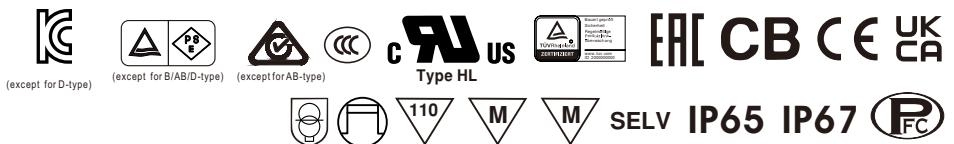




100W Constant Voltage + Constant Current LED Driver

**HLG-100H** series

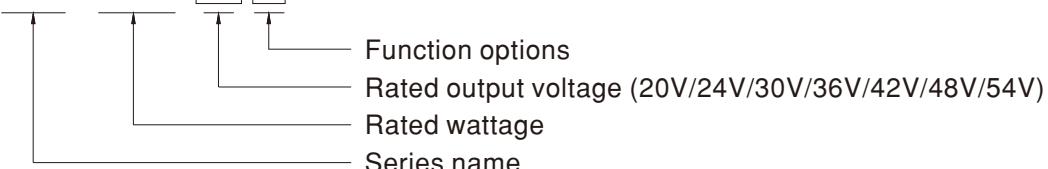
## ■ Features

- Constant Voltage + Constant Current mode output
- Metal housing with class I design
- Built-in active PFC function
- Class 2 power unit
- IP67 / IP65 rating for indoor or outdoor installations
- Function options: output adjustable via potentiometer; 3 in 1 dimming; Timer dimming
- Typical lifetime > 62000 hours
- 7 years warranty

## ■ Description

HLG-100H series is a 100W AC/DC LED driver featuring the dual mode constant voltage and constant current output. HLG-100H operates from 90~305VAC and offers models with different rated voltage ranging between 20V and 54V. Thanks to the high efficiency up to 93%, with the fanless design, the entire series is able to operate for -40°C ~ +80°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-100H 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 - 100H - **48** **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.

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
D	IP67	Timer dimming function, contact MEAN WELL for details(safety pending).	By request

