



*Your Reliable Power Partner*



# LED Power Supply LED Driver

2011  
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# About MEAN WELL

Established in 1982 and located in Taipei, Taiwan, MEAN WELL is a leading branded standard switching power supply manufacturer with broad product lines covering AC/DC power supply, DC/DC converter, DC/AC inverter, and battery charger. Millions of quality switching power supplies are sold under the brand name "MEAN WELL" to over 70 countries every year. Right now we have advanced manufacturing facilities in Taipei Taiwan, GuangZhou China, and SuZhou China and sales offices in China, USA, and Europe.

Many of MEAN WELL industrial power supplies have been widely spreading in the LED moving sign industry all over the world and earned good reputation for their high reliability. To comply with the global trend of energy saving, MEAN WELL invest huge amount of resources to develop new generation of switching power supplies imbued with green concept. The LED power supply family is one of them which are looking for higher in efficiency, lower in power dissipation, and in compliance with the latest lighting regulations all over the world.

MEAN WELL LED power supplies have been widely used for street lighting, architectural lighting, decorative lighting, indoor lighting, stage and theater lighting, embedded lighting, and LED sign board. The robust design with high protection level against dust and moisture makes them suitable for all kind of indoor or outdoor installation of LED related applications.



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# LP series

18~100W Single Output Class 2 Power Unit

## Features

- Universal AC input / Full range (LPV)
- 180~264VAC input only (LPH-18)
- 90~132VAC input only (LPL-18)
- Fully encapsulated with IP67 level
- Protections: Short circuit / Overload / Over voltage / Over temperature (LPH-18/LPL-18 only)
- **Constant voltage design (C.V. mode)**
- UL1310 Class 2 power unit (except for LPV-100)
- Isolation class II, no F.G.
- Withstand 300VAC surge input for 5 seconds (except for LPH/LPL-18)
- Cooling by free air convection
- Pass LPS (except for LPV-100)
- 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	LPV-60	LPV-100
<div>INPUT</div> <div></div> <div>OUTPUT</div> <div></div>							
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, 60A at 230VAC		Cold start, 75A 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℃			-30~+75℃	-30~+70℃	-25~+70℃
Vibration		10~500Hz, 2G 10 minutes /1 cycle, period for 60 minutes each along X, Y, Z axes					
Safety standards		TUV EN60950-1 approved (LPH-18); Design refer to UL1310 class 2, CAN/CSA-C22.2 No. 223-M91, EN61347-2-13		UL1310 class 2 (except for LPV-60-5 & LPV-100), CAN/CSA-C22.2 No. 223-M91 (except for LPV-60-5, LPV-60-48 & LPV-100), UL879 (LPV-20/60) approved; Design refer to EN60950-1, EN61347-2-13			
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, ENV50204				
Connection	Input	UL rated, 18AWGx2C (30cm)		UL rated, 18AWGx2C (60cm)	UL rated, 18AWGx2C (60cm)		18AWGx2C (30cm)
	Output			UL rated, 16AWGx2C (60cm)		UL rated, 14AWGx2C (30cm)	
Dimension (LxWxH)(mm)		140x 30x 22		118x 35x 26	148x 40x 30	162.5x 42.5x 32	190x 52x 37

### • 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%

### • LPH-18 Series (C.V. mode)



Model No.	Output	Tol.	R&N	Effi.
LPH-18-12	12V, 0~1.5A	±3%	120mV	78%
LPH-18-24	24V, 0~0.75A	±3%	150mV	82%
LPH-18-36	36V, 0~0.5A	±3%	200mV	83%

### • LPV-20 Series (C.V. mode)



Model No.	Output	Tol.	R&N	Effi.
LPV-20-5	5V, 0~3.0A	±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%

### • LPV-35 Series (C.V. mode)



Model No.	Output	Tol.	R&N	Effi.
LPV-35-5	5V, 0~5.0A (peak 6A)	±6%	80mV	77%
LPV-35-12	12V, 0~3.0A	±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, 0~1.0A	±5%	150mV	85%

### • LPV-60 Series (C.V. mode)



Model No.	Output	Tol.	R&N	Effi.
LPV-60-5	5V, 0~8.0A	±8%	80mV	76%
LPV-60-12	12V, 0~5.0A	±5%	120mV	83%
LPV-60-15	15V, 0~4.0A	±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, 0~12.0A	±8%	80mV	80%
LPV-100-12	12V, 0~8.5A	±5%	120mV	85%
LPV-100-15	15V, 0~6.7A	±5%	120mV	87%
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%



# LP series

## 18~60W Single Output Class 2 Power Unit

### Features

- Universal AC input / Full range (LPC)
- 180~264VAC input only (LPHC-18)
- 90~132VAC input only (LPLC-18)
- Fully encapsulated with IP67 level
- Protections: Short circuit / Overload / Over voltage / Over temperature ( LPLC/LPHC-18 only )
- **Constant current design (C.C. mode)**
- Withstand 300VAC surge input for 5 seconds (except for LPHC/LPLC-18)
- Isolation class II, no F.G.
- Cooling by free air convection
- UL1310 Class 2 Power Unit
- Pass LPS
- 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	LPC-60
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, 60A at 230VAC	
Overload Protection	Range	±5% rated output current				
	Type	Constant current limiting, auto-recovery				
Over voltage protection		105%~135%		115%~135% rated output voltage		
Withstand voltage		I/P-O/P: 3kVAC				
Working temperature		-30~+70°C			-30~+75°C	-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 UL1310 class 2, EN60950-1,CAN/CSA-C22.2 No.223-M91, EN61347-2-13		UL1310 class 2, CAN/CSA-C22.2 NO. 223-M91( except for LPC-20-350, LPC-35-700, LPC-60-1050/1400 ), UL879 (LPC-20 only) approved; Design refer to TUV EN60950-1, EN61347-2-13		
EMC standards		FCC part 15 class A(LPLC-18), EN55022 class A, EN61000-3-2 class A, EN61000-3-3, ENV50204, EN61000-4-2,3,4,5,6,8,11		EN55022 class B, EN61000-3-2 class A, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, ENV50204		
Connection	Input	UL rated, 18AWGx2C (30cm)		UL rated, 18AWGx2C (60cm)		UL rated, 18AWGx2C (60cm)
	UL rated, 16AWGx2C (60cm)			UL rated, 16AWGx2C (60cm)		
Dimension (LxWxH)(mm)		140x 30x 22		118x 35x 26	148x 40x 30	162.5x 42.5x 32

### •LPLC-18 Series (C.C. mode)



Model No.	Output	Tol.	R&N	Effi.
LPLC-18-350	6~48V, 350mA	±5%	300mV	82%
LPLC-18-700	6~25V, 700mA	±5%	250mV	80%

### •LPHC-18 Series (C.C. mode)



Model No.	Output	Tol.	R&N	Effi.
LPHC-18-350	6~48V, 350mA	±5%	300mV	80%
LPHC-18-700	6~25V, 700mA	±5%	250mV	80%

### •LPC-20 Series (C.C. mode)



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

### •LPC-35 Series (C.C. mode)



Model No.	Output	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%

### •LPC-60 Series (C.C. mode)



Model No.	Output	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%

### ► Special Symbols for EN61347-2-13

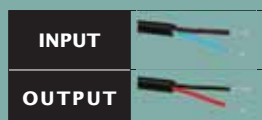
	Protection against overheating to prevent the lamp controlgear case temperature under any conditions of use from exceeding the indicated value (110°C)
	Suitable for direct mounting on normally flammable surfaces, such as wood (>2mm)
	Based on VDE0710-14, can be installed inside a wooden material like wooden cabinet. The minimum distance between the product enclosure to wooden material in each side is defined.
<b>LPS</b>	Limited power source
tc: 80°C ta: 40°C	Full load operation up to 40°C with surface temperature of case < 80°C
<b>SELV</b>	Vo< 50VDC can have this mark on the unit

# AP series

## 12~16W Single Output Class 2 Power Unit

### Features

- Universal AC input / Full range
- Fully isolated plastic case
- Protections: Short circuit / Overload / Over voltage
- Constant voltage design (C.V. mode) for APV series
- Constant current design (C.C. mode) for APC series
- Small and compact size
- Isolation class II, no FG
- Cooling by free air convection
- Pass LPS
- 100% full load burn-in test
- Low cost, high reliability
- Suitable for LED lighting and moving sign applications
- 2 years warranty



AC input voltage range		90~264VAC ; 127~370VDC	
AC inrush current (max.)		Cold start, 70A at 230VAC	
Overload protection	Range	>105% rated output current	±5% rated output current
	Type	Hiccup up mode, auto-recovery	Constant current limiting, auto-recovery
Over voltage protection		115%~140% rated output voltage	110%~135%
Withstand voltage		I/P-O/P: 3kVAC	
Working temperature		-30~+70°C (refer to output derating curve)	
Vibration		10~500Hz, 2G 10min/1 cycle, period for 60 min each along X, Y, Z axes	
Safety standards		Design refer to TUV EN60950-1, EN61347-2-13, UL8750	
EMC standards		EN55022 class B, EN55015, EN61000-3-2 class A, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, ENV50204, EN55024, EN61547	
Connection	Input	UL rated, 18AWGx2C (15cm)	
	Output	UL rated, 20AWGx2C (15cm)	
Dimension (LxWxH)(mm)		77x 40x 29	

