



240W Constant Voltage + Constant Current LED Driver

# HLG-240H-12A

User's Manual



## Features

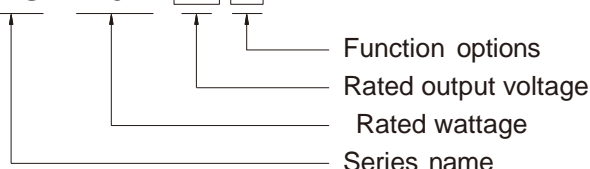
- Constant Voltage + Constant Current mode output
- Metal housing with class I design
- IP67 / IP65 rating for indoor or outdoor installations
- Function options: output adjustable via potentiometer;  
3 in 1 dimming
- Typical lifetime > 62000 hours
- 7 years warranty

## Description

HLG-240H-12A series is a 240W AC/DC LED driver featuring the dual mode constant voltage and constant current output. HLG-240H-12A operates from 90 ~ 305VAC and offers models with different rated voltage ranging between 13.5V and 18V. Thanks to the high efficiency up to 90%, with the fanless design, the entire series is able to operate for -40°C ~ +90°C case temperature under free air convection. The design of metal housing and IP67/IP65 ingress protection level allows this series to fit both indoor and outdoor applications. HLG-240H-12A is equipped with various function options, such as dimming methodologies, so as to provide the optimal design flexibility for LED lighting system.

## Model Encoding

HLG - 240H - 12 A



## Applications

- LED street lighting
- LED high-bay lighting
- Parking space lighting
- LED fishing lamp
- LED greenhouse lighting
- Type HL for use in Class I, Division 2 hazardous (Classified) location.

## GTIN CODE

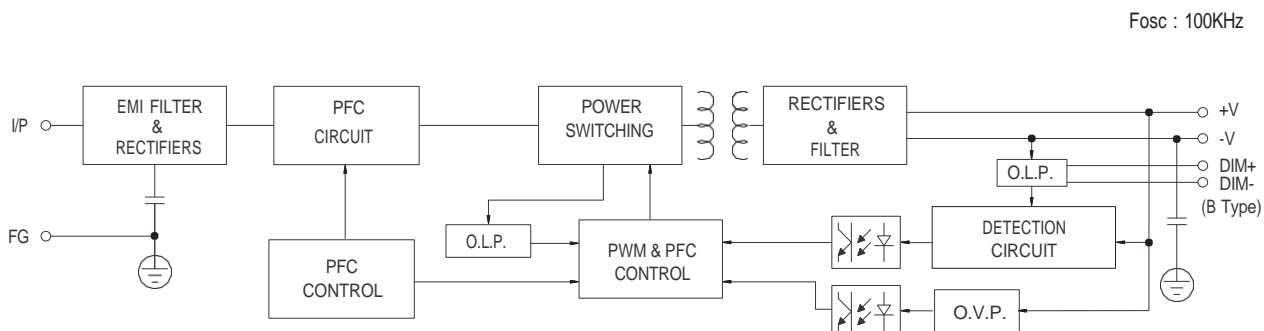
MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

Type	IP Level	Function	Note
Blank	IP67	Io and Vo fixed	In Stock
A	IP65	Io and Vo adjustable through built-in potentiometer	In Stock
B	IP67	3 in 1 dimming function (1~10VDC, 10V PWM signal and resistance)	In Stock
AB	IP65	Io and Vo adjustable through built-in potentiometer & 3 in 1 dimming function (1~10Vdc, 10V PWM signal and resistance)	In Stock
C	-----	Terminal block for I/ connection. output voltage and constant current level can be adjusted through internal potentiometer.	By request
D	IP67	Timer dimming function, contact MEAN WELL for details(safety pending).	By request

