HLG-240H-A Series

240W Constant Voltage LED Lighting Power Supplies

MaxiLED Lighting

Case: 8016GK
244.2 x 68 x 38.8 mm

Features

- Constant voltage mode power supply
- Universal AC input up to 305VAC
- Built in active PFC function
- Output voltage & constant current level adjustable through internal potentiometer
- Short circuit, over current, over voltage, over temperature protections
- Cooling by free air convection
- Compliance to worldwide safety regulations for lighting
- Suitable for dry, damp, wet locations

IP65 SELV CE CB

Specification

INPUT	Voltage	90V~305VAC or 127V~431VDC.				
	Frequency	47 ----- 63 Hz				
	Current	4A/ 115VAC 2A/ 230VAC 1.2A/ 277VAC				
	Power Factor	PF>0.98/115VAC PF>0.95/230VAC, full load (Please refer to "Power Factor Characteristic" curve)				
	Inrush Current	75A@230VAC, Cold start				
	Leakage Current	<0.75mA@277VAC input				
OUTPUT	MODEL No.	HLG-240H-12A	HLG-240H-15A	HLG-240H-20A	HLG-240H-24A	HLG-240H-30A
	Voltage	12V	15V	20V	24V	30V
	Voltage Adj. Range	11.2~12.8V	14 ~ 16V	18.6 ~ 21.4V	22.4 ~ 25.6V	28 ~ 32V
	Constant Current Region	6~12V	7.5~15V	10~20V	12~24V	15~30V
	Rated Current	16A	15A	12A	10A	8A
	Current Adj, Range	8 ~ 16A	7.5 ~ 15A	6 ~ 12A	5 ~ 10A	4 ~ 8A
	Power	192W	225W	240W	240W	240W
	Ripple & Noise	150mV	150mV	150mV	150mV	200mV
	Efficiency (TYP.)	90%	90%	92%	93%	93%
PROTECTION	Over Voltage	13.5 ~ 18V	17.5 ~ 21.5V	23.5 ~ 27.5V	27 ~ 34V	33 ~ 39V
		Shutdown and latch off output voltage, re-power on to recover				
	Short Circuit	Hiccup mode, recovers automatically after fault condition is removed				
	Over Temperature	100℃ ±5℃ (TSW1)/12v&15v 95℃ ±5℃ (TSW1) all other outputs; shutdown output voltage, recovers automatically after temperature goes down				
	Over Current	95~108% rated output current; constant current limiting, recovers automatically after fault condition is removed				
ELEC. CHAR.	Rise Time	80mS@230Vac& 115VAC, full load				
	Hold Up Time	15mS@230V/115VAC, full load condition				
	Voltage Tolerance	±2.5% for 12V; ±2.0% for 15V; ±1.0% all others				
	Line Regulation	±0.5%				
	Load Regulation	±2.0% for 12V; ±1.5% for 15V; ±1.0% for 20V; ±0.5% all others				
	Setup Time	2500ms@230VAC & 115VAC				
ENVIRONMENT	Temperature	Operating: -40~+70℃ ; De-rating: 60~70℃@60% load ; Storage: -40~ +80℃				
	Humidity	Operating: 20%~95% RH; Storage: 10%~95% RH (non condensing)				
	Temp. Coefficient	±0.03%/℃ (0~50℃)				
	Vibration	10~500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes				
SAFETY	Withstand Voltage	I/P-O/P:3.75KVAC I/P-FG:1.88KVAC O/P-FG:0.5KVAC				
	Isolation Resistance	I/P-O/P, I/P-FG, O/P-FG:>100M Ohms / 500VDC / 25℃/ 70% RH				
	Safety Standard	Compliance to UL1012, CAN/CSA-C22.2 No. 107.1-01, UL8750, CSAC22.2 No. 250.0-08,TUV EN61347-1, EN61347-2-13 independent; UL60950-1, UL8750,TUV EN60950-1				
EMC	EMC Emission	Compliance to EN55015, EN55022 (CISPR22) Class B, EN61000-3-2 Class C (≥50% 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.	207.9K hrs min. MIL-HDBK-217F (25℃)				
	Packing	N.W.:1.3Kg / 1pc ; 12pcs / 16.6Kgs 0.84CUFT / 1 CTN				

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ 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. Constant current operation region is within 50~100% rated output voltage. This is a suitable operation region for LED related applications, but please reconfirm if there are special electrical requirements for specific system designs.
5. Derating may be needed under low input voltage. Please check the static characteristics for more details.

