

### 240W Single Output Switching Power Supply

### HLG-240H series



### Features :

- Universal AC input / Full range (up to 305VAC)
- Built-in active PFC function
- Protections: Short circuit / Over current / Over voltage / Over temperature
- Cooling by free air convection
- · OCP point adjustable through output cable or internal potentiometer
- · IP67 / IP65 design for indoor or outdoor installations
- Three in one dimming function (1~10Vdc or PWM signal or resistance)
- Suitable for LED lighting and street lighting applications
- Compliance to worldwide safety regulations for lighting
- Suitable for dry / damp / wet locations
- 5 years warranty (Note.10)

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HLG-240H-12 A Blank : IP67 rated. Cable for I/O connection.

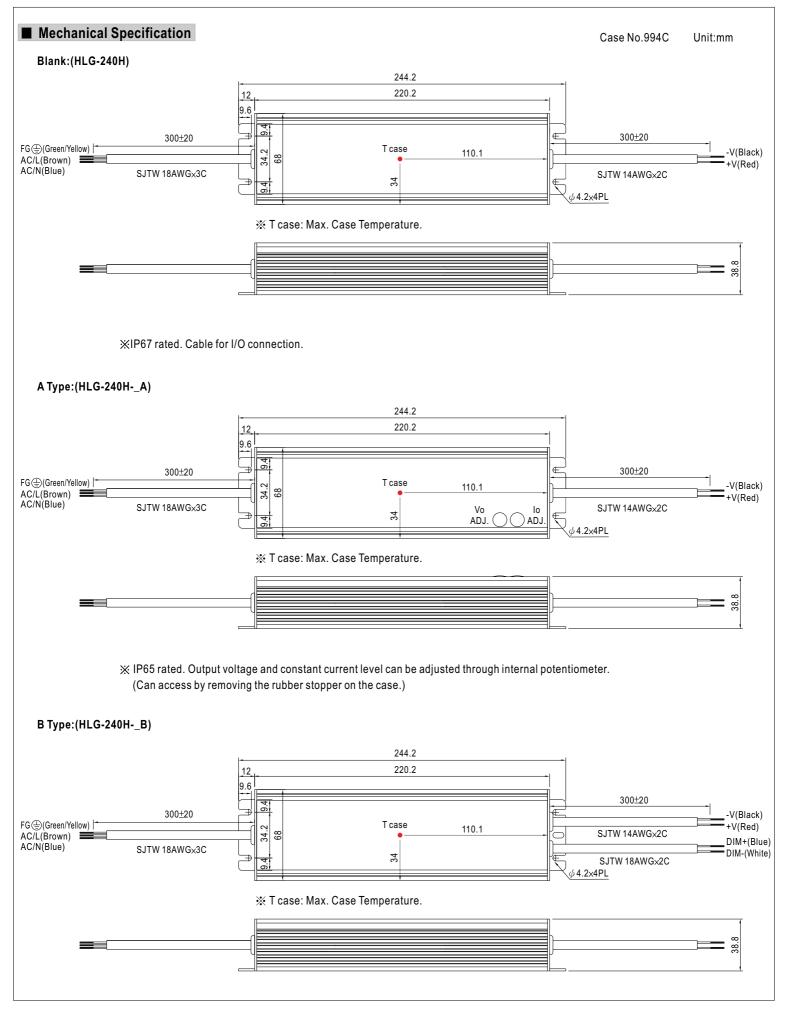
- A : IP65 rated. Output voltage and constant current level can be adjusted through internal potentiometer.
- B: IP67 rated. Constant current level adjustable through output cable with 1~10Vdc or 10V PWM signal or resistance.
- C : Terminal block for I/O connection. Output voltage and constant current level can be adjusted through internal potentiometer.
- D (option) : IP67 rated. Timer dimming function, contact MEAN WELL for details.

