



## ■ Features :

- Universal AC input / Full range (up to 305VAC)
- Built-in active PFC function
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- OCP point adjustable through output cable or internal potential meter
- Suitable for LED lighting and moving sign applications
- IP67 / IP65 design for indoor or outdoor installations
- Compliance to worldwide safety regulations for lighting
- Suitable for dry / damp / wet locations
- 3 years warranty



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 potential meter.

B : IP67 rated. Constant current level adjustable through output cable.

C : Terminal block for I/O connection. Output voltage and constant current level can be adjusted through internal potential meter.

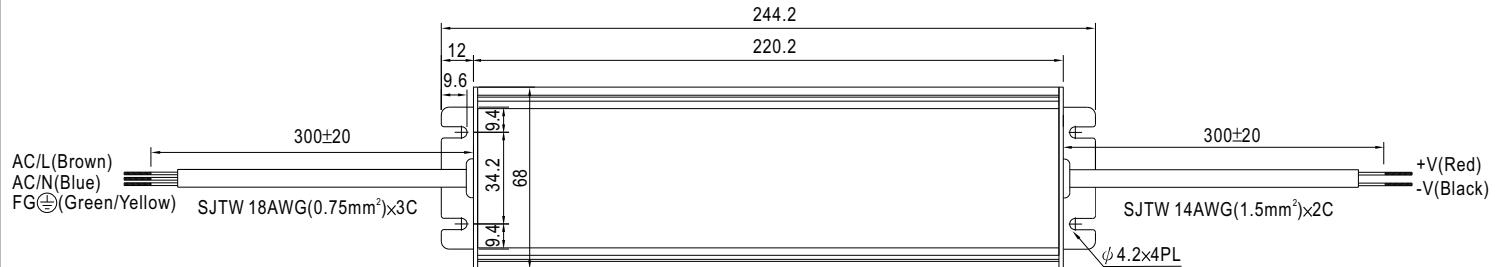
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## SPECIFICATION

## ■ Mechanical Specification

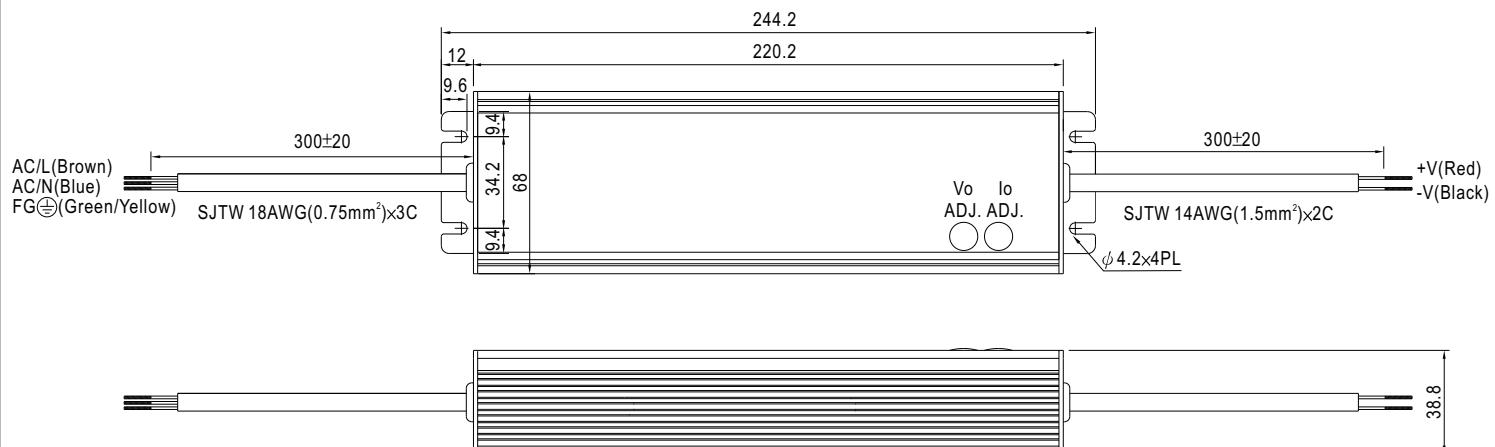
Case No.994C Unit:mm

Blank:(HLG-240H)



