

HLG-100H-B Series

100W IP67 Constant Voltage LED Lighting Power Supplies



Case: 8014EX
220 x 68 x 38.8 mm

Features

- Constant voltage mode power supply
- Universal AC input up to 305VAC
- IP67 level
- 1~10Vdc, 10V PWM signal or resistance dimming function
- Built in active PFC function
- Constant current level adjustable through output cable
- Short circuit, over current, over voltage, over temperature protections
- Compliance to worldwide safety regulations for lighting



Specification

	Voltage	90V~305VAC or 127V~431VDC.						
	Frequency	47 ----- 63 Hz						
INPUT	Power Factor	PF>0.98/115VAC, PF>0.95/230VAC, PF>0.93/277VAC at full load (Please refer to Power Factor Characteristic curve)						
	Current	PF>0.98/115VAC, PF>0.95/230VAC, PF>0.93/277VAC						
	Inrush Current	75A@230VAC, Cold start						
	Leakage Current	<0.75mA@277VAC input						
OUTPUT	MODEL No.	HLG-100H-20B	HLG-100H-24B	HLG-100H-30B	HLG-100H-36B	HLG-100H-42B	HLG-100H-48B	HLG-100H-54B
	Voltage	20V	24V	30V	36V	42V	48V	54V
	Voltage Adj. Range	17 ~ 22V	22 ~ 27V	27 ~ 33V	33 ~ 40V	38 ~ 46V	43 ~ 53V	49 ~ 58V
	Rated Current	4.8A	4A	3.2A	2.65A	2.28A	2A	1.77A
	Current Adj. Range	3 ~ 4.8A	2.5 ~ 4A	2 ~ 3.2A	1.65 ~ 2.65A	1.4 ~ 2.28A	1.25 ~ 2A	1.1 ~ 1.77A
	Power	96W	96W	96W	95.4W	95.76W	96W	95.58W
	Ripple & Noise	150mV	150mV	200mV	200mV	200mV	200mV	200mV
	Efficiency (TYP.)	93%	93%	93%	93%	93%	93%	93%
	Over Voltage	23 ~ 27V	28 ~ 34V	34 ~ 38V	41 ~ 46V	47 ~ 53V	54 ~ 60V	59 ~ 65V
PROTECTION		Shutdown and latch off output voltage, re-power on to recover						
	Short Circuit	Constant current limiting, recovers automatically after fault condition is removed						
	Over Temperature	100°C ±10°C (RTH2); shutdown output voltage, recovers automatically after temperature goes down						
	Over Current	95~106% rated output current; constant current limiting, recovers automatically after fault condition is removed						
	Rise Time	50ms@230VAC & 115VAC, full load						
ELEC. CHAR.	Hold Up Time	16ms@230VAC & 115VAC, full load condition						
	Voltage Tolerance	±1.0%						
	Line Regulation	±0.5%						
	Load Regulation	±0.5%						
	Setup Time	2500ms@230VAC & 115VAC						
ENVIRONMENT	Temperature	Operating: -40~+70°C ; De-rating: 60~70°C@60% load ; Storage: -40~ +80°C						
	Humidity	Operating: 20%~95% RH; Storage: 10%~95% RH (non condensing)						
	Temp. Coefficient	±0.03%/°C (0~50°C)						
	Vibration	10~500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes						
	Withstand Voltage	I/P-O/P:3.75KVAC		I/P-FG:1.88KVAC		O/P-FG:0.5KVAC		
SAFETY	Isolation Resistance	I/P-O/P, I/P-FG, O/P-FG:>100M Ohms / 500VDC / 25°C/ 70% RH						
	Safety Standard	Compliance to EN61347-1, EN61347-2-13 independent; TUV EN60950-1						
EMC	EMC Emission	Compliance to EN55015, EN55022 (CISPR22) Class B, EN61000-3-2 Class C (>60% load) ; EN61000-3-3						
	EMC Immunity	Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, EN55024, light industry level (surge 4KV), criteria A						
OTHERS	M.T.B.F.	192.2K hrs min.		MIL-HDBK-217F (25°C)				
	Packing	N.W.:1.12Kg / 1pc ; 12pcs / 14.4Kgs 0.74CUFT / 1 CTN						