**SPECIFICATION**

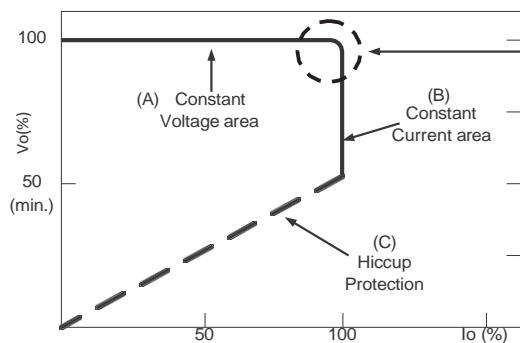
MODEL		HLG-240H-12A
OUTPUT	DC VOLTAGE	12V
	RATED CURRENT	16A
	CURRENT RANGE	0 ~16A
	RATED POWER	192W
	RIPPLE & NOISE (max.) Note.2	150mVp-p
	VOLTAGE TOLERANCE Note.3	±2.5%
	LINE REGULATION	±0.5%
	LOAD REGULATION	±2.0%
	SETUP, RISE TIME Note.6	500ms, 80ms / 230VAC 1000ms, 80ms / 115VAC
	HOLD UP TIME (Typ.)	15ms/230VAC ,230VAC
INPUT	VOLTAGE RANGE Note.4	90 ~ 264VAC 127 ~ 431VDC
	FREQUENCY RANGE	47 ~ 63Hz
	EFFICIENCY (Typ.)	90%
	AC CURRENT	4A/115VAC 2A/230VAC 1.2A/277VAC
	INRUSH CURRENT(Typ.)	COLD START 75A(twidth=700µs measured at 50% Ipeak) at 230VAC
	MAX. No. of PSUs on 16ACIRCUIT BREAKER	2 units (circuit breaker of type B) / 3 units (circuit breaker of type C) at 230VAC
	LEAKAGE CURRENT	0.25mA / 240VAC
PROTECTION	OVERLOAD	110 ~ 150% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed
	OVER VOLTAGE	13.5 ~ 18V Protection type : Shut down o/p voltage, re-power on to recover
ENVIRONMENT	WORKING TEMP.	-40 ~ +90°C (Refer to "Derating Curve")
	WORKING HUMIDITY	20 ~ 90% RH non-condensing
	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10 ~ 95% RH
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes
SAFETY & EMC	SAFETY STANDARDS	UL8750, CSA C22.2 No 250.13-12, UL879, CSA C22.2 No.207-M89, BIS IS15885(Note12), EAC TP TC 004, IP67, IEC62368-1, BS EN/EN62368-1 approved
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC I/P-FG:2KVAC O/P-FG:1.5KVAC
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C/ 70% RH
	EMC EMISSION	Compliance to BS EN/EN55015, BS EN/EN55032 (CISPR32) Class B, BS EN/EN61000-3-2 Class C (@ load≥50%) ; BS EN/EN61000-3-3, GB/T 17743, GB17625.1, EAC TP TC 020:KC KN15, KN61547(except for AB, C, D- type)
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2, 3, 4, 5, 6, 8, 11, BS EN/EN61547, BS EN/EN55024, light industry level (surge immunity Line-Earth 4KV, Line-Line 2KV) EAC TP TC 020:KC KN15, KN61547(except for AB, C, D-type)
OTHERS	MTBF	4497.1K hrs min. Telcordia SR-332 681.6Khrs min. MIL-HDBK-217F (25°C) (Bellcore) ;
	DIMENSION	244.2*68*38.8mm (L*W*H)(HLG-240H-Blank/A/B) 251*68*38.8mm (L*W*H)(HLG-240H C-Type)
	PACKING	1.3Kg; 12pcs/16.6Kg/0.84CUFT(HLG-240-Blank/A/B) 1.23Kg; 12pcs/15.8Kg/1.16CUFT(HLG-240 C-Type)
NOTE	<p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25°C of ambient temperature.</p> <p>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1µf &amp; 47µf parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>4. Please refer to "DRIVING METHODS OF LED MODULE".</p> <p>5. De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details.</p> <p>6. Length of set up time is measured at first cold start. Turning ON/OFF the driver may lead to increase of the set up time.</p> <p>7. The driver 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. (as available on <a href="https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf">https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf</a>)</p> <p>8. To fulfill requirements of the latest ErP regulation for lighting fixtures, this LED driver can only be used behind a switch without permanently connected to the mains.</p> <p>9. This series meets the typical life expectancy of &gt;62,000 hours of operation when Tcase, particularly to point (or TMP, per DLC), is about 75°C or less.</p> <p>10. Please refer to the warranty statement on MEAN WELL's website at <a href="http://www.meanwell.com">http://www.meanwell.com</a>.</p> <p>11. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).</p> <p>12. For any application note and IP water proof function installation caution, please refer our user manual before using. <a href="https://www.meanwell.com/Upload/PDF/LED_EN.pdf">https://www.meanwell.com/Upload/PDF/LED_EN.pdf</a></p> <p>※ Product Liability Disclaimer: For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a></p>	

## BLOCK DIAGRAM



## DRIVING METHODS OF LED MODULE

※ This series is able to work in either Constant Current mode (a direct drive way) or Constant Voltage mode (usually through additional DC/DC driver) to drive the LEDs.