### •APV-12 Series (C.V. mode)



Model No.	Output	Tol.	R&N	Effi.
APV-12-5	5V, 0~2.0A	±5%	50mV	76%
APV-12-12	12V, 0~1.0A	±5%	120mV	80%
APV-12-15	15V, 0~0.8A	±5%	120mV	80%
APV-12-24	24V, 0~0.5A	±5%	150mV	80%

### •APC-12 Series (C.C. mode)



Model No.	Output	Tol.	R&N	Effi.
APC-12-350	9~36V, 350mA	±5%	300mV	79%
APC-12-700	9~18V, 700mA	±5%	250mV	79%

### •APV-16 Series (C.V. mode)



Model No.	Output	Tol.	R&N	Effi.
APV-16-5	5V, 0~2.60A	±5%	100mV	76%
APV-16-12	12V, 0~1.20A	±5%	120mV	80%
APV-16-15	15V, 0~1.07A	±5%	120mV	81%
APV-16-24	24V, 0~0.67A	±5%	150mV	82%

### •APC-16 Series (C.C. mode)



Model No.	Output	Tol.	R&N	Effi.
APC-16-350	12~48V, 350mA	±5%	300mV	82%
APC-16-700	9~24V, 700mA	±5%	250mV	82%

Under Development



## 25W/35W Economical LED Power Supply






- Universal AC input / Full range
- Constant current design (APC-25/35)
- Constant voltage design (APV-25/35)
- Fully isolated plastic case
- Cooling by free air convection
- Small and compact size
- Low cost
- Output models: 350mA / 500mA / 700mA / 1050mA (APC-25/35) 5V / 12V / 15V / 24V / 36V (APV-25/35)
- Dimension(LxWxH): 84x 57x 29.5mm
- 2 years warranty

# ELN series

## 30~60W Single Output Class 2 Power Unit

### 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 / Overload / Over voltage
- Optional dimming function: 1.1~10VDC(D type) or PWM (P type) controlled
- UL1310 Class 2 power unit / Pass LPS
- Cooling by free air convection
- Suitable for economical LED indoor lighting and LED electronic displays
- 2 years warranty

		ELN-30	ELN-60
INPUT			
OUTPUT (standard)			
OUTPUT (Dimming Function)			
AC input voltage range		90~264VAC ; 127~370VDC	
AC inrush current (max.)		Cold start, 60A at 230VAC	
DC adjustment range		±10% rated output voltage	
Current adjustment range		75%~103% rated output current adjustable by internal potential meter	
Overload 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 restart	
Withstand voltage		I/P-O/P: 3kVAC	
Working temperature		-20~+60°C (refer to output derating curve)	
Vibration		10~500Hz, 2G 10min/1 cycle, period for 60 min each along X, Y, Z axes	
Safety standards		UL1310 class 2, CAN/CSA-C22.2 No. 223-M91( except for 48V ) approved; Design refer to TUV EN60950-1, EN61347-2-13	
EMC standards		EN55022 class B, EN61000-3-2 class A, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, ENV50204	
Connection		Input/Output: UL rated, 18AWGx2C (32cm); Output(with optional dimming function): 18AWGx4C (32cm)	Input/Output: UL rated, 18AWGx2C (30cm); Output(with optional dimming function): 18AWGx4C (30cm)
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



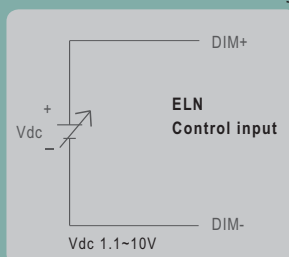
Model No.	Output	Tol.	R&N	Effi.
ELN-60-9	9V, 0~5.0A	±5%	120mV	82%
ELN-60-12	12V, 0~5.0A	±5%	120mV	85%
ELN-60-15	15V, 0~4.0A	±5%	150mV	86%
ELN-60-24	24V, 0~2.5A	±5%	150mV	87%
ELN-60-27	27V, 0~2.3A	±5%	200mV	87%
ELN-60-48	48V, 0~1.3A	±5%	250mV	88%

### 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).

#### D Type :

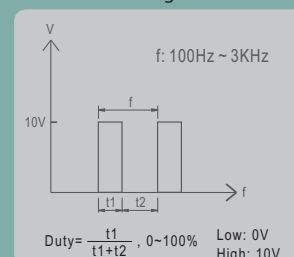
1.1~10Vdc external control signal



Order No.: ELN- [30] - [5] D

#### P Type :

PWM control signal



Order No.: ELN- [30] - [5] P



# LPF series

40~90W Single Output Class 2 with PFC

## Features

- Universal AC input (up to 305VAC) / Full Range
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Built-in active PFC function
- High efficiency up to 91%
- Fully isolated plastic case
- Isolation class II, no FG
- Class 2 power unit
- Built-in 3 in 1 dimming function (1~10VDC, PWM signal or resistance) for LPF-40D/ 60D/ 90D
- Fully encapsulated with IP67 level
- Cooling by free air convection
- Suitable for LED lighting and moving sign applications
- Suitable for dry, damp, wet (LPF-90□) location
- 3 years warranty

		LPF-40/60	LPF-40D/60D	LPF-90(D)
<div>INPUT</div> <div>OUTPUT (standard)</div> <div>OUTPUT (Dimming Function)</div>				
AC input voltage range		90~305VAC ; 127~431VDC		
AC inrush current (max.)		Cold start, 75A at 230VAC		Cold start, 70A at 230VAC
Overload Protection		95% ~108% constant current, auto-recovery		
Over voltage Protection		110%~140% rated output voltage		
Withstand voltage		I/P - O/P: 3.75kVAC		
Working temperature		-40°C~+70°C (refer to output derating curve)		
Setup, rise, hold up time		1000ms, 80ms, 16ms at full load and 230VAC		
Safety standards		UL8750, TUV EN61347-1, EN61347-2-13 approved [LPF-90(D) pending] ; Design refer to UL60950-1, TUV EN60950-1		
EMC standards		EN55015, EN61547, EN61000-3-2 class C, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, ENV50204, EN55024		
Connection	Input	UL rated, 18AWGx2C (60cm)		UL rated, SJTW 18AWGx2C (30cm)
	Output	UL rated, 16AWGx2C (60cm)	UL rated, 16AWGx2C (60cm) + 22AWGx2C (60cm)	LPF-90: UL rated, 18AWGx2C (30cm) LPF-90D: UL rated, 18AWGx4C (30cm)
Dimension (LxWxH)(mm)		162.5x 42.5x 32	162.5x 43.5x 32	161x 61x 36

## •LPF-40□ Series



Model No.	Output	Tol.	R&N	Effi.
LPF-40□-12	12V, 0~3.34A	±4.0%	150mV	84%
LPF-40□-15	15V, 0~2.67A	±4.0%	150mV	85%
LPF-40□-20	20V, 0~2.00A	±4.0%	150mV	86%
LPF-40□-24	24V, 0~1.67A	±4.0%	150mV	87%
LPF-40□-30	30V, 0~1.34A	±4.0%	200mV	88%
LPF-40□-36	36V, 0~1.12A	±4.0%	250mV	88%
LPF-40□-42	42V, 0~0.96A	±4.0%	250mV	89%
LPF-40□-48	48V, 0~0.84A	±4.0%	250mV	89%
LPF-40□-54	54V, 0~0.76A	±4.0%	350mV	89%

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

## •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	90.0%
LPF-90□-24	24V, 0~3.75A	±4.0%	150mV	90.5%
LPF-90□-30	30V, 0~3.00A	±4.0%	200mV	91.0%
LPF-90□-36	36V, 0~2.50A	±4.0%	200mV	91.0%

## •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%

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

Model No.	Output	Tol.	R&N	Effi.
LPF-90□-42	42V, 0~2.15A	±4.0%	200mV	91%
LPF-90□-48	48V, 0~1.88A	±4.0%	200mV	91%
LPF-90□-54	54V, 0~1.67A	±4.0%	200mV	91%


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

# PLN series

20~96W Single Output Class 2 with PFC

## Features

- Universal AC input (up to 295VAC) / Full range
- Fully isolated plastic case with IP64 level
- Built-in active PFC function, PF>0.9 for 75% of load or higher
- Protections: Short circuit / Overload / Over voltage / Over temp.
- Built-in constant current limiting circuit (C.C.+C.V mode)
- UL1310 Class 2 power unit / Pass LPS
- User adjustable output voltage (except for PLN-20) and current protection level
- Cooling by free air convection
- 100% full load burn-in test
- Suitable for LED lighting and moving sign applications
- 2 years warranty

		PLN-20	PLN-30	PLN-45	PLN-60	PLN-100
<div>INPUT (PLN-45/60/100)</div> <div></div>		<div></div>	<div></div>	<div></div>	<div></div>	
<div>INPUT (PLN-20/30)</div> <div></div>	<div>OUTPUT</div> <div></div>					
AC input voltage range		90~277VAC		90~295VAC ; 127~417VDC		
AC inrush current (max.)		Cold start, 40A at 230VAC				
DC adjustment range		None	95%~108% rated output voltage adjustable by internal potential meter			85%~100% rated output voltage
Current adjustment range		75% ~100%	75%~103% rated output current adjustable by internal potential meter			
Overload 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, rise, hold up time		2300ms(setup time) at full load and 230VAC, no hold up time	1500ms (setup time) at full load and 230VAC, no hold up time			1200ms, 80ms, 60ms at full load and 230VAC
Withstand voltage		I/P-O/P: 3.75kVAC				
Working temperature		-30~+60°C	-30~+50°C (refer to output derating curve)			
Safety standards		UL1310 Class 2, CAN/CSA-C22.2 No.223-M91 (except for 48V & PLN-20), EN61347-1, EN61347-2-13, UL879 (except for PLN-20) approved ; UL8750 approved (except for PLN-30); TUV EN60950-1 approved for PLN-100 only				
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, ENV50204, EN61547				
Connection	Input	UL rated, 18AWGx2C (32cm)			UL rated, 18AWGx3C (30cm)	UL rated, 18AWGx3C (31cm)
	Output				UL rated, 18AWGx2C (30cm)	UL rated, 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%