1 All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature

2 Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor

3 Tolerance: includes set up tolerance, line regulation and load regulation

4 Derating may be needed under low input voltages. Please check static characteristics for more details

5 Voltage Adjustment Range is only applicable for type A

6 Safety and EMC design refer to EN60598-1, CNS263, GB7000.2, FCC part 18

7 Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time

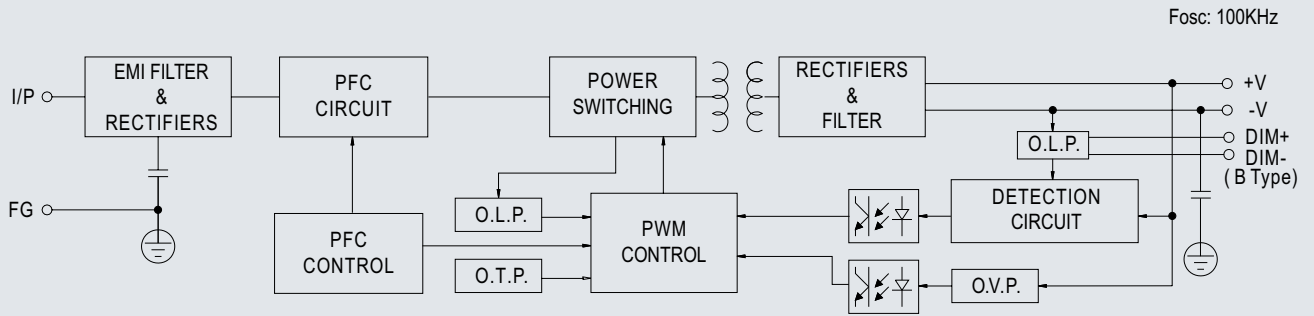
8 The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC directive on the complete installation again

HLG-100H-B Series

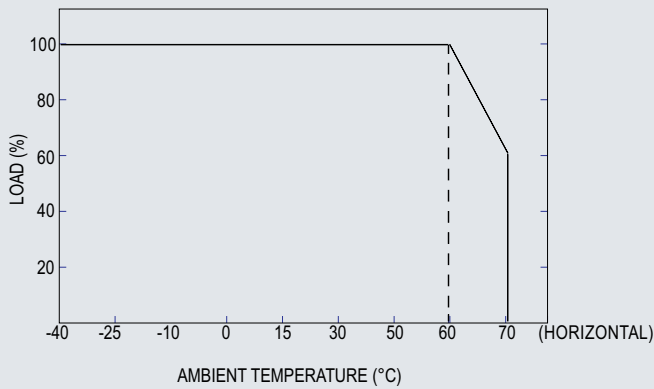
100W IP67 Constant Voltage LED Lighting Power Supplies