Please see next page for more Notes

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	Inrush Current	75A@230VAC, Cold start			
	Leakage Current	<0.75mA@277VAC input			
OUTPUT	MODEL No.	HLG-240H-36A	HLG-240H-42A	HLG-240H-48A	HLG-240H-54A
	Voltage	36V	42V	48V	54V
	Voltage Adj. Range	33.5 ~ 38.5V	39 ~ 45V	44.8 ~ 51.2V	50 ~ 57V
	Constant Current Region	18~36V	21~42V	24~48V	27~54V
	Rated Current	6.7A	5.72A	5A	4.45A
	Current Adj. Range	3.3 ~ 6.7A	2.86 ~ 5.72A	2.5 ~ 5A	2.23 ~ 4.45A
	Power	241.2W	240.24W	240W	240.3W
	Ripple & Noise	250mV	250mV	250mV	350mV
	Efficiency (TYP.)	93%	93%	93.5%	94%
PROTECTION	Over Voltage	43~49V	48~54V	55~63V	60~67V
		Shutdown and latch off output voltage, re-power on to recover			
	Short Circuit	Hiccup mode, recovers automatically after fault condition is removed			
	Over Temperature	100℃ ±5℃ (TSW1)/12v&15v 95℃ ±5℃ (TSW1) all other outputs; shutdown output voltage, recovers automatically after temperature goes down			
	Over Current	95~108% rated output current; constant current limiting, recovers automatically after fault condition is removed			
ELEC. CHAR.	Rise Time	80mS@230Vac& 115VAC, full load			
	Hold Up Time	15mS@230V/115VAC, full load condition			
	Voltage Tolerance	±2.5% for 12V; ±2.0% for 15V; ±1.0% all others			
	Line Regulation	±0.5%			
	Load Regulation	±2.0% for 12V; ±1.5% for 15V; ±1.0% for 20V; ±0.5% all others			
	Setup Time	2500ms@230VAC & 115VAC			
ENVIRONMENT	Temperature	Operating: -40~+70℃ ; De-rating: 60~70℃@60% load ; Storage: -40~ +80℃			
	Humidity	Operating: 20%~95% RH; Storage: 10%~95% RH (non condensing)			
	Temp. Coefficient	±0.03%/℃ (0~50℃)			
	Vibration	10~500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes			
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	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.	207.9K hrs min. MIL-HDBK-217F (25℃)			
	Packing	N.W.:1.3Kg / 1pc ; 12pcs / 16.6Kgs 0.84CUFT / 1 CTN			

7. 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.
7. Length of set up time is measured at first cold start. Turning the power supply ON/OFF may lead to increase of the set up time.
8. Safety and EMC design refer to EN60598-1, subject 8750(UL), CNS15233, GB7000.1, FCC part18.