Model No.	Output	Tol.	R&N	Effi.
PLN-45-20	20V, 0~2.3A	±10%	1.8V	86.5%
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	84.5%
PLN-100-15	15V, 0~5.0A	±3%	150mV	86.5%
PLN-100-20	20V, 0~4.8A	±3%	150mV	90.0%
PLN-100-24	24V, 0~4.0A	±3%	150mV	90.0%
PLN-100-27	27V, 0~3.55A	±3%	150mV	90.0%
PLN-100-36	36V, 0~2.65A	±2%	150mV	90.0%
PLN-100-48	48V, 0~2.0A	±2%	200mV	89.0%

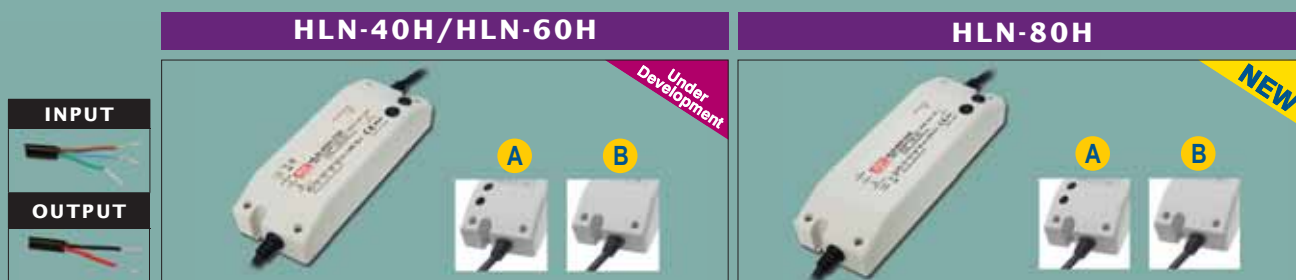


# HLN series

40~80W Single Output Class 2 with PFC

## Features

- Universal AC input (up to 305VAC) / Full range
- Fully isolated plastic case with IP64 level
- Built-in active PFC function, PF > 0.9 for 60% of load or higher
- Protections:
  - Short circuit / Overload / Over voltage / Over temperature
- Built-in constant current limiting circuit (C.C+C.V mode)
- Class 2 power unit
- 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 and constant current level can be adjusted through internal potential meter
  - 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, 70A at 230VAC
DC adjustment range		±10% rated output voltage (Type A only)
Current adjustment range		60%~100% rated output current adjustable by internal potential meter or through output cable
Overload protection		95%~108% constant current limiting, auto-recovery
Over voltage protection		109%~145% rated output voltage
Setup, rise, hold up time		1000ms, 80ms, 16ms at full load and 230VAC
Withstand voltage		I/P-O/P: 3.75kVAC, I/P-FG: 1.88kVAC, O/P-FG:0.5kVAC
Working temperature		-40~+50°C (refer to output derating curve)
Safety standards		UL8750, TUV EN61347-1, EN61347-2-13 approved(40W/60W pending); Design refer to UL60950-1, EN60950-1
EMC standards		EN55015 class B, EN61000-3-2 class C, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, ENV50204, EN61547, EN55024
Connection	Input	UL rated, 18AWGx3C (30cm)
	Output	A Type: UL rated, 18AWGx2C (30cm) ; B Type: UL rated, 18AWGx4C (30cm)
Dimension (LxWxH) (mm)		161x 61.5x 35181x 61.5x 35

## HLN-40H Series

UL/CUL/TUV/CB/CE pending

Model No.	Output	Tol.	R&N	Effi.
HLN-40H-12(A)	12V, 0~3.33A	±2.5%	150mV	87.0%
HLN-40H-15(A)	15V, 0~2.67A	±2.0%	150mV	87.0%
HLN-40H-20(A)	20V, 0~2.00A	±1.0%	150mV	88.0%
HLN-40H-24(A)	24V, 0~1.67A	±1.0%	150mV	88.5%
HLN-40H-30(A)	30V, 0~1.34A	±1.0%	200mV	89.0%
HLN-40H-36(A)	36V, 0~1.12A	±1.0%	200mV	89.0%
HLN-40H-42(A)	42V, 0~0.96A	±1.0%	200mV	90.0%
HLN-40H-48(A)	48V, 0~0.84A	±1.0%	300mV	90.0%
HLN-40H-54(A)	54V, 0~0.75A	±1.0%	300mV	90.0%

○ = A or B

## HLN-60H Series

UL/CUL/TUV/CB/CE pending

Model No.	Output	Tol.	R&N	Effi.
HLN-60H-15(A)	15V, 0~4.0A	±2.0%	150mV	88%
HLN-60H-20(A)	20V, 0~3.0A	±1.0%	150mV	89%
HLN-60H-24(A)	24V, 0~2.5A	±1.0%	150mV	90%
HLN-60H-30(A)	30V, 0~2.0A	±1.0%	200mV	90%

Model No.	Output	Tol.	R&N	Effi.
HLN-60H-36(A)	36V, 0~1.70A	±1.0%	200mV	90%
HLN-60H-42(A)	42V, 0~1.45A	±1.0%	200mV	91%
HLN-60H-48(A)	48V, 0~1.30A	±1.0%	300mV	91%
HLN-60H-54(A)	54V, 0~1.15A	±1.0%	300mV	91%

○ = A or B

## HLN-80H Series

UL/CUL/TUV/CB/CE pending

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

# PLC series

30~96W Single Output Class 2 with PFC

## Features

- Universal AC input / Full range
- Fully isolated plastic case with screw terminal style of I/O
- Built-in constant current limiting circuit (C.C.+C.V mode)
- Adjustable output voltage and current level
- Built-in active PFC function, PF>0.9 for 75% of load or higher
- High efficiency up to 90%
- UL1310 Class 2 power unit / Pass LPS
- Cooling by free air convection
- Protections: Short circuit / Overload / Over voltage / Over temperature
- 100% full load burn-in test
- Suitable for LED lighting and moving sign applications
- 2 years warranty



AC input voltage range	90~264VAC ; 127~370VDC		
AC inrush current (max.)	Cold start, 40A at 230VAC		
DC adjustment range	95%~108% rated output voltage adjustable by internal potential meter		85%~100% rated output voltage
Current adjustment range	75%~103% rated output current adjustable by internal potential meter		75%~100% rated output voltage
Overload 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	1500ms at full load and 230VAC		1200ms at full load and 230VAC
Withstand voltage	I/P-O/P: 3.75kVAC	I/P-O/P: 3.75kVAC, I/P-FG: 1.88kVAC, O/P-FG:0.5kVAC	
Working temperature	-30~+50℃ (refer to output derating curve)		
Safety standards	UL1310 Class 2, CAN/CSA-C22.2 No.223-M91 (except for 48V), EN61347-1, EN61347-2-13 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, ENV50204, 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



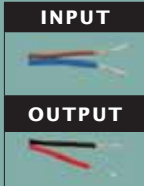
Model No.	Output	Tol.	R&N	Effi.
PLC-100-12	12V, 0~5.0A	±3%	150mV	84.5%
PLC-100-15	15V, 0~5.0A	±3%	150mV	86.5%
PLC-100-20	20V, 0~4.8A	±3%	150mV	90.0%
PLC-100-24	24V, 0~4.0A	±3%	150mV	90.0%
PLC-100-27	27V, 0~3.55A	±3%	150mV	90.0%
PLC-100-36	36V, 0~2.65A	±2%	150mV	90.0%
PLC-100-48	48V, 0~2.0A	±2%	200mV	89.0%

# PCD/PLD series

16~25W Single Output AC Dimmable Power Unit

## Features

- **PCD-16/25:**  
115VAC(90~135VAC) or 230VAC(180~295VAC) input
- **PLD-25:** AC input 90~295VAC
- **PCD16/25:**  
AC phase-cut dimming, work with leading edge and trailing edge TRIAC dimmers
- Built-in active PFC function
- Constant current design
- Fully isolated plastic case
- Class II design, without FG
- Protections: Short circuit / Overload / Over temperature
- Cooling by free air convection
- 3 years warranty

		PCD-16 / 25	PLD-25
INPUT			
AC input voltage range		115VAC (90~135VAC) or 230VAC (180~295VAC)	90~295VAC
AC inrush current (max.)		Cold start, 40A at 230VAC	
Overload Protection		95% ~110% constant current, auto-recovery	
Withstand voltage		I/P - O/P: 3.75kVAC	
Working temperature		-30°C ~ +60°C (refer to output derating curve)	
Safety standards		Design refer to UL8750, EN61347-1, EN61347-2-13	
EMC standards		A Type: FCC part 18 class A B Type: EN55015 class B, EN61000-3-2 class C, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, ENV50204, EN61547	FCC part18 class A, EN55015 class B, EN61000-3-2 class C, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, ENV50204, EN61547
Connection	Input	UL rated, 18AWGx2C (7.5cm)	
	Output	UL rated, 18AWGx2C (15cm)	
Dimension (LxWxH)(mm)		84x 57x 29.5	

