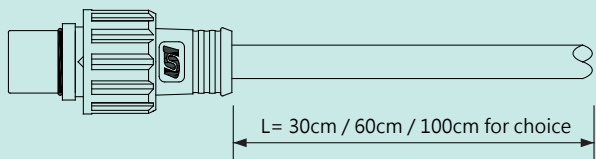
# Waterproof Output Connector

## Female Waterproof Output Connector (Power supply side)

| Waterproof Connector                                                             | Pin Configuration (Female)                                                        |                            |                                                                                   |                             |                                                                                   |                             |                                                                                     |                             |
|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------------------|-----------------------------------------------------------------------------------|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------|-------------------------------------------------------------------------------------|-----------------------------|
|                                                                                  | M12                                                                               |                            | M15                                                                               |                             | M20.5                                                                             |                             | M20.8                                                                               |                             |
|  |  | Order No. : M12-02         |  | Order No. : M12-04          |  | Order No. : M15-02          |  | Order No. : M20.5-02        |
|                                                                                  |                                                                                   | Suitable Current : 5A max. |                                                                                   | Suitable Current : 10A max. |                                                                                   | Suitable Current : 12A max. |                                                                                     | Order No. : M20.8-02        |
|                                                                                  | 2-pin (5A/PIN)                                                                    |                            | 4-pin (5A/PIN)                                                                    |                             | 2-pin (12A/PIN)                                                                   |                             | 2-pin (20A/PIN)                                                                     | Suitable Current : 20A max. |

- ▶ The output cable can be modified to include different waterproof connectors by MEAN WELL. Minimum order quantity may vary for different models.
- ▶ We would suggest you to order the configurations of "M15 connector with length of 20cm / 30cm / 45cm / 60cm / 80cm / 100cm cables" due to its cost effectiveness and fast delivery. Ordering other connector type or cable lengths will have higher cost and longer lead-time.
- ▶ Suitable for CLG / HLG / HLG-C / HVG(C) / HBG / CEN / HSG / HLN / LPF / NPF / PWM / OWA series.

## Male Waterproof Output Connector with Cable (System side)

| Figure                                                                            | Drawing                                                                                                                  |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
|  | <br>L= 30cm / 60cm / 100cm for choice |

- ▶ MEAN WELL offers male waterproof connectors with cable length of 30cm, 60cm, and 100cm as our standard mating accessories. These mating accessories need to be ordered together with PSU. For other length or cable style, the higher MOQ requirement and long lead-time will be expected. Please consult MEAN WELL for details.

## Order No.

**M12-02M-30-U1-UN**

① ② ③ ④ ⑤ ⑥

Connector Type: Male / Female

| ① | M12     | M15     | M20.5   | M20.8   |
|---|---------|---------|---------|---------|
|   | UN & CH | UN & CH | UN only | CH only |

No. of PIN

| ② | 2P   | 4P   | M15, M20.5 and M20.8 only have 2-pin choice |
|---|------|------|---------------------------------------------|
|   | 2pin | 4pin |                                             |

| ③ | M                  | F                 |
|---|--------------------|-------------------|
|   | Male (System Side) | Female (PSU Side) |

Cable Length: Male with Cable

| ④ | 30   | 60   | 100   |
|---|------|------|-------|
|   | 30cm | 60cm | 100cm |

Cable Length: Female with Cable

|  | 20   | 30   | 45   | 60   | 80   | 100   |
|--|------|------|------|------|------|-------|
|  | 20cm | 30cm | 45cm | 60cm | 80cm | 100cm |

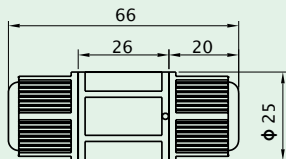
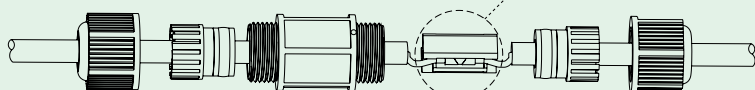
Cable Type

| ⑤ | U1         | E1             |
|---|------------|----------------|
|   | SJTW (USA) | H05RN-F (EURO) |

Brand Name

| ⑥ | UN                           | CH                         |
|---|------------------------------|----------------------------|
|   | UNICABLE<br>(Made in Taiwan) | CHOGORI<br>(Made in China) |