#### SPECIFICATION

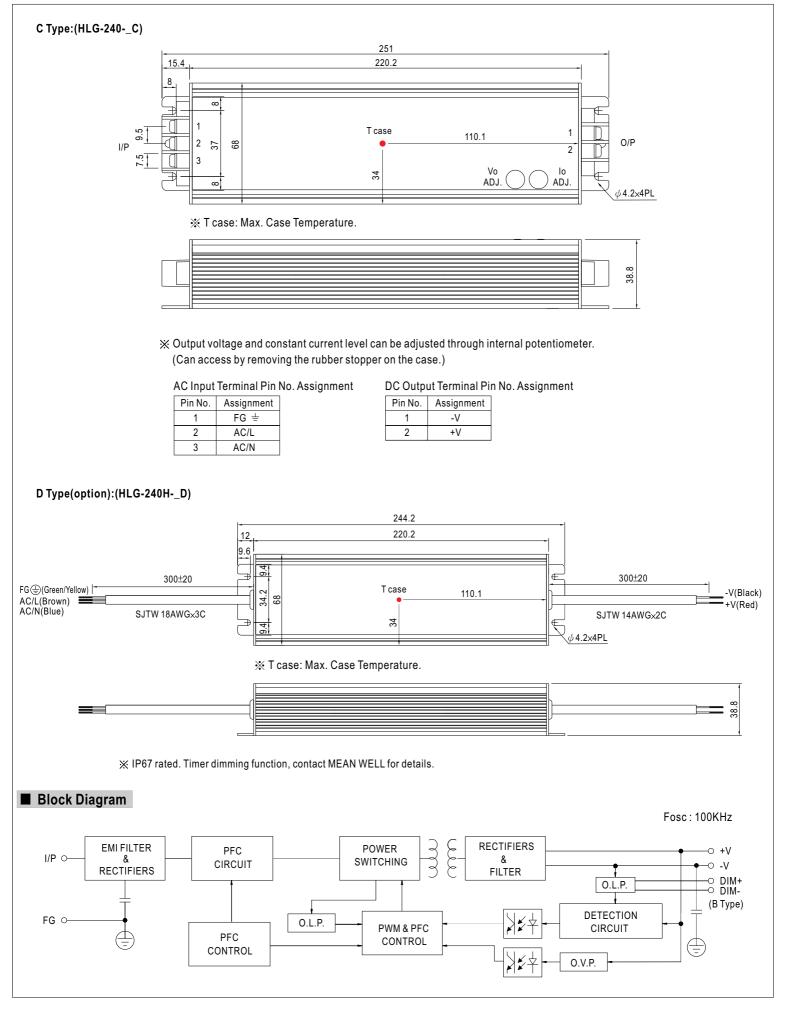
MODEL		HLG-240H-12	HLG-240H-15	HLG-240H-20	HLG-240H-24	HLG-240H-30	HLG-240H-36	HLG-240H-42	HLG-240H-48	HLG-240H-54		
WODEL						- <u> </u>						
OUTPUT	DC VOLTAGE	12V	15V	20V	24V	30V	36V	42V	48V	54V		
	CONSTANT CURRENT REGION Note.4		7.5 ~ 15V	10~20V	12~24V	15~30V	18~36V	21~42V	24 ~ 48V	27 ~ 54V		
	RATED CURRENT	16A	15A	12A	10A	8A	6.7A	5.72A	5A	4.45A		
	RATED POWER	192W	225W	240W	240W	240W	241.2W	240.24W	240W	240.3W		
	RIPPLE & NOISE (max.) Note.2		150mVp-p	150mVp-p	150mVp-p	200mVp-p	250mVp-p	250mVp-p	250mVp-p	350mVp-p		
	VOLTAGE ADJ. RANGE Note.6				22.4 ~ 25.6V		33.5 ~ 38.5V	39 ~ 45V	44.8 ~ 51.2V	50 ~ 57V		
	CURRENT ADJ. RANGE	Can be adjusted by internal potentiometer or through output cable										
		8 ~ 16A	7.5 ~ 15A	6 ~ 12A	5~10A	4 ~ 8A	3.3~6.7A	2.86 ~ 5.72A		2.23 ~ 4.45A		
	VOLTAGE TOLERANCE Note.3	±2.5%	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%		
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%		
	LOAD REGULATION Note.8	±2.0%	±1.5%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%		
	SETUP, RISE TIME Note.9	2500ms, 80ms at full load 230VAC /115VAC										
	HOLD UP TIME (Typ.)	15ms at full load 230VAC /115VAC										
	VOLTAGE RANGE Note.5	90 ~ 305VAC 127 ~ 431VDC										
	FREQUENCY RANGE	47 ~ 63Hz										
	POWER FACTOR (Typ.)	PF>0.98/115VAC, PF>0.95/230VAC at full load (Please refer to "Power Factor Characteristic" curve)										
INPUT	EFFICIENCY (Typ.)	90%	90%	92%	93%	93%	93%	93%	93.5%	94%		
	AC CURRENT (Typ.)	4A / 115VAC 2A / 230VAC 1.2A / 277VAC										
	INRUSH CURRENT (Typ.)	COLD START 75A/230VAC										
	LEAKAGE CURRENT	<0.75mA/277VAC										
		95 ~ 108%										
	OVER CURRENT Note.4	Protection type : Constant current limiting, recovers automatically after fault condition is removed										
	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed										
PROTECTION		13.5 ~ 18V		23.5 ~ 27.5V		33 ~ 39V	43~49V	48~54V	55~63V	60~67V		
	OVER VOLTAGE						ver					
		Protection type : Shut down and latch off o/p voltage, re-power on to recover       105°C ±5°C (TSW1)       95°C ±5°C (TSW1)										