## -PCD-16 Series



Model No.	Output	Io Tol.	R&N	Effi.
PCD-16-350 <input type="checkbox"/>	24~48V, 350mA	±4%	4.6V	82.0%
PCD-16-700 <input type="checkbox"/>	16~24V, 700mA	±4%	2.7V	81.0%
PCD-16-1050 <input type="checkbox"/>	12~16V, 1050mA	±4%	2.2V	80.5%
PCD-16-1400 <input type="checkbox"/>	8~12V, 1400mA	±4%	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 <input type="checkbox"/>	40~58V, 350mA	±4%	4.6V	82.0%
PCD-25-700 <input type="checkbox"/>	24~36V, 700mA	±4%	2.7V	81.0%
PCD-25-1050 <input type="checkbox"/>	16~24V, 1050mA	±4%	2.2V	80.5%
PCD-25-1400 <input type="checkbox"/>	12~18V, 1400mA	±4%	2.0V	80.0%

☐ = A or B type ; A type: 90~135VAC, B type: 180~295VAC

## -PLD-25 Series



Model No.	Output	Io Tol.	R&N	Effi.
PLD-25-350	40~58V, 350mA	±4%	4.6V	85%
PLD-25-700	24~36V, 700mA	±4%	2.7V	86%
PLD-25-1050	16~24V, 1050mA	±4%	2.2V	85%
PLD-25-1400	12~18V, 1400mA	±4%	2.0V	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)
LUTRON	ILLUMATECH TM Cat.No.IP106	(120VAC / 60Hz)
LUTRON	SURESLIDE TM Cat.No.6633-P	(120VAC / 60Hz)
LUTRON	SURESLIDE TM Cat. NO.6615-P	(120VAC / 60Hz)
JUNG	Licht-Management 225 TMD	(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 only






# PLP series

20~60W Single Output with PFC

## Features

- Universal AC input / Full range
- Protections: Short circuit / Overload / Over voltage / Over temperature (PLP-20 only)
- Built-in active PFC function, PF>0.9 for 75% of load or higher
- Cooling by free air convection
- Built-in constant current limiting circuit (C.C.+C.V. mode)
- 100% full load burn-in test
- 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	
AC inrush current (max.)		Cold start, 40A at 230VAC	
Current adjustable range		75%~100% rated output current	
Overload Protection	Range	95%~110%	
	Type	Constant current limiting, auto-recovery	
Setup, rise, hold up time		2300ms, 200ms at full load and 230VAC, no hold up time	1200ms(setup time) at full load and 230VAC, no hold up time
Withstand voltage		1000ms(setup time) at full load and 230VAC, no hold up time	
Working temperature		I/P-O/P: 3.75kVAC, I/P-FG: 1.88kVAC, O/P-FG: 0.5kVAC	
Safety standards		-30~+60°C	
EMC standards		-30~+70°C (refer to output derating curve)	
Connection		TUV EN61347-1, EN61347-2-13, UL8750 (PLP-20 only) approved	
Dimension (LxWxH)(mm)		EN55015, EN61000-3-2 Class C, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, ENV50204, EN61547	
Connection		UL rated, 18AWGx2C (30cm)	
Dimension (LxWxH)(mm)		3+2P / 3.96mm pitch, JST P/N: B3P / B2P-VH	
Dimension (LxWxH)(mm)		140x 32x 22	
Dimension (LxWxH)(mm)		101.6x 50.8x 26.6	
Dimension (LxWxH)(mm)		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-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-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-60 Series



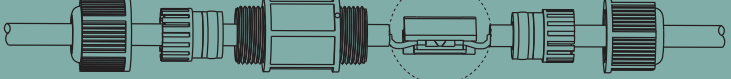
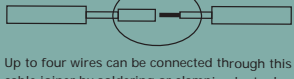
Model No.	Output	Tol.	R&N	Effi.
PLP-60-12	12V, 0~5.0A	±10%	4.5V	84%
PLP-60-24	24V, 0~2.5A	±10%	4.5V	88%
PLP-60-48	48V, 0~1.3A	±10%	4.8V	89%

## Waterproof Connector List

Waterproof Connector	Pin Configuration (Female)							
	M12				M15			
		Order No. : M12-02		Order No. : M12-04		Order No. : M12-05		Order No. : M15-02
		Suitable Current : 5A max.		Suitable Current : 10A max.		Suitable Current : 10A max.		Suitable Current : 12A max.

► The output cable can be modified to include different waterproof connectors by MEAN WELL. Minimum order quantity may vary for different models.

## Cable Joiner

						
	Order No. : CJ04-1 CJ04-2				14AWG~16AWG for CJ04-1 18AWG~22AWG for CJ04-2 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.

# HLP series

40~80W Single Output Class 2 with PFC

## Features

- Universal AC input (up to 305VAC) / Full range
- Protections:
  - Short circuit / Overload / Over voltage / Over temperature
- Built-in active PFC, PF>0.95
- Output constant current level adjustable
- Built-in constant current limiting circuit (C.C.+C.V. mode)
- 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

### HLP-40H/HLP-60H



### HLP-80H



AC input voltage range	90~305VAC ; 127~431VDC	
AC inrush current (max.)	Cold start, 70A at 230VAC	
DC adjustment range	±10% rated output voltage	
Current adjustment range	60%~100% rated output current adjustable by internal potential meter or through output connector	
Overload protection	95%~108% constant current limiting, auto-recovery	
Over voltage protection	109%~145% rated output voltage, shut off, re-power on to recover	
Setup, rise, hold up time	1000ms, 80ms, 16ms at full load and 230VAC	
Withstand voltage	I/P-O/P: 3.75kVAC, I/P-FG: 1.88kVAC, O/P-FG:0.5kVAC	
Working temperature	-40~+70°C (refer to output derating curve)	
Safety standards	UL8750, TUV EN61347-1, EN61347-2-13 approved(40W/60W pending); Design refer to UL60950-1, EN60950-1	
EMC standards	EN55015 class B, EN61000-3-2 class C, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, ENV50204, EN61547, EN55024	
Connection	Input	6+6P/3.96mm pitch, JST P/N: B6P-VH
	Output	
Dimension (LxWxH) (mm)	147x 53x 28	162x 53x 29.5

## HLP-40H Series

UL/CUL/TUV/CB/CE pending

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	88.5%
HLP-40H-30	30V, 0~1.34A	±1.0%	200mV	89.0%
HLP-40H-36	36V, 0~1.12A	±1.0%	200mV	89.0%
HLP-40H-42	42V, 0~0.96A	±1.0%	200mV	90.0%
HLP-40H-48	48V, 0~0.84A	±1.0%	300mV	90.0%
HLP-40H-54	54V, 0~0.75A	±1.0%	300mV	90.0%

## HLP-60H Series

UL/CUL/TUV/CB/CE pending

Model No.	Output	Tol.	R&N	Effi.
HLP-60H-15	15V, 0~4.0A	±2.0%	150mV	88%
HLP-60H-20	20V, 0~3.0A	±1.0%	150mV	89%
HLP-60H-24	24V, 0~2.5A	±1.0%	150mV	90%
HLP-60H-30	30V, 0~2.0A	±1.0%	200mV	90%

Model No.	Output	Tol.	R&N	Effi.
HLP-60H-36	36V, 0~1.70A	±1.0%	200mV	90%
HLP-60H-42	42V, 0~1.45A	±1.0%	200mV	91%
HLP-60H-48	48V, 0~1.30A	±1.0%	300mV	91%
HLP-60H-54	54V, 0~1.15A	±1.0%	300mV	91%

## HLP-80H Series

UL/CUL/TUV/CB/CE pending

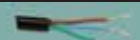



Model No.	Output	Tol.	R&N	Effi.
HLP-80H-12	12V, 0~5.0A	±2.5%	150mV	87.5%
HLP-80H-15	15V, 0~5.0A	±2.0%	150mV	88.5%
HLP-80H-20	20V, 0~4.0A	±1.0%	150mV	89.5%
HLP-80H-24	24V, 0~3.4A	±1.0%	150mV	90.0%
HLP-80H-30	30V, 0~2.7A	±1.0%	200mV	90.0%
HLP-80H-36	36V, 0~2.3A	±1.0%	200mV	90.0%
HLP-80H-42	42V, 0~1.95A	±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 Class 2 with PFC

## Features

- Universal AC input (up to 295VAC) / Full range
- Protections:
  - Short circuit / Overload / Over voltage / Over temperature
- Built-in active PFC function, PF>0.9 for 75% of load or higher
- IP66 design
- Meet 4kV surge immunity level (IEC61000-4-5)
- UL1310 Class 2 power unit
- Cooling by free air convection
- Suitable for dry, damp and wet location
- Suitable for LED lighting and moving sign applications
- 3 years warranty