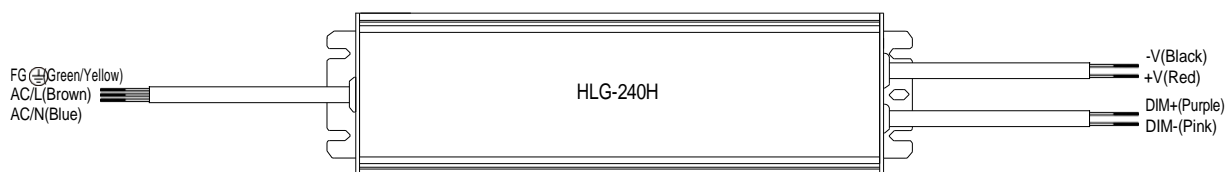


Typical output current normalized by rated current (%)

In the constant current region, the highest voltage at the output of the driver depends on the configuration of the end systems.

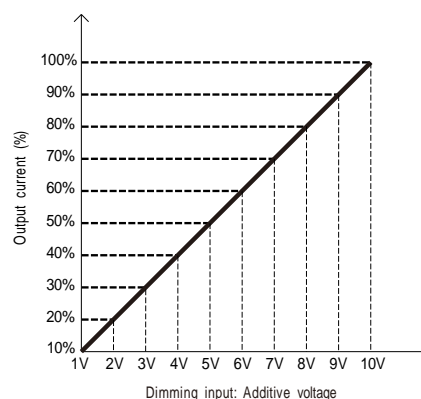
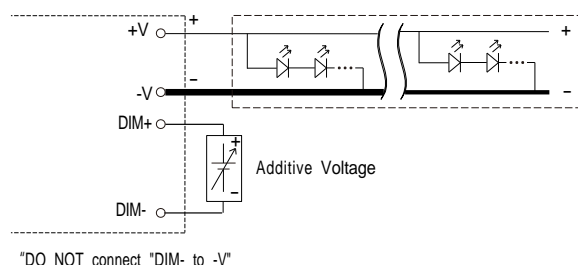
Should there be any compatibility issues, please contact MEAN WELL.

## DIMMING OPERATION

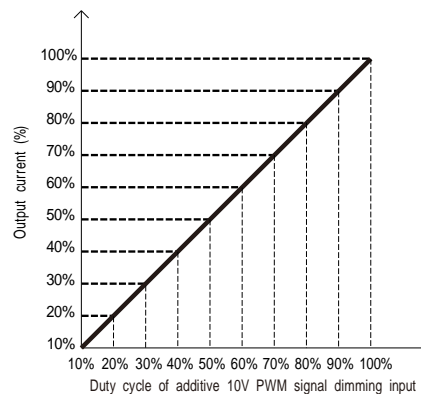
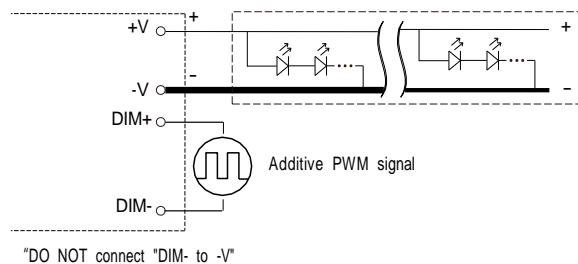


### ※ 3 in 1 dimming function (for B/AB-Type)

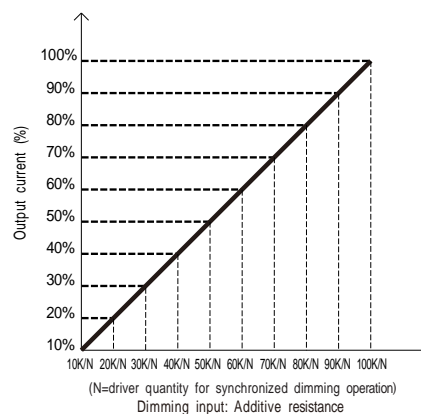
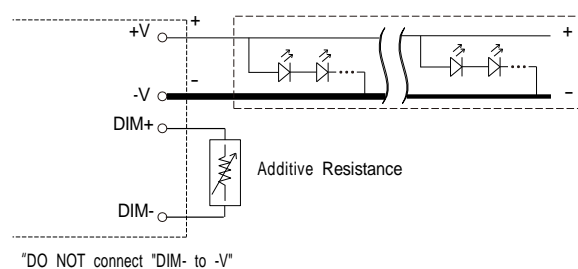
- Output constant current level can be adjusted by applying one of the three methodologies between DIM+ and DIM-:  
1 ~ 10VDC, or 10V PWM signal or resistance.
- Direct connecting to LEDs is suggested. It is not suitable to be used with additional drivers.
- Dimming source current from power supply: 100 $\mu$ A (typ.)
- ◎ Applying additive 1 ~ 10VDC