	OVER TEMPERATURE	Protection type : Shut down o/p voltage, recovers automatically after temperature goes down										
	WORKING TEMP.	-40 ~ +70°C (Refer to "Derating Curve")										
		20 ~ 95% RH non-condensing										
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10 ~ 95% RH										
	TEMP. COEFFICIENT											
	VIBRATION	±0.03%/°C (0 ~ 50°C) 10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes										
	VIDICATION	-				•		61317 1 ENG	1347 2 13 ind	opondont		
	SAFETY STANDARDS Note.7	UL1012, CAN/CSA-C22.2 No. 107.1-01, UL8750, CSA C22.2 No. 250.0-08, TUV EN61347-1, EN61347-2-13 independent (except for HLG-240H C type), UL60950-1, UL8750, TUV EN60950-1, IP65 or IP67, J61347-1, J61347-2-13 approved										
SAFETY &	WITHSTAND VOLTAGE			-			11 03 01 11 07,	301347-1,30	1047-2-10 app	loveu		
EMC				G:1.88KVAC								
	ISOLATION RESISTANCE EMC EMISSION	,	,	00M Ohms / 50					00.2.2			
						N61000-3-2 C						
					EINO 1947, EINO	5024, light indu	istry level (surg	je 4KV), criter	la A			
	MTBF	207.9Khrs min. MIL-HDBK-217F (25°C)										
OTHERS	DIMENSION	244.2*68*38.8mm (L*W*H)(HLG-240H-Blank/A/B) 251*68*38.8mm (L*W*H)(HLG-240H-C)										
	PACKING	1.3Kg; 12pcs/16.6Kg/0.84CUFT(HLG-240-Blank/A/B) 1.23Kg; 12pcs/15.8Kg/1.16CUFT(HLG-240-C)										
NOTE	<ol> <li>All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</li> <li>Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>Constant current operation region is within 50% ~100% rated output voltage. This is the suitable operation region for LED related applications, but please reconfirm special electrical requirements for some specific system design.</li> <li>Derating may be needed under low input voltages. Please check the static characteristics for more details.</li> <li>Type A and type C only.</li> <li>Safety and EMC design refer to EN60598-1, subject 8750(UL), CNS15233, GB7000.1, FCC part18.</li> <li>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.</li> <li>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.</li> <li>Defer to warranty statement.</li> </ol>											