CEN-60/75		CEN-100
<b>INPUT</b>  <b>OUTPUT</b> 		
		
AC input voltage range	90~295VAC ; 127~417VDC	
AC inrush current (max.)	Cold start, 45A at 230VAC	Cold start, 60A at 230VAC
DC adjustment range	±10% rated output voltage	
Current adjustment range	75%~100% rated output current	
Overload protection	95%~110% constant current limiting, auto-recovery	
Over voltage protection	110%~140% shut off, re-power on to restart	110%~135% shut off, re-power on to restart
Over temp. protection	85°C ±10°C (RTH1) shut down O/P voltage, recovers automatically after fault condition goes down	
Setup time	1400ms at full load and 230VAC, no hold up time	3000ms at full load and 230VAC, no hold up time
Withstand voltage	I/P-O/P: 3.75kVAC, I/P-FG: 1.88kVAC, O/P-FG: 0.5kVAC	
Working temperature	-30~+70°C (refer to output derating curve)	
Safety standards	UL8750, UL879 (except for CEN-100), TUV EN61347-1, EN61347-2-13 approved	
EMC standards	EN55015, EN61000-3-2 Class C, EN61000-4-2,3,4,5,6,8,11, ENV50204, EN61547	
Connection	Input	UL rated, 18AWGx3C (30cm)
	Output	UL rated, 18AWGx2C (30cm)
Dimension (LxWxH) (mm)	183x 62.5x 40.5	193x 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 / Overload / Over voltage / Over temp.
- Built-in active PFC function, PF>0.9 for 75% of load or higher
- IP67/IP65 design for indoor or outdoor installations (except for C type)
- Output current adjustable through output cable or internal potential meter (CLG-150)
- UL1310 class 2 power unit / Pass LPS (CLG-60&100)
- Cooling by free air convection
- Suitable for LED lighting, street lighting and moving sign applications
- Built-in constant current limiting circuit (c.c.+c.v. mode)
- 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 potential meter
  - 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



AC input voltage range	90~295VAC; 127~417VDC	
AC inrush current (max.)	Cold start, 40A at 230VAC	
DC adjustment range	Fixed. Can be modified between 90%~110% (CLG-60) or 85%~100% (CLG-100) rated output voltage	A and C type can be adjusted by internal potential meter
Current adjustment range	Fixed. Can be modified between 75%~103% rated output current	Can be adjusted by internal potential meter (A and C type) or through output cable (B type)
Overload protection	95%~110% constant current, auto-recovery	95%~102% constant current, auto-recovery
Over voltage protection	110%~140%	107%~135%
Setup, rise, hold up time	3000ms(setup time), no hold up time	1200ms, 80ms, 60ms at full load and 230VAC
Withstand voltage	I/P-O/P: 3.75kVAC, I/P-FG: 1.88kVAC, O/P-FG: 0.5kVAC	
Working temperature	-30~+70°C (refer to output derating curve)	
Safety standards	UL1310 Class 2, CAN/CSA-C22.2 No.223-M91 (except for 48V), UL879, UL8750, EN61347-1, EN61347-2-13; J 61347-1, J61347-2-13 (option, CLG-60-20~48V & CLG-100-36/48 only) approved; TUV EN60950-1 and UL60950-1 for CLG-100 only	UL60950-1, UL1012, TUV EN60950-1, EN61347-1, EN61347-2-13; J61347-1, J61347-2-13 (option, except for CLG-150 C-type) approved
EMC standards	EN55015, EN55022 class B, EN61000-3-2 class C, EN61000-4-2,3,4,5,6,8,11, ENV50204, EN61547	
Connection	Input	UL rated, 18AWGx3C (30cm)
	Output	UL rated, 18AWGx2C (30cm)
Dimension (LxWxH)(mm)	195.6x 61.5x 38.8	222.2x 68x 38.8
Packing	0.86kg ; 16pcs / 14.8kg	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	84.5%
CLG-100-15	15V, 0~5.00A	±3%	150mV	86.5%
CLG-100-20	20V, 0~4.80A	±3%	150mV	90.0%
★CLG-100-24	24V, 0~4.00A	±3%	150mV	90.0%

Model No.	Output	Tol.	R&N	Effi.
CLG-100-27	27V, 0~3.55A	±3%	150mV	90.0%
CLG-100-36	36V, 0~2.65A	±2%	150mV	90.0%
★CLG-100-48	48V, 0~2.00A	±2%	200mV	89.0%

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

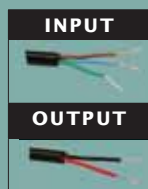
# HLG series

40~60W High Efficiency with PFC

## Features

- Universal AC input (up to 305VAC) / Full range
- Protections:
  - Short circuit / Overload / Over voltage / Over temp.
- Built-in active PFC, PF>0.9 for 60% of load or higher
- High efficiency up to 91%
- IP67 / IP65 design for indoor or outdoor installations
- Output current adjustable through output cable or internal potential meter
- Cooling by free air convection
- 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 potential meter
  - 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.
- 5 years warranty

## HLG-40H/60H



NEW

AC input voltage range		90~305VAC ; 127~431VDC
AC inrush current (max.)		Cold start, 70A at 230VAC
DC adjustment range		±10% rated output voltage (Type A only)
Current adjustment range		60%~100% rated output current adjustable by internal potential meter or through output cable
Overload protection		95%~108% constant current limiting, auto-recovery
Over voltage protection		109%~145% rated output voltage, shut off, re-power on to recover
Setup, rise, hold up time		1000ms, 80ms, 16ms at full load and 230VAC
Withstand voltage		I/P-O/P: 3.75kVAC, I/P-FG: 1.88kVAC, O/P-FG:0.5kVAC
Working temperature		-40~+70°C (refer to output derating curve)
Safety standards		Design refer to UL8750, TUV EN61347-1, EN61347-2-13, UL60950-1, EN60950-1
EMC standards		EN55015, EN61000-3-2 class C, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, ENV50204, EN61547, EN55024
Connection	Input	UL rated, 18AWGx3C (30cm)
	Output	A/D/Blank-Type:18AWGx2C (30cm); B-Type: 18AWGx2C (30cm)+18AWGx2C (30cm)
Dimension (LxWxH) (mm)		171x 61.5x 36.8

## HLG-40H Series



UL/CUL/TUV/CB/CE pending

Model No.	Output	Tol.	R&N	Effi.
HLG-40H-12(A)	12V, 0~3.33A	±2.5%	150mV	87.0%
HLG-40H-15(A)	15V, 0~2.67A	±2.0%	150mV	87.0%
HLG-40H-20(A)	20V, 0~2.00A	±1.0%	150mV	88.0%
HLG-40H-24(A)	24V, 0~1.67A	±1.0%	150mV	88.5%
HLG-40H-30(A)	30V, 0~1.34A	±1.0%	200mV	89.0%
HLG-40H-36(A)	36V, 0~1.12A	±1.0%	200mV	89.0%
HLG-40H-42(A)	42V, 0~0.96A	±1.0%	200mV	90.0%
HLG-40H-48(A)	48V, 0~0.84A	±1.0%	300mV	90.0%
HLG-40H-54(A)	54V, 0~0.75A	±1.0%	300mV	90.0%

○ = A, B, D or Blank

## HLG-60H Series



UL/CUL/TUV/CB/CE pending

Model No.	Output	Tol.	R&N	Effi.
HLG-60H-15(A)	15V, 0~4.0A	±2.0%	150mV	88%
HLG-60H-20(A)	20V, 0~3.0A	±1.0%	150mV	89%
HLG-60H-24(A)	24V, 0~2.5A	±1.0%	150mV	90%
HLG-60H-30(A)	30V, 0~2.0A	±1.0%	200mV	90%

Model No.	Output	Tol.	R&N	Effi.
HLG-60H-36(A)	36V, 0~1.70A	±1.0%	200mV	90%
HLG-60H-42(A)	42V, 0~1.45A	±1.0%	200mV	91%
HLG-60H-48(A)	48V, 0~1.30A	±1.0%	300mV	91%
HLG-60H-54(A)	54V, 0~1.15A	±1.0%	300mV	91%

○ = A, B, D or Blank

## Junction Box for HLG Series



Optional junction box available for HLG-80H~320H series (A-Type only). Please contact MEAN WELL for details.

# HLG series

80~120W High Efficiency with PFC

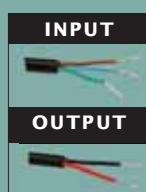
## Features

- Universal AC input (up to 305VAC) / Full range
- Protections:  
Short circuit / Overload / Over voltage / Over temperature
- Built-in active PFC, PF>0.9 for 60% of load or higher
- High efficiency up to 94%
- IP67 / IP65 design for indoor or outdoor installations
- Output current adjustable through output cable or internal potential meter
- Cooling by free air convection
- Suitable for dry, damp and wet location

- Suitable for LED lighting and street lighting applications
- Multiple models for choice:  
**A-Type:** IP65 rated. Output and constant current level can be adjusted through internal potential meter  
**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
- 5 years warranty

## HLG-80H

## HLG-100□/HLG-120□



AC input voltage range	□ = Blank or H type ; Blank: 90~264VAC, 127~370VDC ; H type: 90~305VAC, 127~431VDC	
AC inrush current (max.)	Cold start, 70A at 230VAC	Cold start, 75A at 230VAC
DC adjustment range	±10% rated output voltage (A Type only)	
Current adjustment range	50%~100% rated output current adjustable by internal potential meter or through output cable (62%~100% for HLG-100□)	
Overload protection	95%~108% constant current limiting, auto-recovery	
Over voltage protection	110%~140% rated output voltage	
Setup, rise, hold up time	1000ms, 80ms, 16ms at full load and 230VAC	2500ms, 50ms, 16ms at full load and 230VAC
Withstand voltage	I/P-O/P: 3.75kVAC, I/P-FG: 1.88kVAC, O/P-FG: 0.5kVAC	
Working temperature	-40~+70°C (refer to output derating curve)	
Safety standards	UL8750, TUV EN61347-1, EN61347-2-13 approved; Design refer to UL60950-1, EN60950-1	
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, ENV50204, EN61547, EN55024	
Connection	Input	UL rated, 18AWGx3C (30cm)
	Output	A/D/Blank-Type: 18AWGx2C (30cm) ; B-Type: 18AWGx2C (30cm)+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	90.5%
HLG-80H-24(A)	24V, 0~3.4A	±1.0%	150mV	91.0%
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, D or Blank