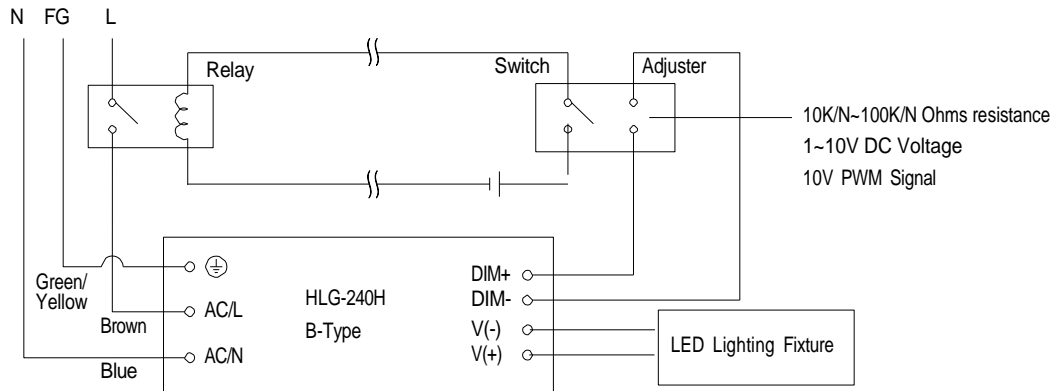
- ◎ Applying additive 10V PWM signal (frequency range 100Hz ~ 3KHz):



- ◎ Applying additive resistance:

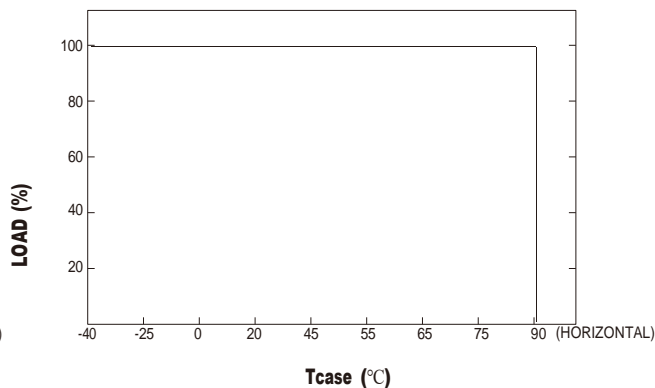
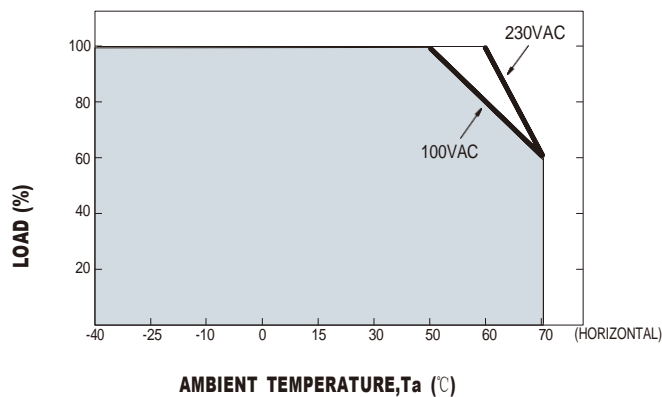


Note: In the case of turning the lighting fixture down to 0% brightness, please refer to the configuration as follow, or please contact MEAN WELL for other options.

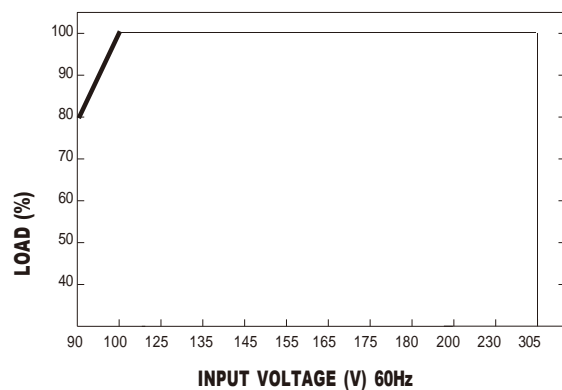


Using a switch and relay can turn ON/OFF the lighting fixture.

## OUTPUT LOAD vs TEMPERATURE(Note. 10)



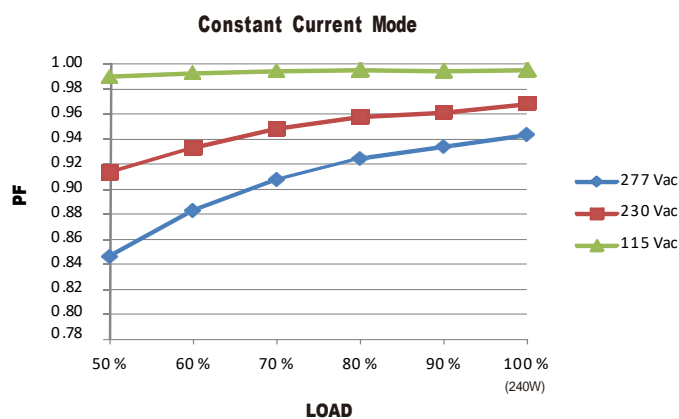
## STATIC CHARACTERISTICS



※ De-rating is needed under low input voltage.