## Waterproof Cable Joiner

|                                                                                    |                                                                                                                                                                                                                                                              |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <br>66<br>26<br>20<br>φ25                                                                                                                                                 |
| Order No. : CJ04-1<br>CJ04-2                                                       | <br>CJ04-1 suitable for 14AWG~16AWG<br>CJ04-2 suitable for 18AWG~22AWG<br>Up to four wires can be connected through this cable joiner by soldering or clamping by tools. |

- ▶ CJ04 cable joiner can be purchased independently for user's own assembly.



# How to Choose A Suitable LED Power Supply?

- Decide a suitable wattage level, including safety margin.
- Verify your design of LED driving circuit: direct drive by PSU [choose a constant current (C.C.) mode LED power supply] or add additional driving IC to get a more precise constant current level [choose LDD, LDH or LDB].
- Verify whether the application need PFC function.
- Verify location of assembly and the required level against dust and humidity for the LED power supply (enclosure style, IP level, dry/damp/wet location).
- Verify the required safety certificates.
- Need to adjust the output voltage and/or output current or need the dimming function ?

## ► Suggested System Design

| Setting                                                                    | Circuit Diagram | Description                                                                                                                                                                                                                                                                                                            | Advantage & Disadvantage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------------------------------------------------------------------|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Use constant current (C.C.) mode power supply only</b>                  |                 | <p>Using MEAN WELL's C.V. + C.C. mode or C.C. mode LED power supply as constant current source and feed the LED arrays directly.</p> <p>MEAN WELL product:<br/>APC / LPC / ELN / PLN / PLC / LPF / NPF / OWA / HLN / GSC / PLD / PLM / CLG / CEN / HLG / HLG-C / HSG / HVG / HVGC / HBG / PLP / HLP / LCM families</p> | <p><b>Advantage</b></p> <ul style="list-style-type: none"> <li>• Simplest design, no need LED driver IC</li> <li>• Lower price</li> <li>• Higher efficiency with the best lumen per watt(lm/w)</li> </ul> <p><b>Disadvantage</b></p> <ul style="list-style-type: none"> <li>• Unbalanced driving current and shorter LED life time</li> <li>• LED chips should be sorted for similar VF</li> </ul>                                                                                                                   |
| <b>Use constant voltage (C.V.) mode power supply with DC-DC LED driver</b> |                 | <p>Using AC/DC C.V. mode LED power supply and separate DC/DC LED drivers.</p> <p>MEAN WELL product:<br/>Any AC/DC LED power supply + LDD, LDH or LDB series (DC/DC LED driver)</p>                                                                                                                                     | <p><b>Advantage</b></p> <ul style="list-style-type: none"> <li>• Independent output channels, the most balanced current for paralleled LED strips</li> <li>• No need to sort the VF of LED</li> <li>• Longer LED lifetime</li> <li>• Failures in any string do not affect the other strings</li> </ul> <p><b>Disadvantage</b></p> <ul style="list-style-type: none"> <li>• Higher price</li> <li>• Complicated circuit design</li> <li>• Lower system efficiency</li> <li>• Larger in power supply volume</li> </ul> |

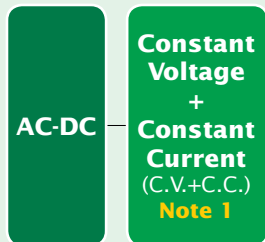
# Quick Selection Map

## Note 1

At the moment of power on, the LED power supply will work in C.V. mode and can provide a peak output current; after the LED turns on, the LED power supply will go into C.C. mode.

## Note 2

The C.C. only LED power supplies are suitable for directly driving LED modules, but not suitable for connecting with additional DC-DC LED drivers.