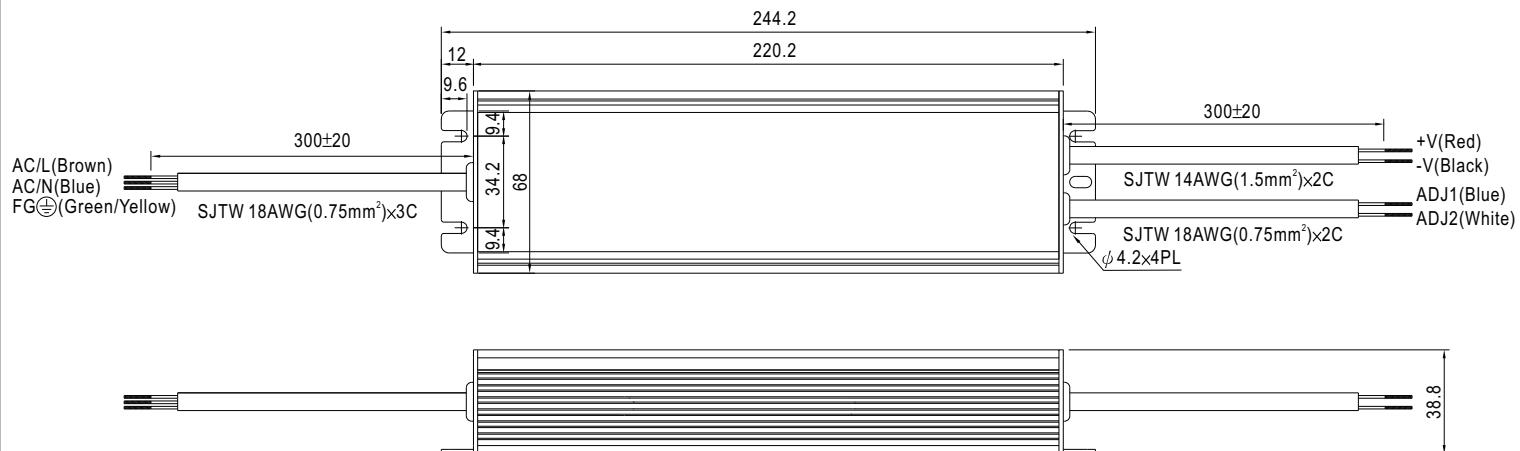
※IP67 rated. Cable for I/O connection.

A Type:(HLG-240H-A)



※ IP65 rated. Output voltage and constant current level can be adjusted through internal potential meter.  
(Can access by removing the rubber stopper on the case.)

## B Type:(HLG-240H-\_B)

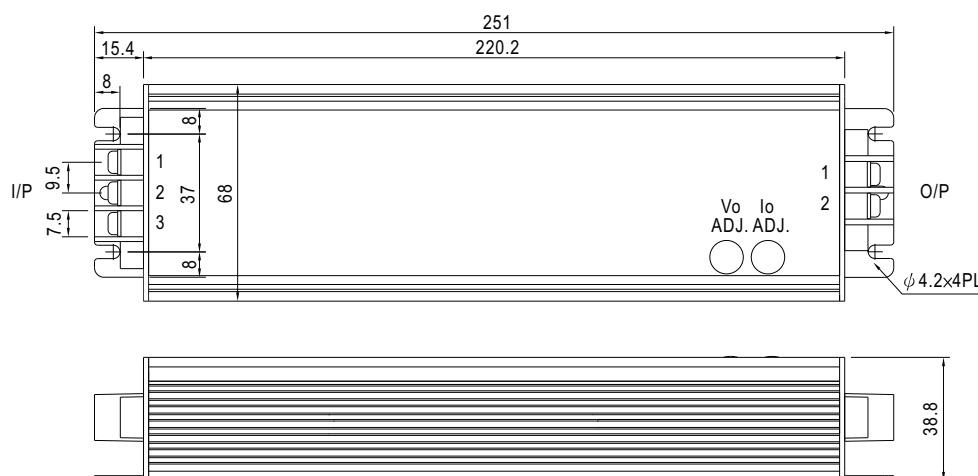


※ IP67 rated. Output constant current level can be adjusted through output cable by connecting a resistor between ADJ1 and ADJ2.