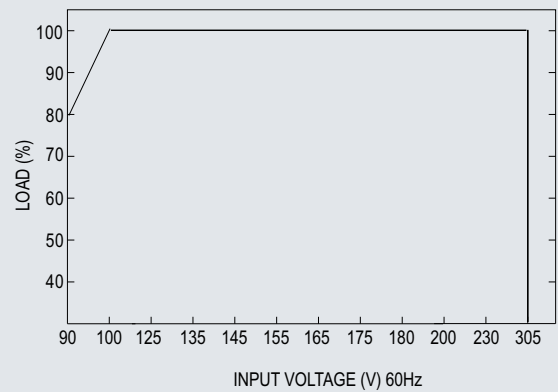
Block Diagram



De-Rating Curve

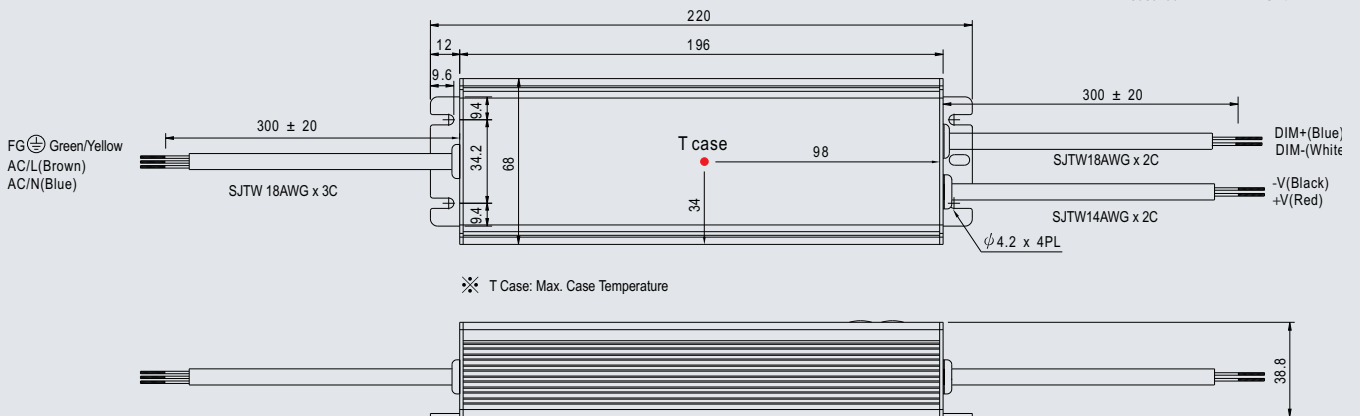


Static Characteristics



Dimensions

Case: 8014EX Unit: mm

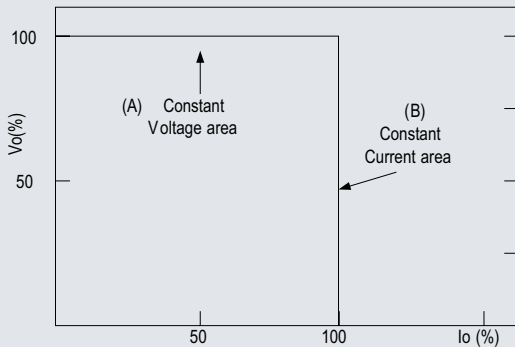


HLG-100H-B Series

100W IP67 Constant Voltage LED Lighting Power Supplies



Driving Methods of LED Module



There are two main kinds of LED driver method "direct drive" and "with LED driver". A typical LED power supply may either work in constant voltage mode (CV) or constant current mode (CC) to drive the LEDs.

Our LED power supply with CV+CC characteristics can be operated at both CV mode and CC mode as this diagram shows.

Dimming Operation

Built-in 3 in 1 dimming function, IP67 rated. Output constant current level can be adjusted through output cable by connecting a resistance, 1~10Vdc or 10V PWM signal between DIM+ and DIM-.

Please DO NOT connect "DIM-" to "-V".

Reference resistance value for output current adjustment (Typical)

Resistance Value	10KΩ	20KΩ	30KΩ	40KΩ	50KΩ	60KΩ	70KΩ	80KΩ	90KΩ	100KΩ	OPEN
Percentage of rated current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	102%~108%

1~10V dimming for output current adjustment (Typical)

Dimming Value	1V	2V	3V	4V	5V	6V	7V	8V	9V	10V	OPEN
Percentage of rated current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	102%~108%

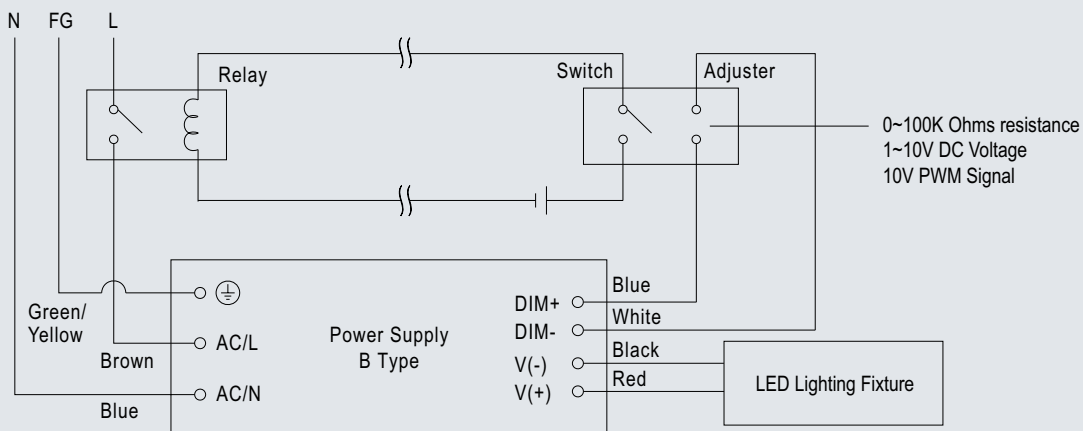
10V PWM signal for output current adjustment (Typical): Frequency range: 100Hz~3KHz