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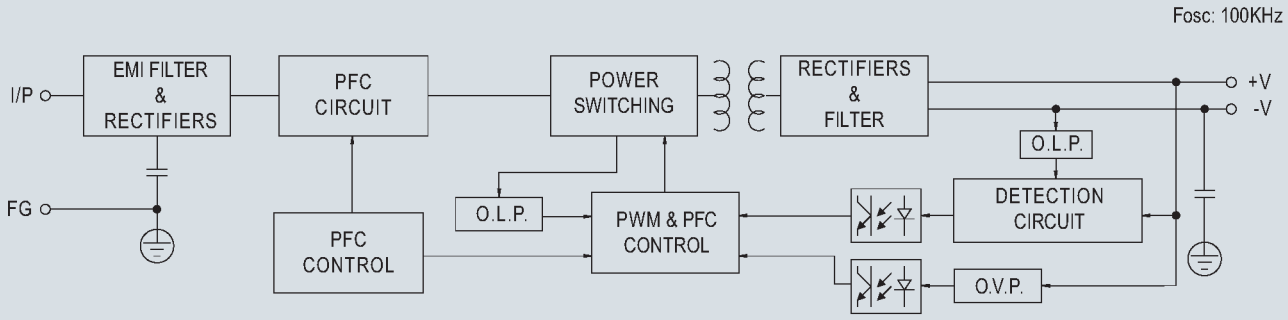
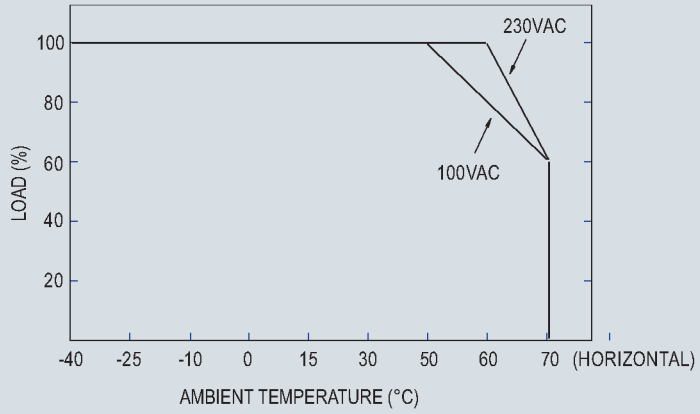
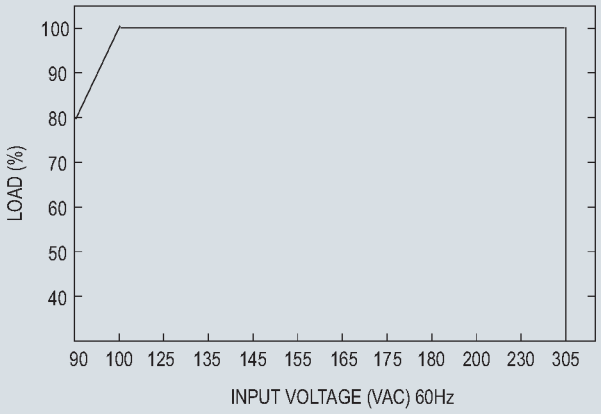
Block Diagram



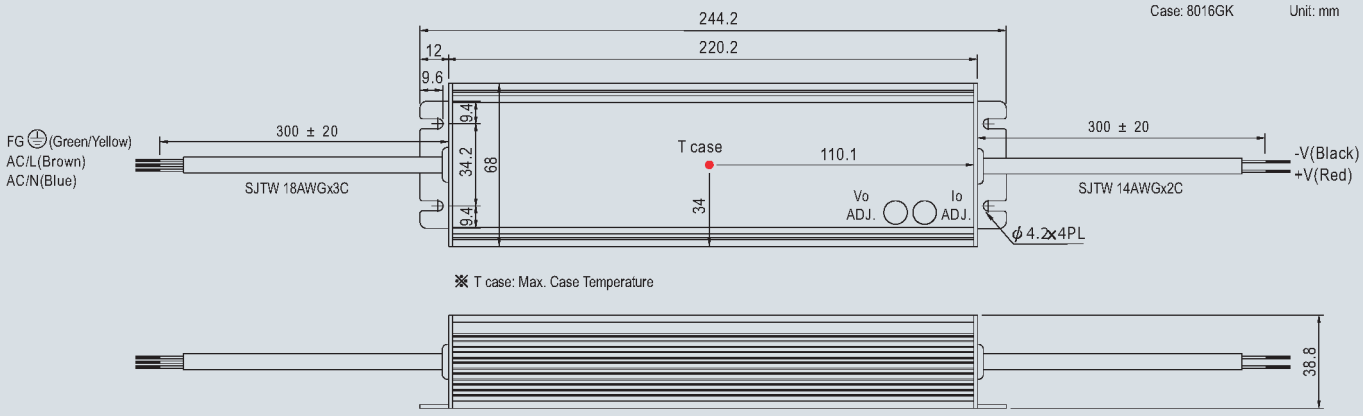
De-Rating Curve



Static Characteristics



Dimensions



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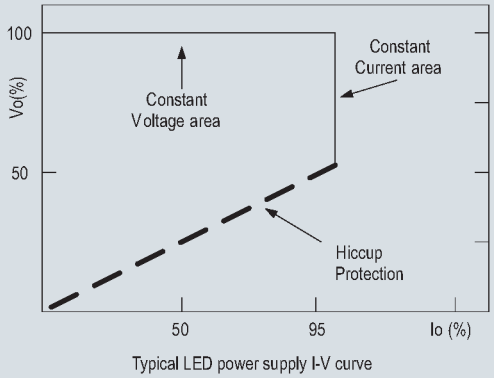
Driving Methods of LED Module