PFC

Metal Case

Plastic Case

Non-PFC

Plastic Case

**AC-DC**

**Constant Current (C.C.)**  
**Note 2**

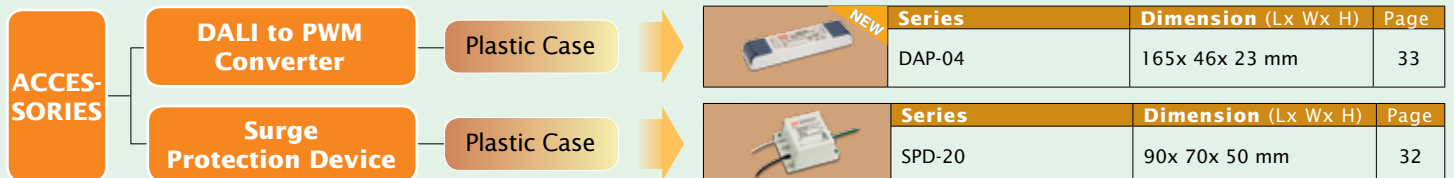
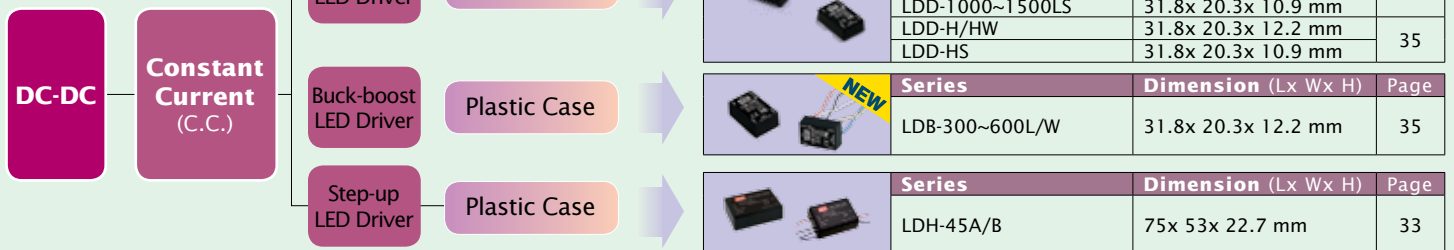
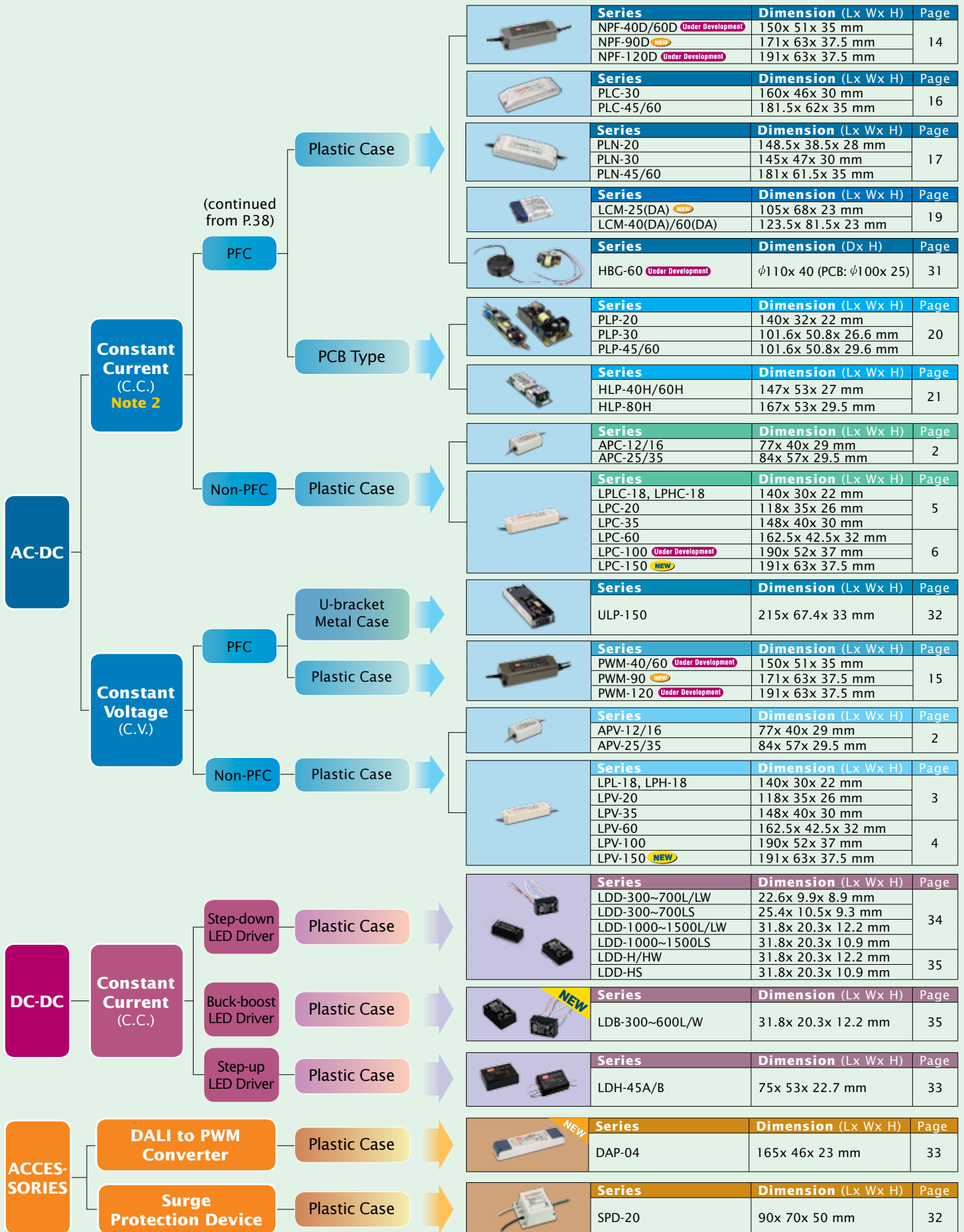
PFC