Duty Value	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	OPEN
Percentage of rated current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	102%~108%

Using the built-in dimming function on B-type model can't turn the lighting fixture totally dark. Please refer to the connection method below to achieve 0% brightness of the lighting fixture connecting to the LED power supply unit.

Direct connecting to LEDs is suggested, but it not suitable for using additional drivers.

Dimming connection diagram for turning the lighting fixture ON/OFF:



Using a switch and relay can turn ON/OFF the lighting fixture.

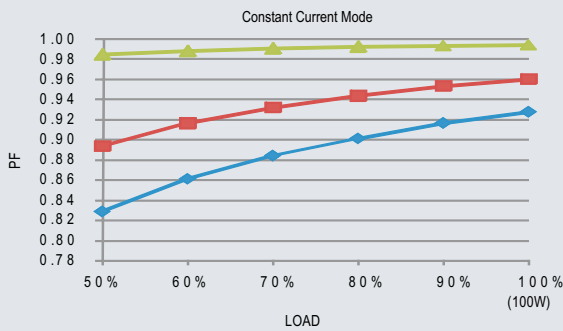
1. Output constant current level can be adjusted through the output cable by connecting a resistor, 1~10Vdc or 10V PWM signal between DIM+ and DIM-.
2. The LED lighting fixture can be turned ON/OFF via the switch.

HLG-100H-B Series

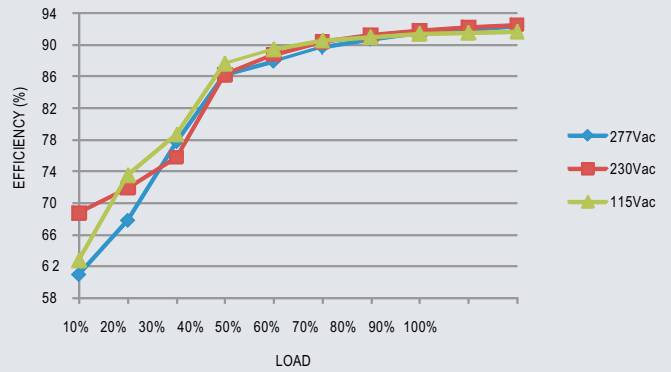
100W IP67 Constant Voltage LED Lighting Power Supplies



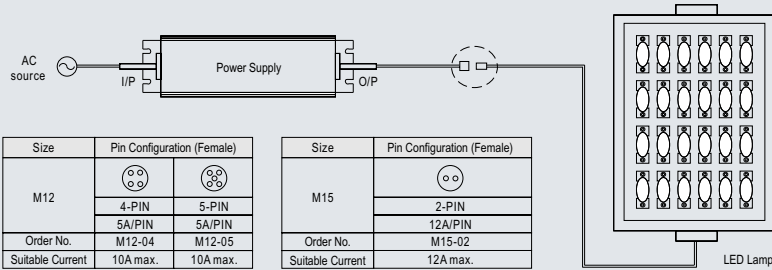
Power Factor Characteristics



Efficiency vs Load (48V Model)

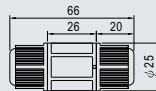


Waterproof Connection



Size	Pin Configuration (Female)	
M12		
	4-PIN	5-PIN
	5A/PIN	5A/PIN
Order No.	M12-04	M12-05
Suitable Current	10A max.	10A max.

Size	Pin Configuration (Female)
M15	
	2-PIN
	12A/PIN
Order No.	M15-02
Suitable Current	12A max.



CJ04-1 Suitable for 14AWG-16AWG
CJ04-2 Suitable for 18AWG-22AWG



Up to four wires can be connected through this cable joiner by soldering or clamping by tools.