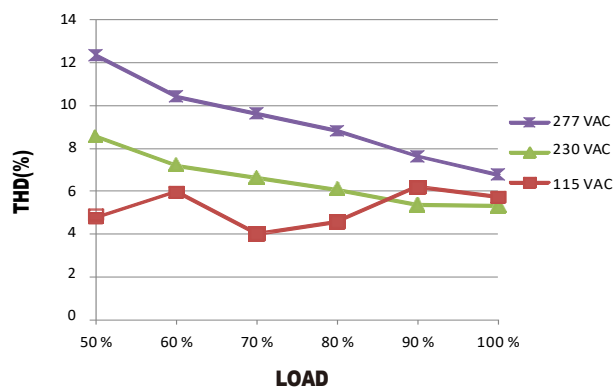
## POWER FACTOR(PF) CHARACTERISTIC

※Tcase at 80°C



## TOTAL HARMONIC DISTORTION (THD)

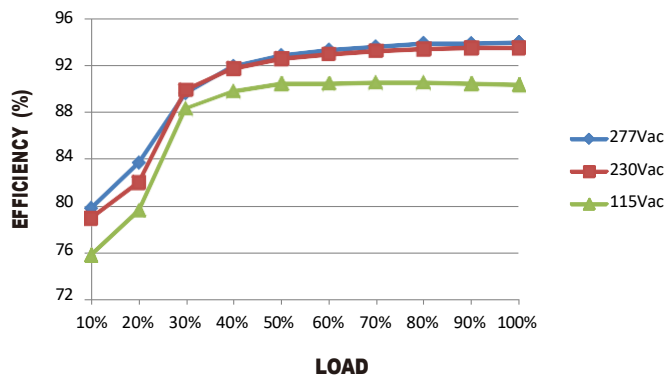
※ 48V Model, Tcase at 80°C



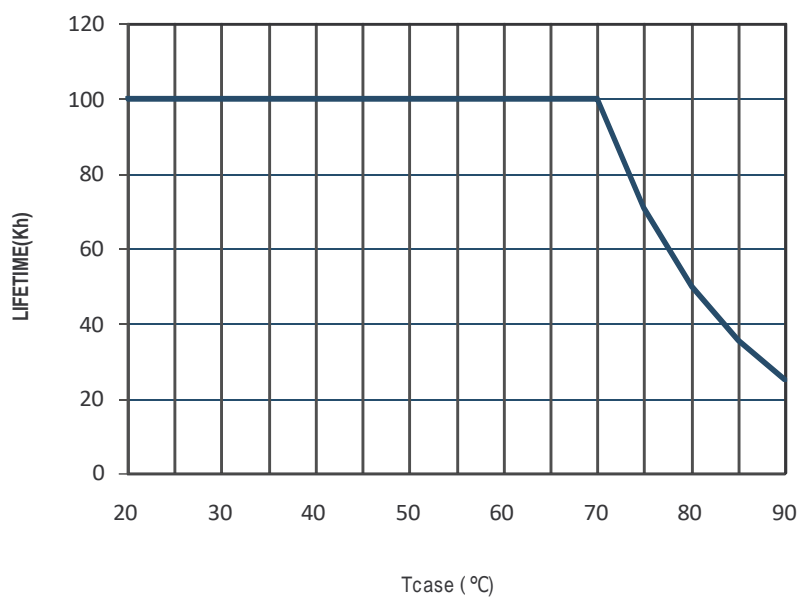
## EFFICIENCY vs LOAD

HLG-240H series possess superior working efficiency that up to 93.5% can be reached in field applications.