## HLG-100 Series



Model No.	Output	Tol.	R&N	Effi.
HLG-100□-20(A)	20V, 0~4.8A	±1.0%	150mV	93.5%
HLG-100□-24(A)	24V, 0~4.0A	±1.0%	150mV	93.5%
HLG-100□-30(A)	30V, 0~3.2A	±1.0%	200mV	93.5%

Model No.	Output	Tol.	R&N	Effi.
HLG-100□-36(A)	36V, 0~2.65A	±1.0%	200mV	93.5%
HLG-100□-42(A)	42V, 0~2.28A	±1.0%	200mV	93.5%
HLG-100□-48(A)	48V, 0~2.0A	±1.0%	200mV	93.5%
HLG-100□-54(A)	54V, 0~1.77A	±1.0%	200mV	93.5%

□ = Blank or H type; ○ = A, B, D or Blank

## HLG-120 Series



Model No.	Output	Tol.	R&N	Effi.
HLG-120□-12(A)	12V, 0~10A	±2.5%	150mV	92.0%
HLG-120□-15(A)	15V, 0~8.0A	±2.0%	150mV	92.0%
HLG-120□-20(A)	20V, 0~6.0A	±1.0%	150mV	93.5%
HLG-120□-24(A)	24V, 0~5.0A	±1.0%	150mV	94.0%
HLG-120□-30(A)	30V, 0~4.0A	±1.0%	200mV	94.0%
HLG-120□-36(A)	36V, 0~3.4A	±1.0%	200mV	94.0%
HLG-120□-42(A)	42V, 0~2.9A	±1.0%	200mV	94.0%
HLG-120□-48(A)	48V, 0~2.5A	±1.0%	200mV	94.0%
HLG-120□-54(A)	54V, 0~2.3A	±1.0%	200mV	94.0%

□ = Blank or H type; ○ = A, B, D or Blank



# HLC series

150~320W High Efficiency with PFC

## Features

- Universal AC input (up to 305VAC) / Full range
- Protections:  
Short circuit / Overload / Over voltage / Over temperature
- Built-in active PFC, PF>0.9 for 65% of load or higher
- High efficiency up to 95%
- IP67 / IP65 design for indoor or outdoor installations (except for C-Type)
- Output current adjustable through output cable or internal potential meter
- Cooling by free air convection
- Suitable for LED lighting and street lighting applications

- Multiple models for choice:

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

**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-240□/320H)

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

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

- 5 years warranty



AC input voltage range	□ = Blank or H type ; Blank: 90~264VAC, 127~370VDC ; H type: 90~305VAC, 127~431VDC	
AC inrush current (max.)	Cold start, 75A at 230VAC	
DC adjustment range	±10% rated output voltage	±6% rated output voltage
Current adjustment range	50%~100% rated output current adjustable by internal potential meter or through output cable (62%~100% for HLG-150□)	
Overload protection	95%~108% constant current limiting, auto-recovery	
Over voltage protection	110%~140% rated output voltage	
Setup, rise, hold up time	2500ms, 80ms, 16ms at full load and 230VAC	2500ms, 80ms, 15ms at full load and 230VAC
Withstand voltage	I/P-O/P: 3.75kVAC, I/P-FG: 1.88kVAC, O/P-FG: 0.5kVAC	
Working temperature	-40~+70°C (refer to output derating curve)	
Safety standards	UL8750, TUV EN61347-1, EN61347-2-13 approved for HLG-150□/185□/320H (320W pending) ; UL8750, TUV EN61347-1, EN61347-2-13, UL1012, UL60950-1, TUV EN60950-1 for HLG-240□	
EMC standards	EN55015, EN55022 class B, EN61000-3-2 class C, EN61000-4-2,3,4,5,6,8,11, ENV50204, EN61547	
Connection	Input	UL rated, 18AWGx3C (30cm); Terminal block for C type (HLG-240□/320H only)
	Output	A & Blank type: 14AWGx2C (30cm) ; B type: 14AWGx2C (30cm)+18AWGx2C (30cm); C type: Terminal block (HLG-240□/320H)
Dimension (LxWxH)(mm)	A/B/D/Blank-Type: 228x 68x 38.8	A/B/D/Blank-Type: 244.2x 68x 38.8
	C-Type: 251x 68x 38.8	A/B/D/Blank-Type: 252x 90x 43.8
		C-Type: 256x 90x 43.8

## • HLG-150 Series



Model No.	Output	Tol.	R&N	Effi.
HLG-150□-12(A)	12V, 0~12.5A	±2.5%	150mV	92.0%
HLG-150□-15(A)	15V, 0~10.0A	±2.0%	150mV	92.5%
HLG-150□-20(A)	20V, 0~7.50A	±1.0%	150mV	93.0%
HLG-150□-24(A)	24V, 0~6.30A	±1.0%	150mV	93.5%
HLG-150□-30(A)	30V, 0~5.00A	±1.0%	200mV	93.5%
HLG-150□-36(A)	36V, 0~4.20A	±1.0%	200mV	93.5%
HLG-150□-42(A)	42V, 0~3.60A	±1.0%	200mV	94.0%
HLG-150□-48(A)	48V, 0~3.20A	±1.0%	200mV	94.0%
HLG-150□-54(A)	54V, 0~2.80A	±1.0%	200mV	94.0%

□ = Blank or H type; ○ = A, B, D or Blank

## • HLG-185 Series



Model No.	Output	Tol.	R&N	Effi.
HLG-185□-12(A)	12V, 0~13.0A	±2.5%	150mV	92.0%
HLG-185□-15(A)	15V, 0~11.5A	±2.0%	150mV	93.0%
HLG-185□-20(A)	20V, 0~9.30A	±1.0%	150mV	93.5%
HLG-185□-24(A)	24V, 0~7.80A	±1.0%	150mV	94.0%
HLG-185□-30(A)	30V, 0~6.20A	±1.0%	200mV	94.0%
HLG-185□-36(A)	36V, 0~5.20A	±1.0%	200mV	94.0%
HLG-185□-42(A)	42V, 0~4.40A	±1.0%	200mV	94.0%
HLG-185□-48(A)	48V, 0~3.90A	±1.0%	200mV	94.0%
HLG-185□-54(A)	54V, 0~3.45A	±1.0%	200mV	94.0%

□ = Blank or H type; ○ = A, B, D or Blank

## • HLG-240 Series



Model No.	Output	Tol.	R&N	Effi.
HLG-240□-12(A)	12V, 0~16.0A	±2.5%	150mV	90.0%
HLG-240□-15(A)	15V, 0~15.0A	±2.0%	150mV	90.0%
HLG-240□-20(A)	20V, 0~12.0A	±1.0%	150mV	92.0%
HLG-240□-24(A)	24V, 0~10.0A	±1.0%	150mV	93.0%
HLG-240□-30(A)	30V, 0~8.00A	±1.0%	200mV	93.0%
HLG-240□-36(A)	36V, 0~6.70A	±1.0%	250mV	93.5%
HLG-240□-42(A)	42V, 0~5.72A	±1.0%	250mV	94.0%
HLG-240□-48(A)	48V, 0~5.00A	±1.0%	250mV	94.0%
HLG-240□-54(A)	54V, 0~4.45A	±1.0%	350mV	94.0%

□ = Blank or H type; ○ = A, B, C, D or Blank

## • 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

# HVG/ULP series

100~150W Single Output with PFC

## HVG-100 100W High Input Voltage with PFC



Under Development

- Wide input range 200~ 480VAC
- Protections:  
Short circuit / Overload / Over voltage / Over temperature
- Built-in active PFC
- High efficiency up to 92%
- IP67 / IP65 design
- Cooling by free air convection
- C.C.+C.V. mode design (HVG-100)

### Constant current design (HVG-100)

- Output current adjustable through output cable or internal potential meter
- 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 potential meter

**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

### Specification

AC input voltage range	200~480VAC; 282~679VDC	
DC adjustment range	±10% rated output voltage	
Current adjustment range	50%~100% rated output current adjustable by internal potential meter or through output cable	
Overload protection	95%~108% constant current limiting	
Over voltage protection	110%~140% rated output voltage	
Withstand voltage	I/P-O/P: 3.75kVAC, I/P-FG: 1.88kVAC, O/P-FG: 0.5kVAC	
Working temperature	-40~+70℃	
Safety standards	Design refer to UL8750, TUV EN61347-1, EN61347-2-13	
EMC standards	EN55015, FCC part 18 class A, EN61000-3-2 class C, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, ENV50204, EN55024, EN61547	
Connection	Input	UL rated, 18AWGx3C (30cm)
	Output	A&D type: 18AWGx2C (30cm) ; B type: 18AWGx2C (30cm)+ 18AWGx2C (30cm)
Dimension (LxWxH)(mm)	234x 68x 38.8	

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



UL/CUL/CE pending

Model No.	Output	Tol.	R&N	Effi.
HVG-100-15(A)	15V, 0~5.0A	±2.0%	150mV	90%
HVG-100-20(A)	20V, 0~4.8A	±1.0%	150mV	90%
HVG-100-24(A)	24V, 0~4.0A	±1.0%	150mV	91%
HVG-100-30(A)	30V, 0~3.2A	±1.0%	200mV	91%
HVG-100-36(A)	36V, 0~2.65A	±1.0%	200mV	91%
HVG-100-42(A)	42V, 0~2.28A	±1.0%	200mV	91%
HVG-100-48(A)	48V, 0~2.0A	±1.0%	200mV	91%
HVG-100-54(A)	54V, 0~1.77A	±1.0%	200mV	91%