# HLG-240H series









0.80 0.78

50%

60%

■ EFFICIENCY vs LOAD (48V Model)

70%

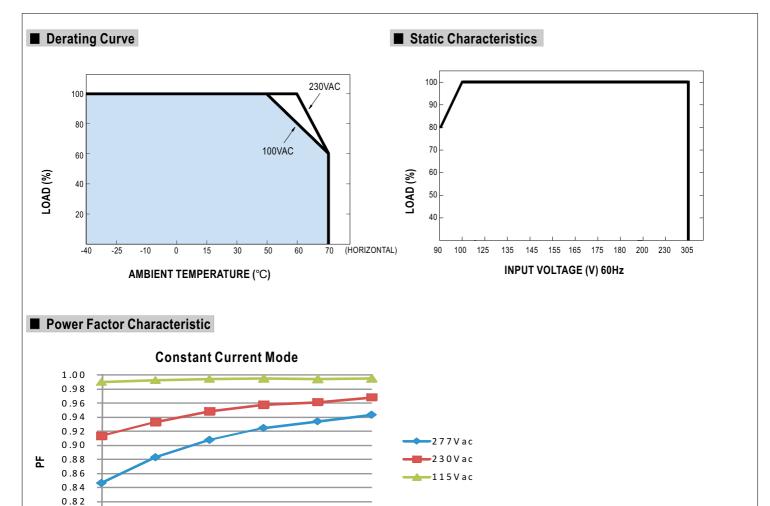
80%

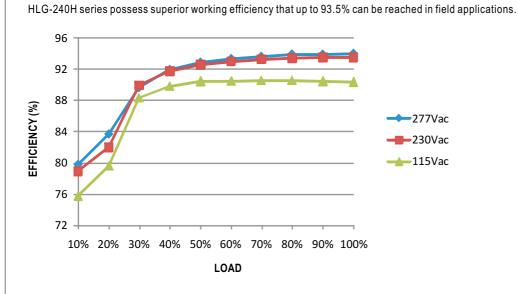
LOAD

90%

100% (240W)

## HLG-240H series





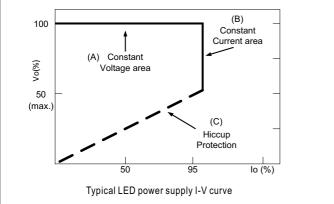


### DRIVING METHODS OF LED MODULE

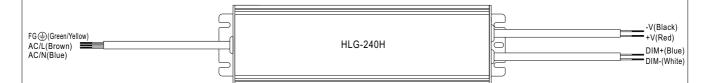
There are two major kinds of LED drive method "direct drive" and "with LED driver".

A typical LED power supply may either work in "constant voltage mode (CV) or constant current mode (CC)" to drive the LEDs.

Mean Well's LED power supply with CV+ CC characteristic can be operated at both CV mode (with LED driver, at area (A) and CC mode (direct drive, at area (B).



#### ■ 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 or 1 ~ 10Vdc or 10V PWM signal between DIM+ and DIM-.

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

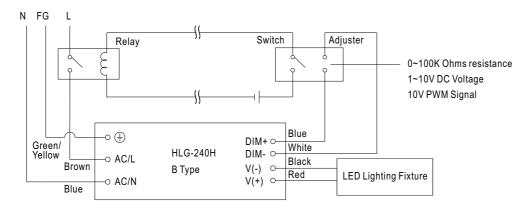
※ Reference resistance value for output current adjustment (Typical)