Metal Case

Plastic Case

| Series                                       | Dimension (Lx Wx H)  | Page |
|----------------------------------------------|----------------------|------|
| CLG-100                                      | 222.2x 68x 38.8 mm   | 23   |
| CLG-150                                      | 229x 68x 38.8 mm     |      |
| Series                                       | Dimension (Lx Wx H)  | Page |
| HLG-40H/60H                                  | 171x 61.5x 36.8 mm   | 24   |
| HLG-80H                                      | 195.6x 61.5x 38.8 mm | 25   |
| HLG-100H/120H                                | 220x 68x 38.8 mm     |      |
| HLG-150H/185H                                | 228x 68x 38.8 mm     | 26   |
| HLG-240H                                     | 251x 68x 38.8 mm     | 27   |
| HLG-320H                                     | 252x 90x 43.8 mm     |      |
| HLG-600H <small>NEW</small>                  | 280x 144x 48.5 mm    |      |
| Series                                       | Dimension (Lx Wx H)  | Page |
| HVG-65 <small>NEW</small>                    | 189x 61.5x 36.8 mm   | 29   |
| HVG-100                                      | 236x 68x 38.8 mm     |      |
| HVG-150                                      | 245x 68x 38.8 mm     |      |
| Series                                       | Dimension (Dx H)     | Page |
| HBG-100                                      | φ130x 66.5           | 31   |
| HBG-160                                      | φ151.68x 66.5        |      |
| HBG-240                                      | φ191.5x 69           |      |
| Series                                       | Dimension (Lx Wx H)  | Page |
| HSG-70                                       | 127.2x 90x 38.8 mm   | 32   |
| Series                                       | Dimension (Lx Wx H)  | Page |
| OWA-90E/U <small>NEW</small>                 | 171x 63x 37.5 mm     | 9    |
| OWA-120E/U <small>Under Development</small>  | 191x 63x 37.5 mm     |      |
| Series                                       | Dimension (Lx Wx H)  | Page |
| LPF-16/25                                    | 148x 40x 32 mm       | 13   |
| LPF-40/60                                    | 162.5x 43x 32 mm     |      |
| LPF-90                                       | 161x 61x 36 mm       |      |
| Series                                       | Dimension (Lx Wx H)  | Page |
| NPF-40/60 <small>Under Development</small>   | 150x 51x 35 mm       | 14   |
| NPF-90 <small>NEW</small>                    | 171x 63x 37.5 mm     |      |
| NPF-120 <small>Under Development</small>     | 191x 63x 37.5 mm     |      |
| Series                                       | Dimension (Lx Wx H)  | Page |
| PLC-100                                      | 200.5x 69.5x 35 mm   | 16   |
| Series                                       | Dimension (Lx Wx H)  | Page |
| PLN-100                                      | 200x 70.5x 35 mm     | 17   |
| Series                                       | Dimension (Lx Wx H)  | Page |
| HLN-40H/60H                                  | 161x 61.5x 35 mm     | 18   |
| HLN-80H                                      | 181x 61.5x 35 mm     |      |
| Series                                       | Dimension (Lx Wx H)  | Page |
| ELN-30                                       | 145x 47x 30 mm       | 7    |
| ELN-60                                       | 181x 61.5x 35 mm     |      |
| Series                                       | Dimension (Lx Wx H)  | Page |
| OWA-60E/U <small>Under Development</small>   | 130x 53x 35 mm       | 9    |
| Series                                       | Dimension (Lx Wx H)  | Page |
| CEN-60/75                                    | 185x 62.5x 40.5 mm   | 22   |
| CEN-100                                      | 195x 62.5x 40.5 mm   |      |
| Series                                       | Dimension (Lx Wx H)  | Page |
| CLG-60                                       | 195.6x 61.5x 38.8 mm | 23   |
| Series                                       | Dimension (Lx Wx H)  | Page |
| HLG-60H-C                                    | 171x 61.5x 36.8 mm   | 28   |
| HLG-80H-C                                    | 195.6x 61.5x 38.8 mm |      |
| HLG-120H-C                                   | 220x 68x 38.8 mm     |      |
| HLG-185H-C                                   | 228x 68x 38.8 mm     |      |
| Series                                       | Dimension (Lx Wx H)  | Page |
| HVGC-65 <small>NEW</small>                   | 189x 61.5x 36.8 mm   | 30   |
| HVGC-100                                     | 236x 68x 38.8 mm     |      |
| HVGC-150                                     | 245x 68x 38.8 mm     |      |
| Series                                       | Dimension (Lx Wx H)  | Page |
| GSC18/25/40 <small>Under Development</small> | 79x 54x 33 mm        | 8    |
| Series                                       | Dimension (Lx Wx H)  | Page |
| PCD-16/25                                    | 84x 57x 29.5 mm      | 10   |
| PCD-40/60                                    | 128x 60x 31.5 mm     |      |
| PLD-16/25                                    | 84x 57x 29.5 mm      | 11   |
| PLD-40/60                                    | 128x 60x 31.5 mm     |      |
| Series                                       | Dimension (Lx Wx H)  | Page |
| PLM-12/25                                    | 145x 38x 22 mm       | 12   |
| PLM-40                                       | 175x 42x 24 mm       |      |
| Series                                       | Dimension (Lx Wx H)  | Page |
| LPF-16D/25D                                  | 148x 40x 32 mm       | 13   |
| LPF-40D/60D                                  | 162.5x 43x 32 mm     |      |
| LPF-90D                                      | 161x 61x 36 mm       |      |