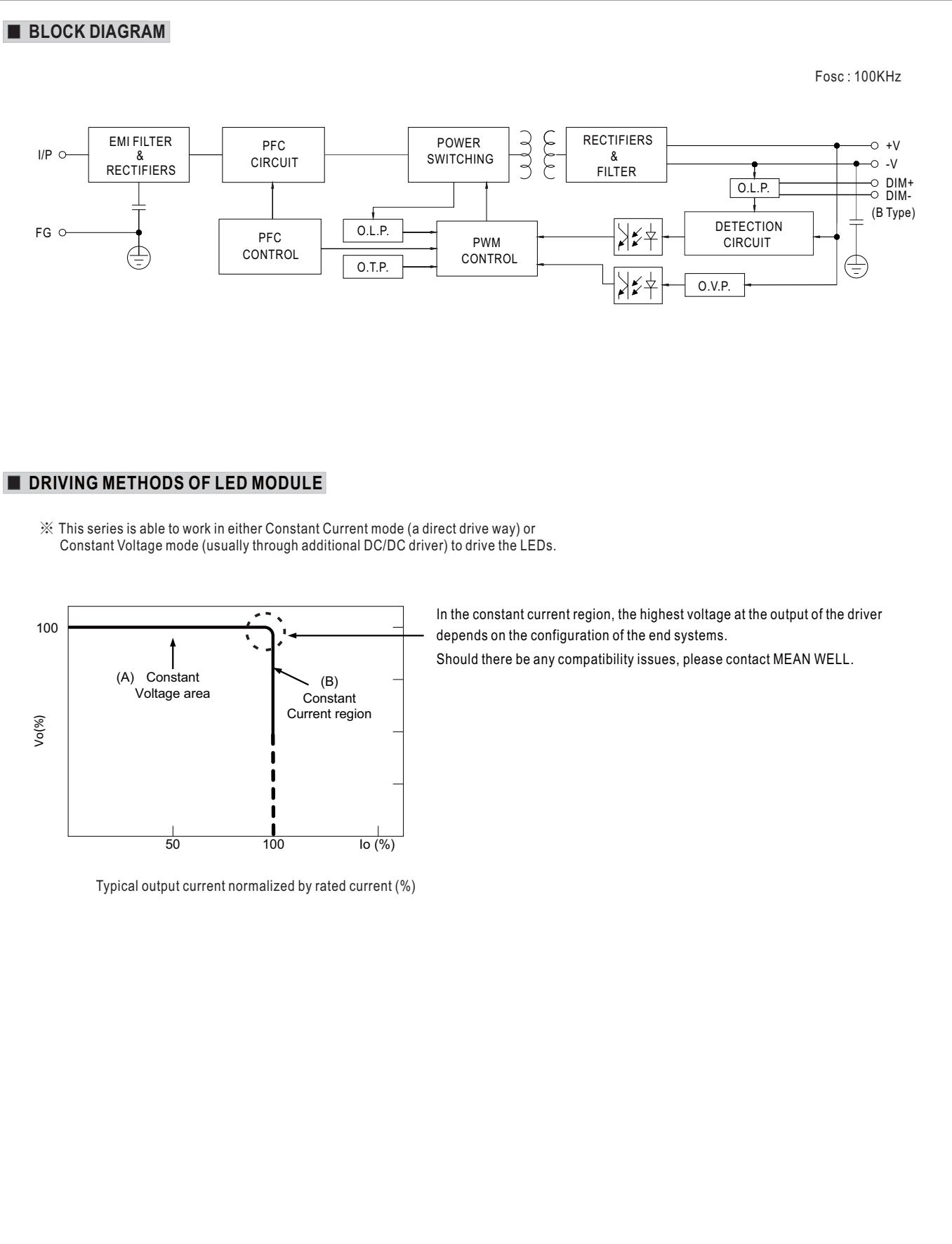
## **SPECIFICATION**

MODEL	HLG-100H-20	HLG-100H-24	HLG-100H-30	HLG-100H-36	HLG-100H-42	HLG-100H-48	HLG-100H-54
OUTPUT	DC VOLTAGE	20V	24V	30V	36V	42V	48V
	CONSTANT CURRENT REGION Note.4	10 ~ 20V	12 ~ 24V	15 ~ 30V	18 ~ 36V	21 ~ 42V	24 ~ 48V
	RATED CURRENT	4.8A	4A	3.2A	2.65A	2.28A	2A
	RATED POWER	96W	96W	96W	95.4W	95.76W	96W
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	200mVp-p	200mVp-p	200mVp-p	200mVp-p
	VOLTAGE ADJ. RANGE	Adjustable for A/AB-Type only (via built-in potentiometer)					
	CURRENT ADJ. RANGE	Adjustable for A/AB-Type only (via built-in potentiometer)					
	VOLTAGE TOLERANCE Note.3	±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%
	LOAD REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
INPUT	SETUP, RISE TIME Note.6	1200ms,50ms/115VAC 500ms,50ms/230VAC					
	HOLD UP TIME (Typ.)	16ms / 115VAC, 230VAC					
PROTECTION	VOLTAGE RANGE Note.5	90 ~ 305VAC 127 ~ 431VDC (Please refer to "STATIC CHARACTERISTIC" section)					
	FREQUENCY RANGE	47 ~ 63Hz					
	POWER FACTOR (Typ.)	PF ≥ 0.98/115VAC, PF ≥ 0.95/230VAC, PF ≥ 0.93/277VAC @ full load (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)					
	TOTAL HARMONIC DISTORTION	THD < 20% (@ load ≥ 60% / 115VAC, 230VAC; @ load ≥ 75% / 277VAC) (Please refer to "TOTAL HARMONIC DISTORTION (THD)" section)					
	EFFICIENCY (Typ.)	93%	93%	93%	93%	93%	93%
	AC CURRENT (Typ.)	1.2A / 115VAC	0.55A / 230VAC	0.5A / 277VAC			
	INRUSH CURRENT (Typ.)	COLD START 60A(t <sub>width</sub> =415μs measured at 50% I <sub>peak</sub> ) at 230VAC; Per NEMA 410					
ENVIRONMENT	MAX. No. of PSUs on 16A CIRCUIT BREAKER	4 units (circuit breaker of type B) / 8 units (circuit breaker of type C) at 230VAC					
	LEAKAGE CURRENT	<0.75mA / 277VAC					
	OVER CURRENT	95 ~ 106%					
	SHORT CIRCUIT	Constant current limiting, recovers automatically after fault condition is removed					
SAFETY & EMC	OVER VOLTAGE	23 ~ 27V	28 ~ 34V	34 ~ 38V	41 ~ 46V	47 ~ 53V	54 ~ 63V
	OVER TEMPERATURE	Shut down o/p voltage with auto-recovery or re-power on to recovery					