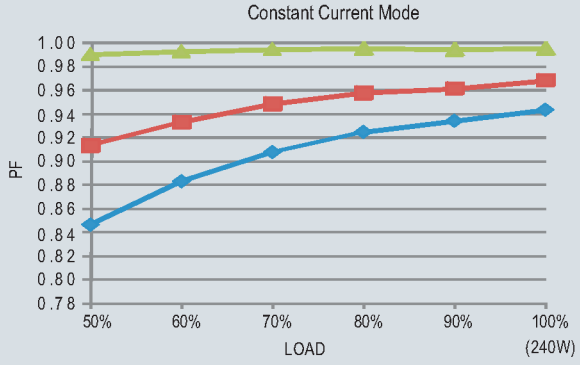


Typical LED power supply I-V curve

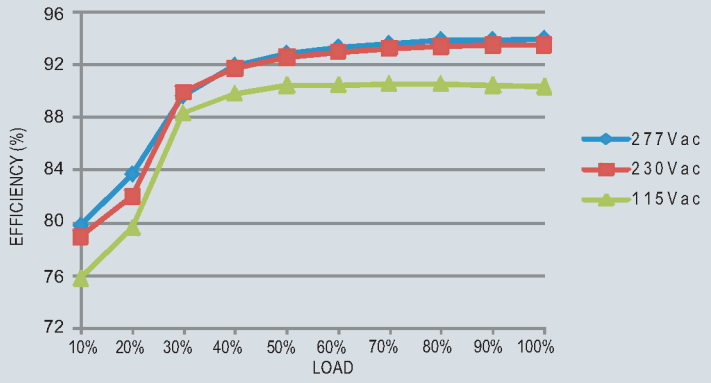
There are two main kinds of LED driver method "direct drive" and "with LED driver". A typical LED power supply may either work in constant voltage mode (CV) or constant current mode (CC) to drive the LEDs.

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

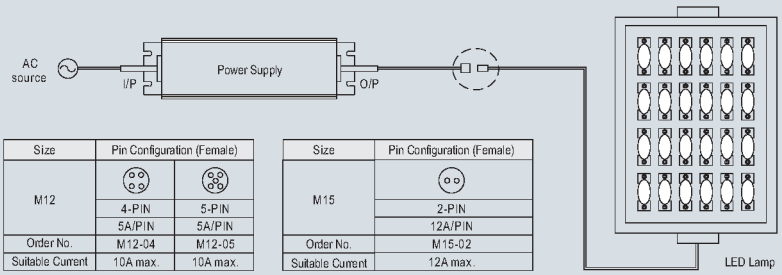
Power Factor Characteristics



Efficiency vs Load (48V Model)

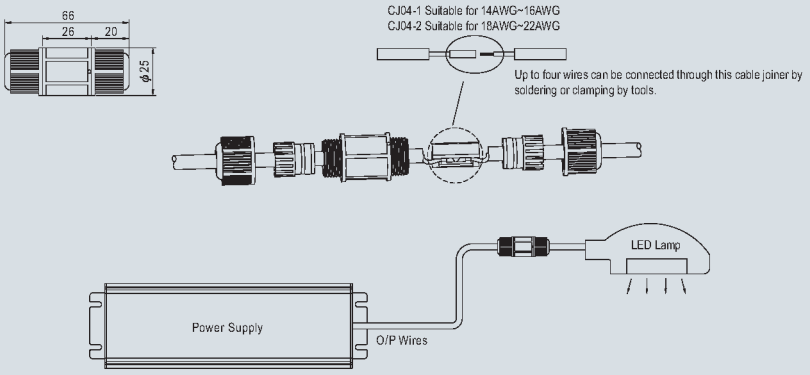


Waterproof Connection



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.



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Junction Box Option