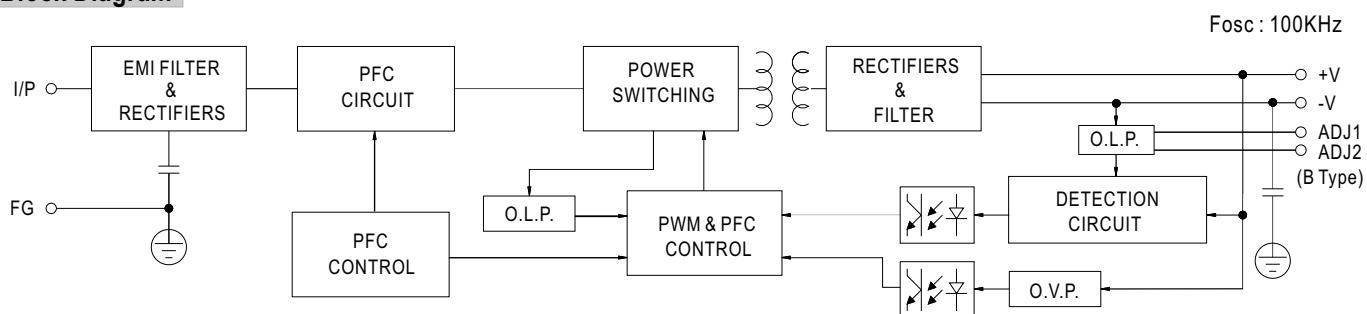
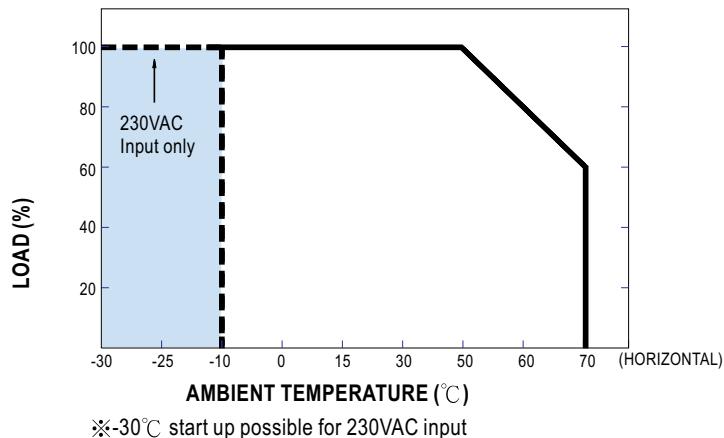
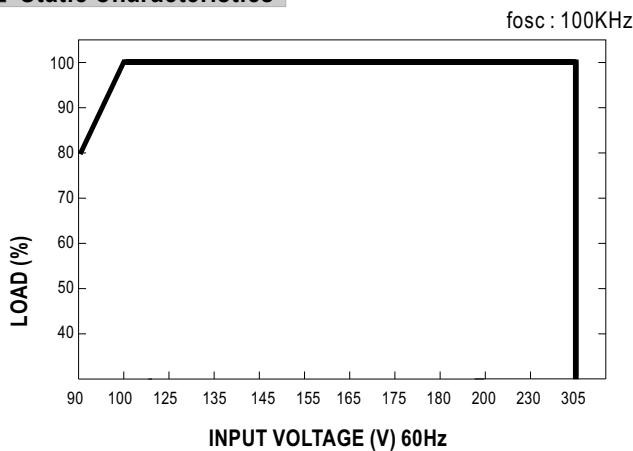
※ Reference resistance value for output current adjustment (Typical)

Percentage of rated current \ Model	12V	15V	20V	24V	30V	36V	42V	48V	54V
Slightly > 100%	Open								
75%	680Ω	560Ω	680Ω	510Ω	820Ω	1.8KΩ	680Ω	620Ω	820Ω
50%	120Ω	47Ω	91Ω	51Ω	120Ω	500Ω	82Ω	68Ω	150Ω
Slightly < 50%	Short								

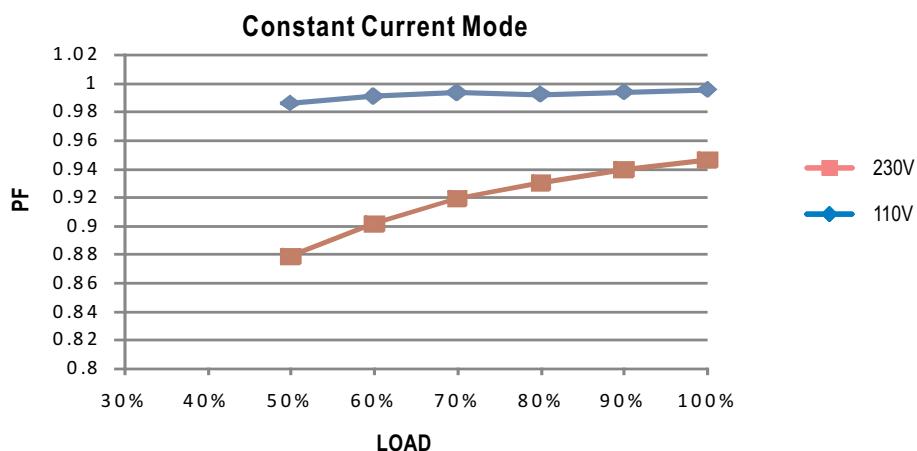
## C Type:(HLG-240H-\_C)