	WORKING TEMP.	Tcase = -40 ~ +80°C (Please refer to "OUTPUT LOAD vs TEMPERATURE" section)					
	MAX. CASE TEMP.	Tcase = +80°C					
OTHERS	WORKING HUMIDITY	20 ~ 95% RH non-condensing					
	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10 ~ 95% RH					
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 60°C)					
	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes					
NOTE	SAFETY STANDARDS Note.8	UL8750(type "HL"), CSA C22.2 No. 250.0-08; BS EN/EN 61347-1, BS EN/EN 61347-2-13, AS/NZS 61347-1(except for AB-type), AS/NZS 61347-2-13(except for AB-type) independent; GB19510.1,GB19510.14,IP65 or IP67, J61347-1, J61347-2-13(except for B, AB and D-type), KC61347-1,KC61347-2-13(except for D-type),EAC TP TC 004 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 Note.8	Compliance to BS EN/EN55015, BS EN/EN55032 Class B, BS EN/EN61000-3-2 Class C (@ load ≥ 60%) ; BS EN/EN61000-3-3, GB17743 and GB17625.1, EAC TP TC 020					
DIMENSION	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					
	MTBF	192.2K hrs min. MIL-HDBK-217F (25°C)					
	DIMENSION	220*68*38.8mm (L*W*H)					
PACKING	PACKING	1.12Kg; 12pcs/14.4Kg/0.8CUFT					
	1.	All parameters NOT specially mentioned are measured at 230VAC input, rated current 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.	Please refer to "DRIVING METHODS OF LED MODULE".					
	5.	De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details.					
	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.					
	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.					
	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.					
	9.	This series meets the typical life expectancy of >62,000 hours of operation when Tcase, particularly (tc) point (or TMP, per DLC), is about 80°C or less.					
	10.	Please refer to the warranty statement on MEAN WELL's website at <a href="http://www.meanwell.com">http://www.meanwell.com</a>					
	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)					
	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>					
	13.	Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a>					