# Quick Selection Map





# Comparison Chart

| Family                                                               |                     | PFC (Note 2)               |           | AC Input Range (VAC) | Potted           | C.C. or C.V. (Note 1)                   | IP              | Dimming (Note 3) | Vo / Io Adj         | Max. Eff. | Warranty (years) | Remark         |  |
|----------------------------------------------------------------------|---------------------|----------------------------|-----------|----------------------|------------------|-----------------------------------------|-----------------|------------------|---------------------|-----------|------------------|----------------|--|
| Series Name                                                          | Type (Note 4)       | Single Stage               | Two Stage |                      |                  |                                         |                 |                  |                     |           |                  |                |  |
| HLG-40H / 60H / 80H / 100H / 120H / 150H / 185H / 240H / 320H / 600H | A ★                 |                            | ✓         | 90~305               | ✓                | C.V.+C.C.                               | 65              |                  | ✓                   | 96%       | 5                | Vo<60VDC       |  |
|                                                                      | B                   |                            |           |                      |                  |                                         | 67              | 3 in 1           |                     |           |                  |                |  |
|                                                                      | C (240W/320W only)  |                            |           |                      |                  |                                         |                 |                  | ✓                   |           |                  |                |  |
|                                                                      | Blank (40W~320W)    |                            |           |                      |                  |                                         | 67              |                  |                     |           |                  |                |  |
|                                                                      | D (option, 40~320W) |                            |           |                      |                  |                                         | 67              | Timer            |                     |           |                  |                |  |
| HLG-60H-C / 80H-C / 120H-C / 185H-C                                  | A ★                 |                            | ✓         | 90~305               | ✓                | C.C.                                    | 65              |                  | Io                  | 94%       | 5                | Vo>60VDC       |  |
|                                                                      | B                   |                            |           |                      |                  |                                         | 67              | 3 in 1           |                     |           |                  |                |  |
|                                                                      | D (option)          |                            |           |                      |                  |                                         | 67              | Timer            |                     |           |                  |                |  |
| HBG                                                                  | 60                  | Blank (enclosed)           | ✓         | 90~295               | ✓ (half)         | C.C.                                    |                 |                  | Io                  | 91%       | 5                | Circular shape |  |
|                                                                      |                     | P (PCB)                    |           |                      |                  |                                         |                 |                  |                     |           |                  |                |  |
|                                                                      | 100 / 160 / 240     | A                          | ✓         | 90~305               | ✓                | C.V.+C.C.                               | 65              |                  | Io                  | 93.5%     |                  |                |  |
|                                                                      |                     | B                          |           |                      |                  |                                         | 67              | 3 in 1           |                     |           |                  |                |  |
|                                                                      |                     | Blank                      |           |                      |                  |                                         | 67              |                  |                     |           |                  |                |  |
|                                                                      |                     | E (option, 100W/160W only) |           |                      |                  |                                         | 67              |                  |                     |           |                  |                |  |
| HVG(C)-65 / 100 / 150                                                | A ★                 |                            | ✓         | 180~528              | ✓                | HVG : C.V.+C.C.<br>HVG C : C.C.         | 65              |                  | HVG: ✓<br>HVG C: Io | 91.5%     | 5                |                |  |