Resistance value	Single driver	$10 \mathrm{K}\Omega$	$20 \mathrm{K}\Omega$	$30 \mathrm{K}\Omega$	<b>40K</b> Ω	<b>50Κ</b> Ω	$60 \mathrm{K}\Omega$	<b>70Κ</b> Ω	<b>80K</b> Ω	<b>90Κ</b> Ω	100K $\Omega$	OPEN
	Multiple drivers (N=driver quantity for synchronized dimming operation)	10KΩ/N	20KΩ/N	30KΩ/N	40KΩ/N	50KΩ/N	<b>60K</b> Ω/N	<b>70K</b> Ω/N	<b>80K</b> Ω/N	90KΩ/N	100KΩ/N	
Percentage of rated current		10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95%~105%
× 1 ~ 10V dimming function 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%	95%~105%
× 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%	95%~105%

XUsing 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 is not suitable for using additional drivers.

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

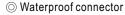


Using a switch and relay can turn ON/OFF the lighting fixture.

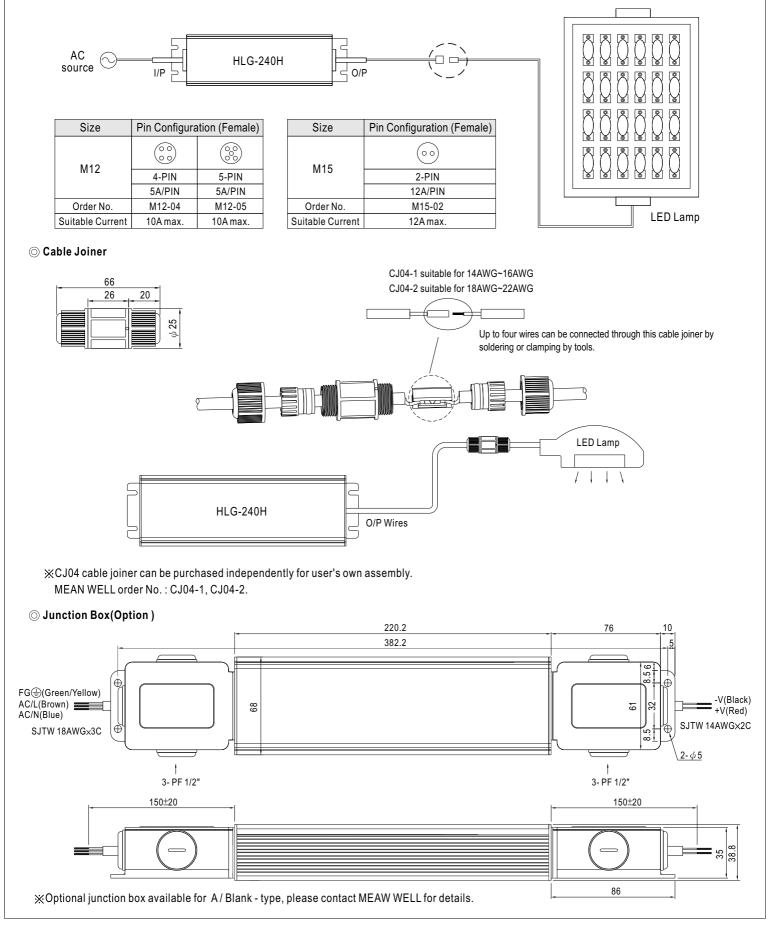
1.Output constant current level can be adjusted through output cable by connecting a resistance or 1~10Vdc or 10V PWM signal between DIM+ and DIM-. 2.The LED lighting fixture can be turned ON/OFF by the switch.



### ■ WATERPROOF CONNECTION



Waterproof connector can be assembled on the output cable of HLG-240H to operate in dry/wet/damp or outdoor environment.



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 A301-300-B2
 A301-300-F3
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 A301-600-F3
 A302-100-F3
 A302-150-B2
 A302-1K0-B2
 A302-1K0-F3
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 AC PLUG-UK2
 AC Plug-US
 AC PLUG-US2
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