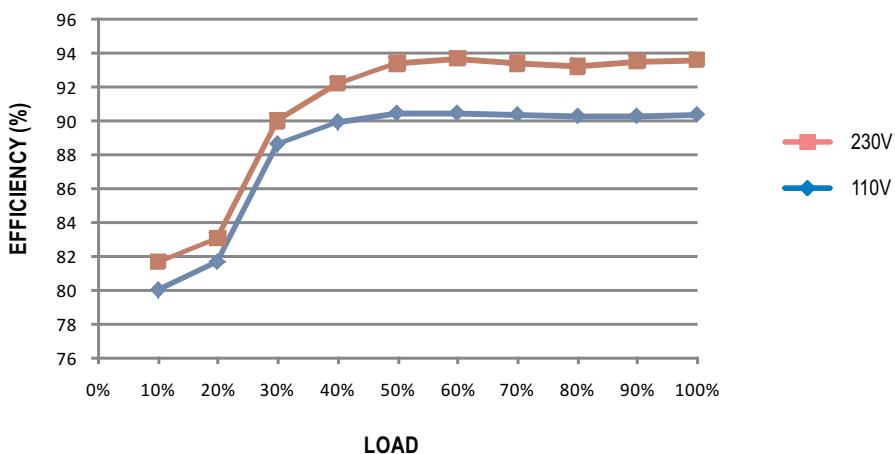
※ Output voltage and constant current level can be adjusted through internal potential meter.  
(Can access by removing the rubber stopper on the case.)

**Block Diagram**

**Derating Curve**

**Static Characteristics**

**Power Factor Characteristic**

Power factor will be higher than 0.9 when output loading is 65% or higher.


**EFFICIENCY vs LOAD (48V Model)**

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

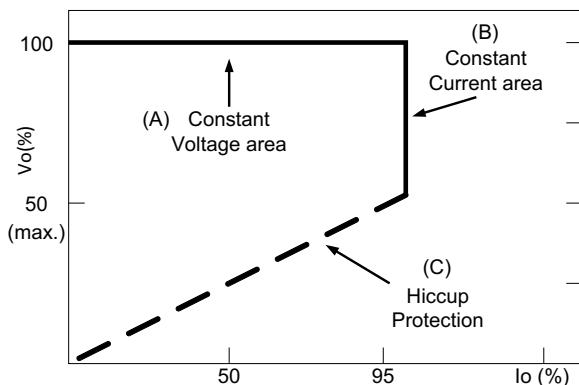


## ■ DRIVING METHODS OF LED MODULE

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).



Typical LED power supply I-V curve

### ◎ Direct driving :

Under direct driving, the power supply will work in "constant current mode (CC)" and output voltage of the power supply will be clamped by sum of forward voltage ( $V_F$ ) of the LED strip.

The total forward voltage of series connecting LEDs is suggested for 75%~95% of power supply rated output voltage due to concern of the best PF value and efficiency.



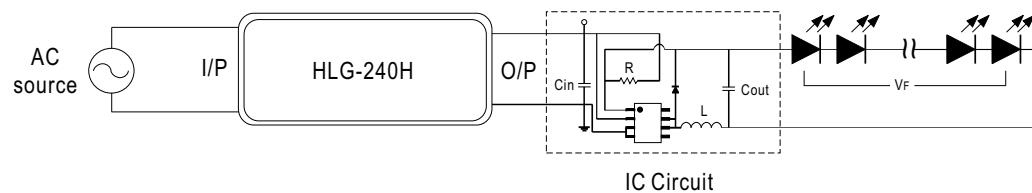
### ◎ With LED driver :

Using additional driver, the power supply will work in "constant voltage mode (CV)" and output voltage of the power supply will be kept in rated value. In this drive mode, several design issues need to be considered:

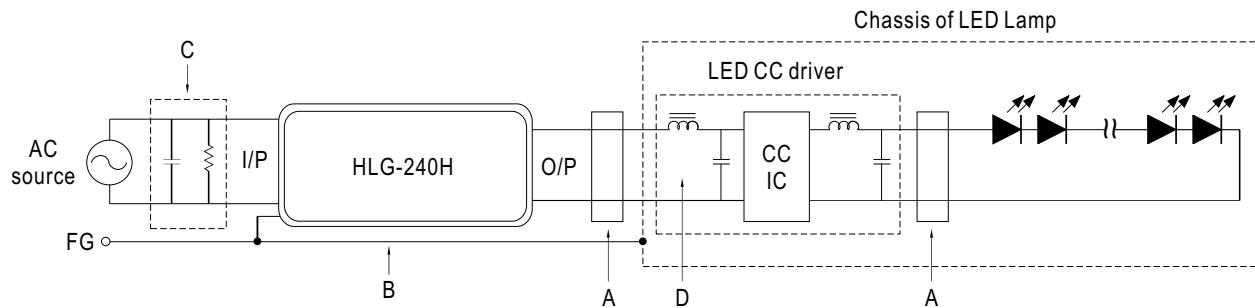
1. Output voltage of PSU must be higher than total forward voltage of series connecting LEDs by 3V minimum.

2. Input capacitor ( $C_{in}$ ) of LED driver circuit should use 2.2uF ~ 22uF(typ.) of rating depends on the operating frequency of the LED driver.

The higher the operating frequency is used, the smaller value of  $C_{in}$  should be chosen, and vice versa.



## ■ EMI DEBUG SUGGESTION

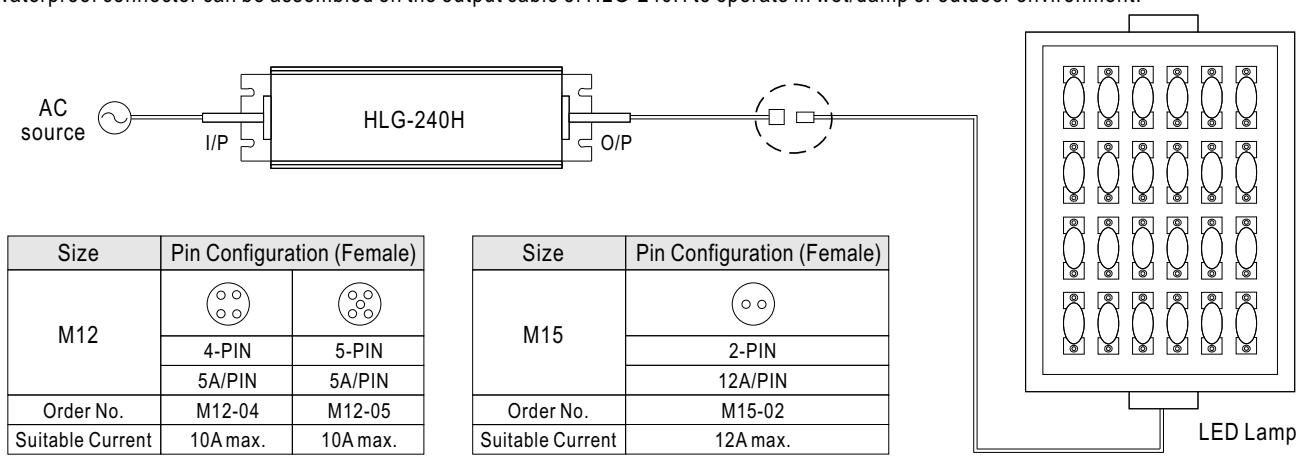


- A. Add a common mode ferrite choke on output wires to reduce the common emission between 10M ~ 300MHz per lighting EMI regulation.
- B. Chassis of LED lamp and chassis of HLG-240H or the FG wire should be connected to the safety ground to reduce the EMI noise, including the conduction and radiation emission.
- C. The additional X-Cap and discharge resistor can reduce the low frequency conduction noise between 9K ~ 1MHz per lighting EMI regulation.
- D. L-C filter should be added at the DC input of LED constant current driver to avoid the differential emission and high frequency noise generated by the CC driver.

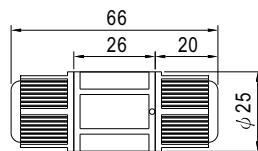
## ■ WATERPROOF CONNECTION

## ◎ Waterproof connector

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



## ◎ Cable Joiner



Suitable for 14AWG~22AWG

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