※ 48V Model, Tcase at 80°C



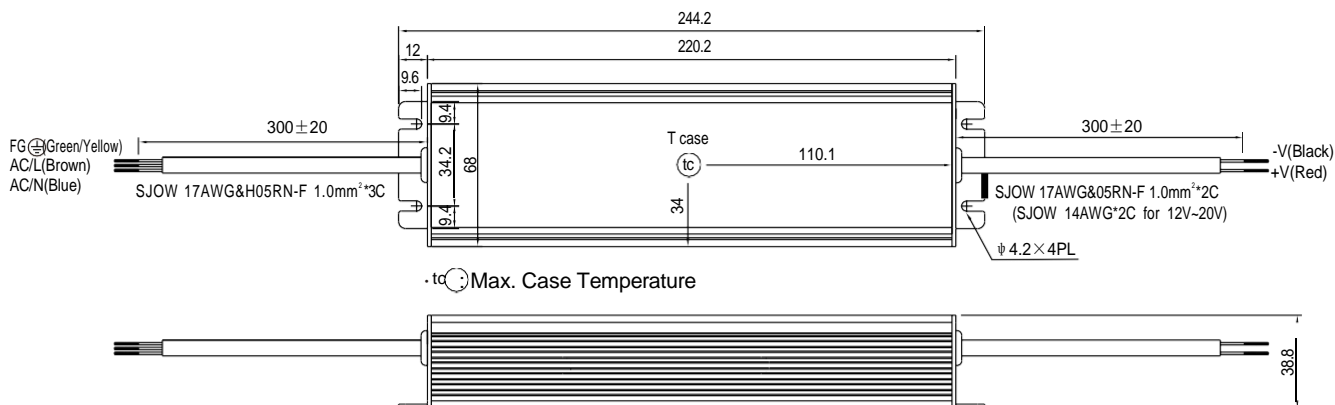
■ LIFE TIME



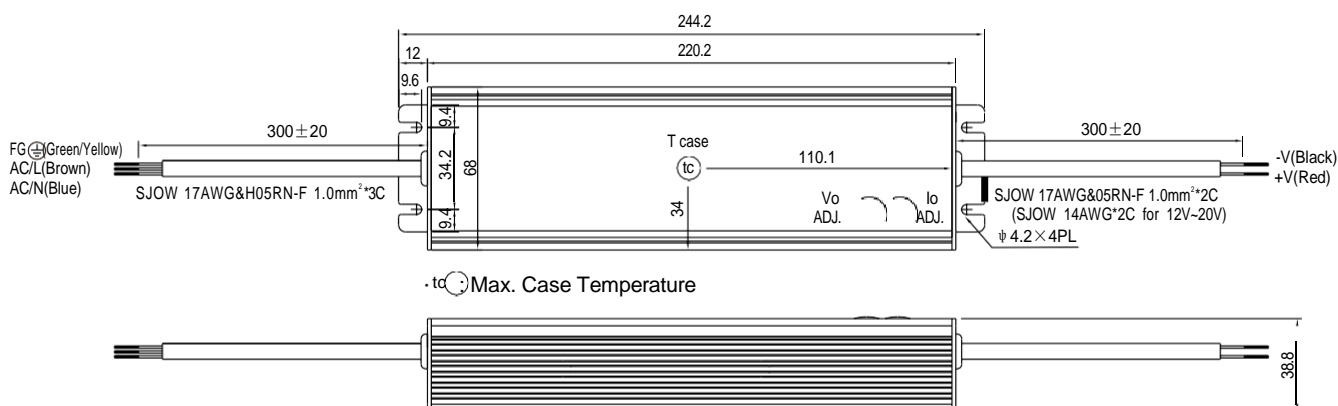
Case No.994C Unit:mm

## MECHANICAL SPECIFICATION

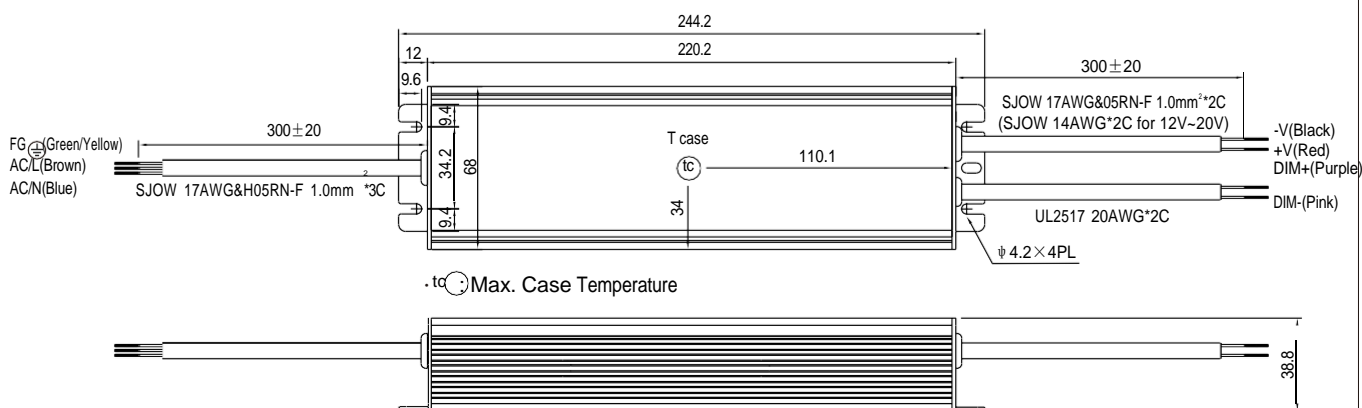
### ※Blank/D-Type



### ※A-Type

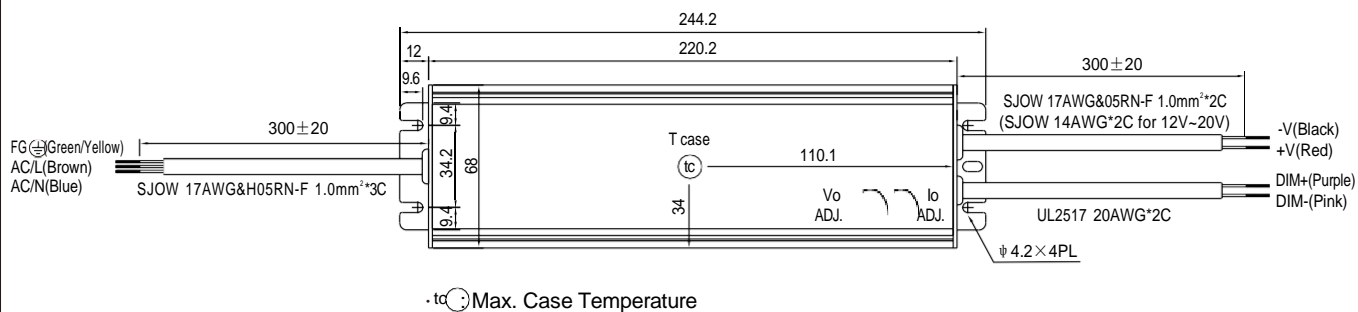


### ※B-Type

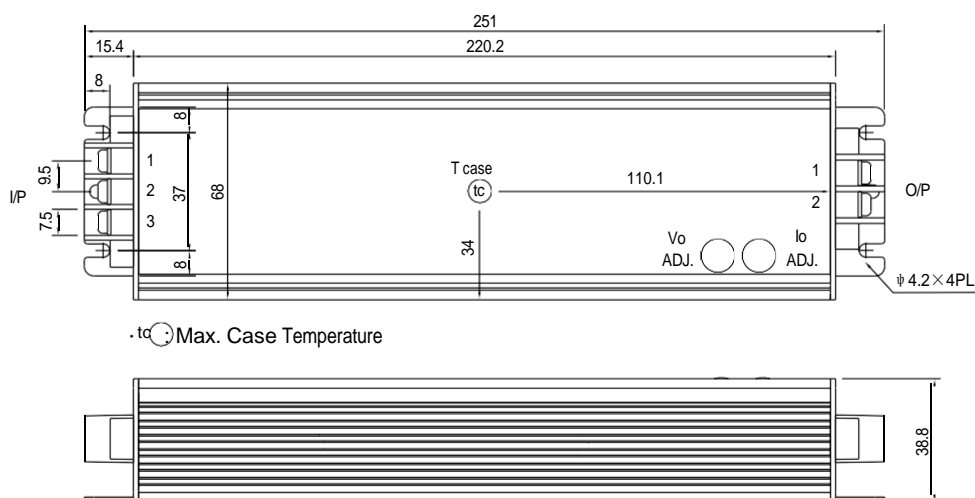