|                                                                      | B                   |                            |           |                      |                  |                                         | 67              | 3 in 1           |                     |           |                  |                |  |
|                                                                      | D (option)          |                            |           |                      |                  |                                         | 67              | Timer            |                     |           |                  |                |  |
| HSG-70                                                               |                     |                            | ✓         | 90~305               | ✓                | C.V.+C.C.                               | 65              |                  | Io                  | 90%       | 3                |                |  |
| CLG-150                                                              | A ★                 |                            | ✓         | 90~295               | ✓                | C.V.+C.C.                               | 65              |                  | ✓                   | 91%       | 3                |                |  |
|                                                                      | B                   |                            |           |                      |                  |                                         | 67              | Resistance       |                     |           |                  |                |  |
|                                                                      | C                   |                            |           |                      |                  |                                         |                 |                  | ✓                   |           |                  |                |  |
|                                                                      | Blank               |                            |           |                      |                  |                                         | 67              |                  |                     |           |                  |                |  |
| CLG-100                                                              |                     |                            | ✓         | 90~295               | ✓                | C.V.+C.C.                               | 67              |                  |                     | 88.5%     | 3                |                |  |
| CLG-60                                                               |                     | ✓                          |           | 90~295               | ✓                | C.C.                                    | 67              |                  |                     | 89%       | 3                |                |  |
| CEN-60 / 75 / 100                                                    |                     | ✓                          |           | 90~295               |                  | C.C.                                    | 66              |                  | ✓                   | 91%       | 3                |                |  |
| ULP-150                                                              |                     |                            | ✓         | 90~295               | ✓ (half)         | C.V.                                    |                 |                  | Vo                  | 93%       | 3                | U-bracket      |  |
| HLN-40H / 60H / 80H                                                  | A                   |                            | ✓         | 90~305               | ✓ (60W/80W half) | C.V.+C.C.                               | 64              |                  | ✓                   | 91%       | 3                |                |  |
|                                                                      | B                   |                            |           |                      |                  |                                         |                 | 3 in 1           |                     |           |                  |                |  |
| LPF-16□ / 25□ / 40□ / 60□ / 90□                                      | D                   |                            | ✓         | 90~305               | ✓                | Blank Type : C.V.+C.C.<br>D-Type : C.C. | 67 (16W option) | 3 in 1           |                     | 90.5%     | 5                |                |  |
|                                                                      | Blank               |                            |           |                      |                  |                                         |                 |                  |                     |           |                  |                |  |
| NPF-40□ / 60□ / 90□ / 120□                                           | D                   |                            | ✓         | 90~305               | ✓                | Blank Type : C.V.+C.C.<br>D-Type : C.C. | 67              | 3 in 1           |                     | 91%       | 5                |                |  |
|                                                                      | Blank               |                            |           |                      |                  |                                         |                 |                  |                     |           |                  |                |  |
| PWM-40 / 60 / 90 / 120                                               |                     |                            | ✓         | 90~305               | ✓                | C.V.                                    | 67              | 0~10Vdc & PWM    |                     | 91%       | 5                | PWM output     |  |
| OWA- 90 / 120                                                        |                     |                            | ✓         | 90~264               | ✓                | C.V.+C.C.                               | 67★             |                  |                     | 91%       | 5                | External type  |  |