○ = A, B or D

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



UL/CUL/CE pending

Model No.	Output	Io Tol.	R&N	Effi.
HVGC-100-350(A)	170~285V, 350mA	±5%	3V	92%
HVGC-100-700(A)	85~142V, 700mA	±5%	1.5V	92%

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



- Universal AC input (up to 295VAC) / Full range
- Built-in active PFC circuit compliance to EN61000-3-2 class C
- High efficiency up to 93%
- Protections:  
Short circuit / Overload / Over voltage / Over temp.
- Constant voltage design
- Cooling by free air convection
- U-bracket low profile: 33mm
- 3 years warranty

### Specification

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% hiccup mode, auto-recovery
Setup, rise, hold up time	2000ms, 100ms, 16ms at full load and 230VAC
Withstand voltage	I/P-O/P: 3.75kVAC, I/P-FG: 1.88kVAC, 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, ENV50204, EN61000-4-2,3,4,5,6,8,11, EN55024
Dimension (LxWxH)(mm)	215x 67.4x 33

Model No.	Output	Tol.	R&N	Effi.
ULP-150-12	12V, 0~12.5A	±2%	100mV	91.5%
ULP-150-15	15V, 0~10.0A	±2%	150mV	91.5%
ULP-150-24	24V, 0~6.30A	±2%	150mV	93.0%
ULP-150-36	36V, 0~4.20A	±2%	250mV	93.0%
ULP-150-48	48V, 0~3.20A	±2%	250mV	93.0%

Under Development

## 20kA Surge Protection Device

- Type 4 SPD for type 2 application
- Line to ground & line to line protected
- Design refer to UL1449 3rd edition listed, GB18802.1
- Parallel (3-wire) connection style
- Max. continuous operating voltage (MCOV): 300VAC
- Max. surge current: 20kA
- Short circuit current rating (SCCR): 5kA
- Response time < 5ns
- LED indicator
- IP67 design
- Working temperature: -40~+70°C
- Dimension(LxWxH): 90x 65x 50 mm



# LD/LDV series

Multiple Channel Output / DC-DC Driver

## LDV-185 185W Multiple Channel Output with PFC

CE pending



- 180~305VAC input range
- 6CH/700mA or 12CH/350mA constant current output
- Built-in active PFC
- Protections: Short circuit / Overload / Over voltage / Over temp.
- Cooling by free air convection
- IP67 design for indoor or outdoor installations
- 3 years warranty

### Specification

AC input voltage range	180~305VAC
AC inrush current	Cold start, 60A at 230VAC
Over voltage protection	A: 41~50V, B: 47~50V, C: 54~63V
Working temperature	-40°C~+70°C

Safety standards	Design refer to UL8750, EN61347-1, EN61347-2-13
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EMC standards	EN55015 class B, EN61000-3-2 class C, EN61000-3-3, EN61547, ENV50204, EN61000-4-2,3,4,5,6,8,11
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Connection	Input	UL rated, 18AWGx3C(30cm)
	Output	6 CH: 22AWGx13C (15cm) with one connector 12CH: 22AWGx12C/13C (15cm) with two connector

Model No.	Input	Io Tol.	Effi.	Max.
LDV-185-350A	32~38V, 350mA	±5%	88.5%	159.6W
LDV-185-350B	37~43V, 350mA	±5%	88.5%	180.6W
LDV-185-350C	42~52V, 350mA	±5%	88.5%	182.0W
LDV-185-700A	32~38V, 700mA	±5%	88.5%	159.6W
LDV-185-700B	37~43V, 700mA	±5%	88.5%	180.6W
LDV-185-700C	42~52V, 700mA	±5%	88.5%	182.0W

## LD Series DC/DC Constant Current LED Driver

CE



LD-350H  
31.8x 20.3x 10.2mm



LD-700L  
22.6x 9.9x 8.9mm

- Constant current LED driver
- Wide input and output voltage range
- High efficiency up to 97%
- Built-in EMI filter. Comply with EN55015 and FCC part 15 without additional input filter and capacitors
- Built-in PWM dimming control
- Protections: Short circuit / Over temperature
- Compact size
- Cooling by free air convection
- Fully enclosed plastic case (UL 94V-0)
- Low cost, high reliability
- 2 years warranty

Model No.	Input (VDC)	Output		Io Tol.	Effi.
		Voltage (VDC)	Current (mA)		
LD-300L	9~36	2~32	300	±5%	95%
LD-350L	9~36	2~32	350	±5%	95%
LD-500L	9~36	2~32	500	±5%	95%
LD-600L	9~36	2~32	600	±5%	95%
LD-700L	9~36	2~32	700	±5%	95%
LD-300H	9~56	2~52	300	±5%	97%
LD-350H	9~56	2~52	350	±5%	97%
LD-500H	9~56	2~52	500	±5%	97%
LD-600H	9~56	2~52	600	±5%	97%
LD-700H	9~56	2~52	700	±5%	97%
LD-1000H	9~56	2~52	1000	±5%	97%

Under Development

## DC/DC 6~12 Channel Output LED Driver



- DC input range: 12~60VDC
- DC output range: 8~56VDC(2~16LEDs)
- Output channel: 6 / 8 / 10 / 12
- Constant current design (350mA or 700mA)
- Output current accuracy: ±5%
- High efficiency up to 95%
- Fully encapsulated with IP67 level
- Cooling by free air convection
- Dimension(LxWxH): 126.8x 61.5x 38.8mm
- 3 years warranty



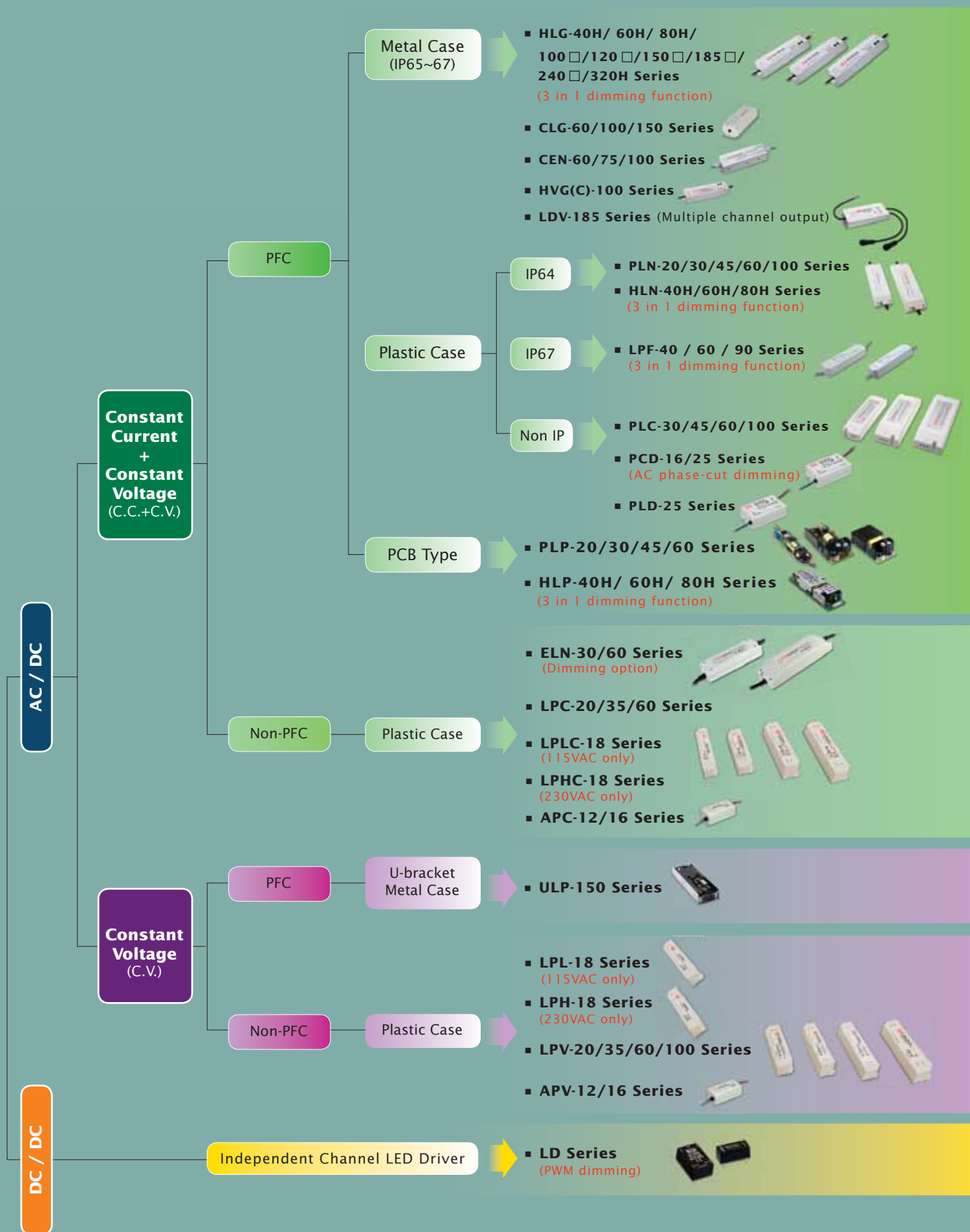
# How to choose a suitable LED power supply?