※AB-Type



※C-Type



AC Input Terminal Pin No. Assignment

Pin No.	Assignment
1	FG
2	AC/L
3	AC/N

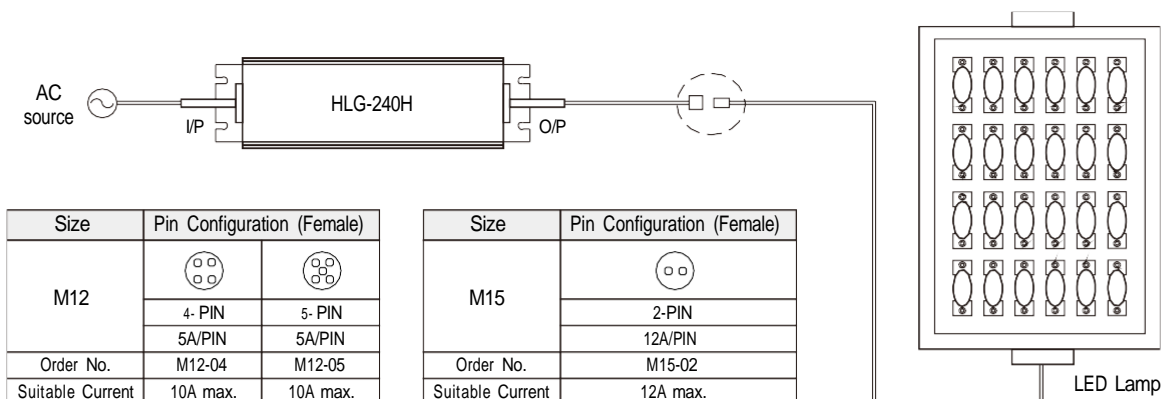
DC Output Terminal Pin No. Assignment

Pin No.	Assignment
1	-V
2	+V

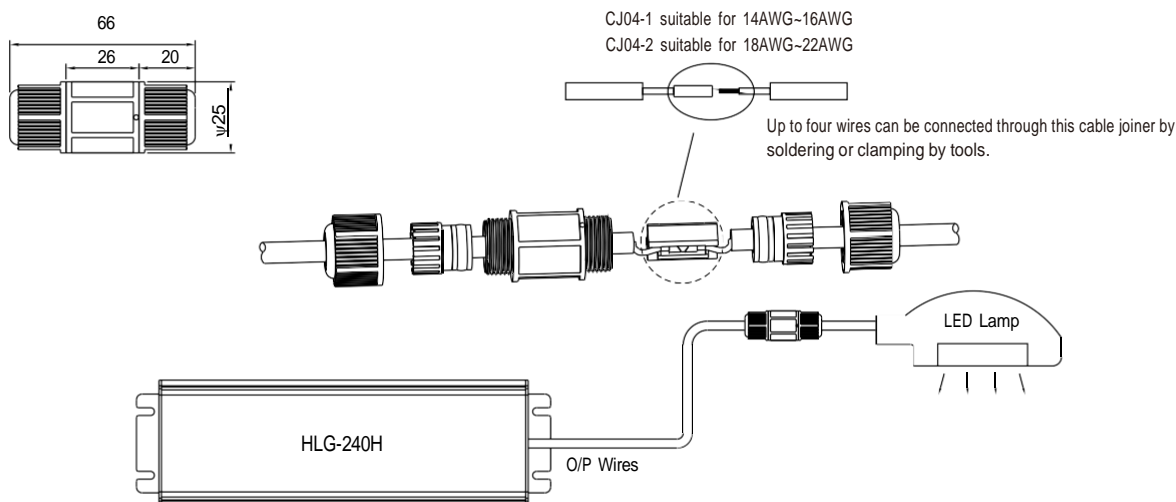
## ■ WATERPROOF CONNECTION

※ Waterproof connector