# Comparison Chart

| Family                                            |               | PFC (Note 2) |           | AC Input Range (VAC)                                                   | Potted               | C.C. or C.V. (Note 1) | IP  | Dimming (Note 3) | Vo / Io Adj | Max. Eff. | Warranty (years) | Remark                                |
|---------------------------------------------------|---------------|--------------|-----------|------------------------------------------------------------------------|----------------------|-----------------------|-----|------------------|-------------|-----------|------------------|---------------------------------------|
| Series Name                                       | Type (Note 4) | Single Stage | Two Stage |                                                                        |                      |                       |     |                  |             |           |                  |                                       |
| PLN-100                                           |               |              | ✓         | 90~295                                                                 |                      | C.V.+C.C.             | 64  |                  | ✓           | 88.5%     | 2                |                                       |
| PLN-30 / 45 / 60                                  |               | ✓            |           | 90~295                                                                 |                      | C.C.                  | 64  |                  | ✓           | 89%       | 2                |                                       |
| PLN-20                                            |               | ✓            |           | 90~277                                                                 |                      | C.C.                  | 64  |                  | Io          | 83.5%     | 2                |                                       |
| PLC-100                                           |               |              | ✓         | 90~264                                                                 |                      | C.V.+C.C.             |     |                  | ✓           | 90%       | 2                | Terminal block I/O                    |
| PLC-30 / 45 / 60                                  |               | ✓            |           | 90~264                                                                 |                      | C.C.                  |     |                  | ✓           | 89%       | 2                | Terminal block I/O                    |
| PCD-16 / 25 / 40 / 60                             |               | ✓            |           | A: 90~135<br>B: 180~295                                                | (16W/25W/60W half) ✓ | C.C.                  | 30  | AC Phase-Cut     |             | 87%       | 3                |                                       |
| PLD-16 / 25 / 40 / 60                             |               | ✓            |           | 16W/40W/60W:<br>A: 90~135<br>B: 180~295                                | (16W/25W/60W half) ✓ | C.C.                  | 30  |                  |             | 88%       | 3                |                                       |
|                                                   |               |              |           | 25W: 90~295                                                            |                      |                       |     |                  |             |           |                  |                                       |
| GSC18 / 25 / 40                                   |               | ✓            |           | 90~277                                                                 | (40W half)           | C.C.                  | 30  |                  |             | 88%       | 3                | External type                         |
| PLM-12 / 25 / 40                                  |               | ✓            |           | 110~295                                                                |                      | C.C.                  | 30  |                  |             | 88%       | 2                | Push terminal                         |
| LCM-25 / 40 / 60                                  |               | ✓            |           | 25W: 180~277<br>40W/60W: 180~295                                       |                      | C.C.                  | 20  | 0~10Vdc & PWM    |             | 92%       | 3                | Io level selectable in one power unit |
| LCM-25DA / 40DA / 60DA                            |               |              |           |                                                                        |                      |                       |     | DALI & Push DIM  |             |           |                  |                                       |
| PLP-20 / 30 / 45 / 60                             |               | ✓            |           | 20W: 90~277<br>30~60W: 90~264                                          |                      | C.C.                  |     |                  | Io          | 89%       | 2                | PCB type                              |
| HLP-40H / 60H / 80H                               |               |              | ✓         | 90~305                                                                 |                      | C.C.                  |     | 3 in 1           | ✓           | 90.5%     | 3                | PCB type                              |
| OWA-60                                            |               |              |           | 90~264                                                                 | ✓                    | C.V.+C.C.             | 67* |                  |             | 91%       | 5                | External type                         |
| ELN-30 / 60                                       |               |              |           | 90~264                                                                 |                      | C.V.+C.C.             | 64  | 1.1~10Vdc or PWM | ✓           | 88%       | 2                |                                       |
| LPL-18 / LPH-18<br>LPV-20 / 35 / 60 / 100 / 150   |               |              |           | LPL: 90~132<br>LPH: 180~264<br>LPV-20~100: 90~264<br>LPV-150: 180~305  | ✓                    | C.V.                  | 67  |                  |             | 90%       | 2                |                                       |
| LPLC-18 / LPHC-18<br>LPC-20 / 35 / 60 / 100 / 150 |               |              |           | LPLC: 90~132<br>LPHC: 180~264<br>LPC-20~60: 90~264<br>LPC-150: 180~305 | ✓                    | C.C.                  | 67  |                  |             | 90%       | 2                |                                       |
| APC-12 / 16 / 25 / 35                             |               |              |           | 90~264                                                                 | (16W/35W half) ✓     | C.C.                  | 30  |                  |             | 84%       | 2                |                                       |
| APV-12 / 16 / 25 / 35                             |               |              |           | 90~264                                                                 | (16W/35W half) ✓     | C.V.                  | 30  |                  |             | 85%       | 2                |                                       |

**Note 1** C.V. represents Constant Voltage Mode Output, whereas C.C. represents Constant Current Mode Output. For C.V.+C.C., C.C., and C.V. operations, please refer to Application Q&A section on MEAN WELL LED website. (The C.C. only LED power supplies are suitable for directly driving LED modules, but not suitable for connecting with additional DC-DC LED drivers.)

**Note 2** ■ Single-Stage PFC : No hold-up time and higher Ripple & Noise. Not recommended to use in regions with unstable utility.  
 ■ Two-Stage PFC : Longer hold-up time and lower Ripple & Noise. Suitable for LED lighting and general industrial applications.  
 ■ Non-PFC : PF<0.6 and target at regions where PF compliance is not required.

**Note 3** 3-in-1 dimming: 1~10Vdc, PWM signal, or resistance. Timer: Timmer dimming function, please contact MEAN WELL for details.

**Note 4** ★ are popular models and will have sufficient stock for prompt delivery of high quantity orders.

**Note 5** \* IP67 design for main body



#### Taiwan

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