- 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 LDV-185, LD or LDH series].
- 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 and IP level).
- Verify the required safety certificates.
- Need to adjust the output voltage and/or output current or need the dimming function ?

## Suggested System Design

Design Suggestion	Installation Diagram	Circuit Diagram	Description	Advantage & Disadvantage
<b>Solution 1</b>  <b>Use C.C. mode power supply only</b>  No need ballast resistor and LED driver IC	<p>AC source</p> <p>MW LED PSU HLG-185-24</p> <p>Direct drive</p> <p>Lighting Fixture</p>	<p>7.8A +V(Red) MW AC/DC LED PSU HLG-185-24 -V(Black)</p> <p>0.35A</p> <p>0.35A</p> <p>0.35A</p> <p>For 1W LED, <math>V_F=3.2V</math>, <math>I_F=0.35A</math>                      Parallel connection: <math>7.8A / 0.35A \approx 22</math>                      22 branches need to connect in parallel</p> <p>Constant current region of HLG-185-24: 12~24V, so the LED series connection should be 4 to 7.</p>	Using MEAN WELL's C.C. mode LED power supply for direct driving: APC / LPC / ELN / PLN / PLC / LPF / HLN / PCD / PLD / CLG / CEN / HLG / PLP / HLP families.	<b>Advantage:</b> <ul style="list-style-type: none"> <li>Simplest design, no need LED driver IC</li> <li>Lowest price</li> <li>Less EMI concern</li> <li>Highest efficiency with the best lumen per watt(lw/w)</li> </ul> <b>Disadvantage:</b> <ul style="list-style-type: none"> <li>Unbalanced driving current and shorter LED life time</li> <li>Uneven brightness for different LED strips</li> <li>LED chips should be sorted for similar <math>V_F</math></li> </ul>
<b>Solution 2</b>  <b>Use Multiple Channel C.C. mode power supply</b>  Built-in driver ICs in the AC/DC Power Supply	<p>AC source</p> <p>MW LED PSU LDV-185-350A</p> <p>350mA multiple (6 or 12) channels</p> <p>Lighting Fixture</p>	<p>MW LED Power Supply LDV-185-350A</p> <p>0.35A</p> <p>0.35A</p> <p>0.35A</p>	Using LDV-185 series with DC/DC constant current LED driver ICs built-in. Each LED strip can get balanced driving current.	<b>Advantage:</b> <ul style="list-style-type: none"> <li>Built-in driver ICs in the unit</li> <li>Moderate price</li> <li>Less EMI concern</li> <li>Equipped with waterproof connector</li> </ul> <b>Disadvantage:</b> <ul style="list-style-type: none"> <li>LED chips should be sorted for similar <math>V_F</math></li> <li>Each channel need to have the same LED quantity</li> <li>Lower system efficiency comparing to the direct drive method</li> </ul>
<b>Solution 3</b>  <b>Use C.V. or C.C. mode power supply with DC-DC LED driver</b>  Driver IC is used as a constant current source	<p>AC source</p> <p>MW AC/DC LED PSU HLG-185-24</p> <p>24VDC OUTPUT</p> <p>MW DC/DC LED PSU LDH-12</p> <p>12 channels D/D driver all in one LDH-12</p> <p>Lighting Fixture</p>	<p>+V (Red) MW AC/DC LED PSU HLG-185-24 -V (Black)</p> <p>0.35A</p> <p>+V -V</p> <p>0.35A</p> <p>+V -V</p> <p>0.35A</p> <p>+V -V</p> <p>LDH-12</p>	Using MEAN WELL's AC/DC LED power supply and DC/DC LED driver: HLG family + LDH-12 series. Each LED strip can get balanced driving current and can connect different quantity of LEDs at each strip.	<b>Advantage:</b> <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 <math>V_F</math> of LED</li> <li>Longer LED lifetime</li> <li>Failures in any string do not affect the other strings</li> </ul> <b>Disadvantage:</b> <ul style="list-style-type: none"> <li>Higher price</li> <li>Complicated circuit design</li> <li>Lowest efficiency</li> <li>More EMI issues at system level</li> <li>Larger in power supply volume</li> </ul>
<b>Solution 4</b>  <b>Use C.V. or C.C. mode power supply with DC-DC LED driver</b>  Driver IC is used as a constant current source	<p>AC source</p> <p>MW AC/DC LED PSU HLG-185-24</p> <p>24VDC OUTPUT</p> <p>LD LD ... LD LD</p> <p>1 channel D/D driver in each LD</p> <p>Lighting Fixture</p>	<p>+V (Red) MW AC/DC LED PSU HLG-185-24 -V (Black)</p> <p>0.35A</p> <p>+V -V</p> <p>0.35A</p> <p>+V -V</p> <p>0.35A</p> <p>+V -V</p> <p>LD</p> <p>LD</p> <p>LD</p>	Using MEAN WELL's AC/DC LED power supply and DC/DC LED driver: HLG family + LD series. Each LED strip can get balanced driving current and can connect different quantity of LEDs at each strip.	<b>Advantage:</b> <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 <math>V_F</math> of LED</li> <li>Longer LED lifetime</li> <li>Failures in any string do not affect the other strings</li> </ul> <b>Disadvantage:</b> <ul style="list-style-type: none"> <li>Highest price</li> <li>Complicated circuit design</li> <li>Lowest efficiency</li> <li>More EMI issues at system level</li> <li>Additional mother board is required</li> </ul>

# Quick Selection Map



# Comparison Chart

Family		PFC (Note 1)		277VAC	Potted	C.C. or C.V.	IP	Dimming (Note 2)	Vo / Io Adj	Description
Series Name	Type (Note 3)	Single Stage	Two Stage							
HLG-40H / 60H / 80H / 100 □ / 120 □ / 150 □ / 185 □ / 240 □ / 320H	A ★		✓	(H type)	✓	C.C.+C.V.	65	3 in 1	✓	• High efficiency up to 95% • 5 years warranty
	B						67			
	C (240W/320W only)								✓	
	D (option)						67	Timer		
	Blank						67			
HVG(C)-100	A ★		✓	✓	✓	C.C.+C.V.	65	3 in 1	✓	• 200~480VAC input • High efficiency up to 92% • High output voltage for HVGC-100
	B						67			
	D (option)						67	Timer		
CLG-150	A ★		✓	✓	✓	C.C.+C.V.	65		✓	• 1 <sup>st</sup> generation metal casing • High efficiency up to 91%
	B						67			
	C								✓	
	Blank						67			
CLG-100			✓	✓	✓	C.C.+C.V.	67			1 <sup>st</sup> generation metal casing
CLG-60		✓		✓	✓	C.C.+C.V.	67			1 <sup>st</sup> generation metal casing
CEN-60 / 75 / 100		✓		✓		C.C.+C.V.	66		✓	• Economical metal casing • High efficiency up to 91%
ULP-150			✓	✓	✓ (half)	C.V.			Vo	• U-bracket • Built-in lighting fixture • High efficiency up to 93%
LDV-185			✓	✓	✓	C.C.	67			Multiple channel C.C. output
HLN-40H / 60H / 80H	A		✓	✓		C.C.+C.V.	64	3 in 1	✓	• 2 <sup>nd</sup> generation plastic casing • High efficiency up to 91%
	B									
LPF-40 □ / 60 □ / 90 □	D		✓	✓	✓	C.C.+C.V.	67	3 in 1		• Class II input (no F.G.) • High efficiency up to 91%
	Blank									
PLN-100			✓	✓		C.C.+C.V.	64		✓	1 <sup>st</sup> generation plastic casing
PLN-30 / 45 / 60		✓		✓		C.C.+C.V.	64		✓	1 <sup>st</sup> generation plastic casing
PLN-20		✓		✓		C.C.+C.V.	64		Io	1 <sup>st</sup> generation plastic casing
PLC-100			✓			C.C.+C.V.			✓	Terminal block I/O
PLC-30 / 45 / 60		✓				C.C.+C.V.			✓	Terminal block I/O
PCD-16 / 25		✓		✓ (B type)	✓ (half)	C.C.				AC phase-cut dimming
PLD-25		✓		✓	✓ (half)	C.C.				• C.C. output • Rectangular plastic casing
PLP-20 / 30 / 45 / 60		✓		20W only		C.C.+C.V.			Io	• PCB type • Built-in lighting fixture
HLP-40H / 60H / 80H			✓	✓		C.C.+C.V.		3 in 1	✓	• PCB type • High efficiency up to 91% • Built-in lighting fixture
ELN-30 / 60						C.C.+C.V.	64	1~10Vdc or PWM	✓	1~10V & PWM dimming option
LPH / LPL-18 LPV-20 / 35 / 60 / 100					✓	C.V.	67			• Economical • Constant voltage output
LPHC / LPLC-18 LPC-20 / 35 / 60					✓	C.C.	67			• Economical • Constant current output
APC-12 / 16						C.C.				• Economical • Constant current output • Rectangular casing
APV-12 / 16						C.V.				• Economical • Constant voltage output • Rectangular casing

## Note 1

- Single-Stage PFC : No hold-up time and higher Ripple & Noise. Not to use in regions with unstable utility status is highly recommended.
- 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 PFC compliance does not required. Not suitable for pan Europe area.

**Note 2** 3-in-1 dimming: 1~10Vdc, PWM signal, or resistance.

**Note 3** ★ are popular models and will have sufficient stock for prompt delivery of high quantity orders.





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