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

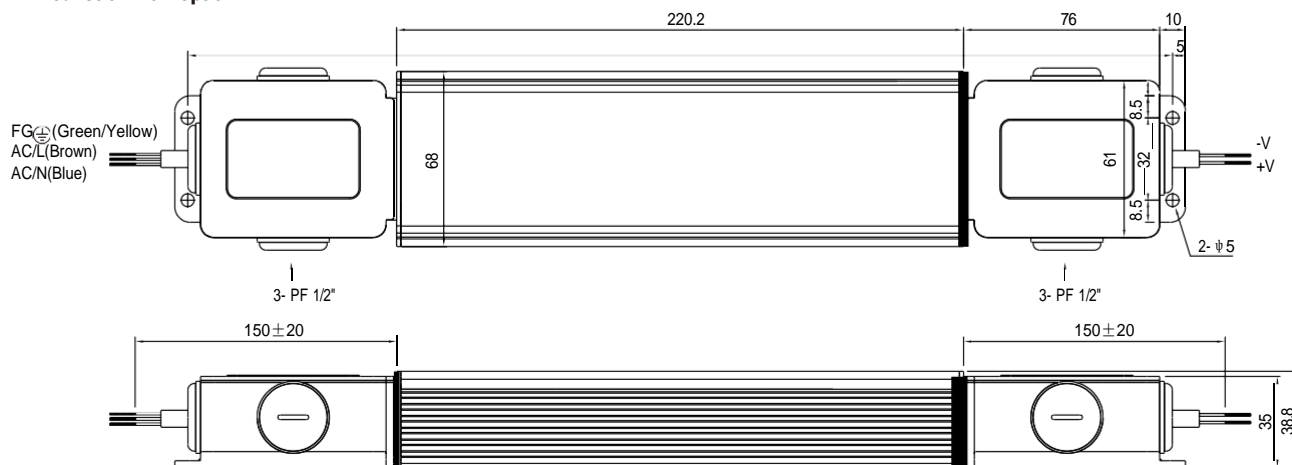


※ Cable Joiner



◎ CJ04 cable joiner can be purchased independently for user's own assembly.  
MEAN WELL order No. : CJ04-1, CJ04-2.

※ Junction Box Option



◎ Junction box option is available for A / Blank - Type. Please contact MEAN WELL for details.