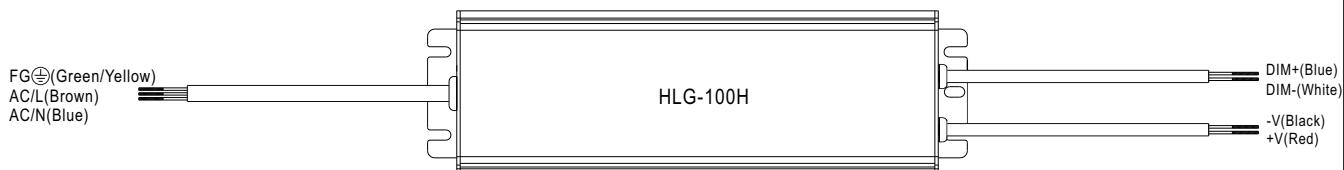


100W Constant Voltage + Constant Current LED Driver

HLG-100H series



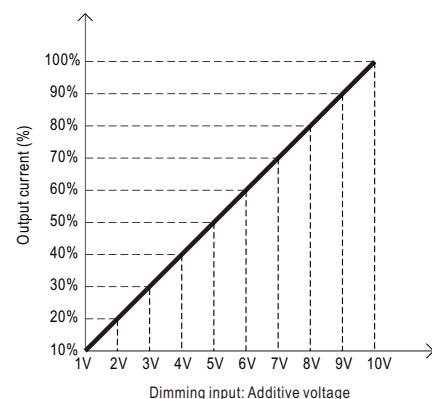
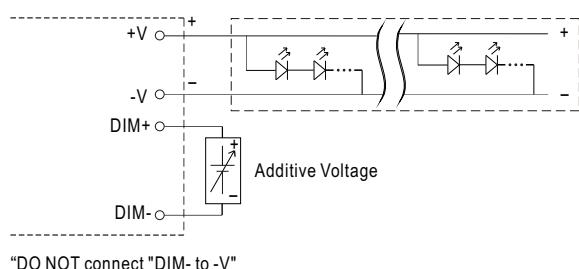
## ■ DIMMING OPERATION



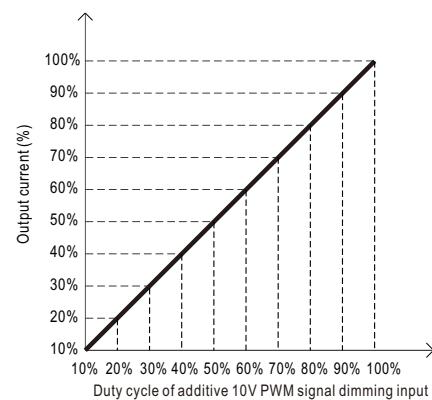
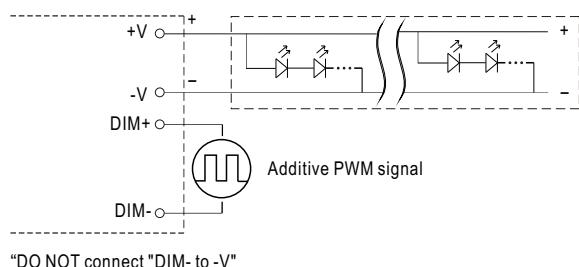
## ※ 3 in 1 dimming function (for B/AB-Type)

- 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:  $100\mu\text{A}$  (typ.)

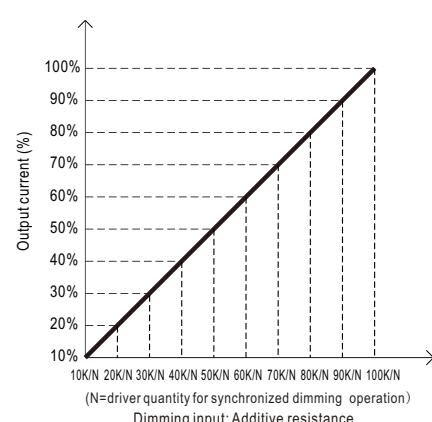
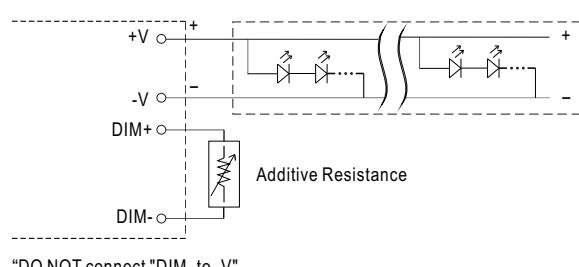
## ◎ Applying additive 1 ~ 10VDC



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



## ◎ Applying additive resistance:

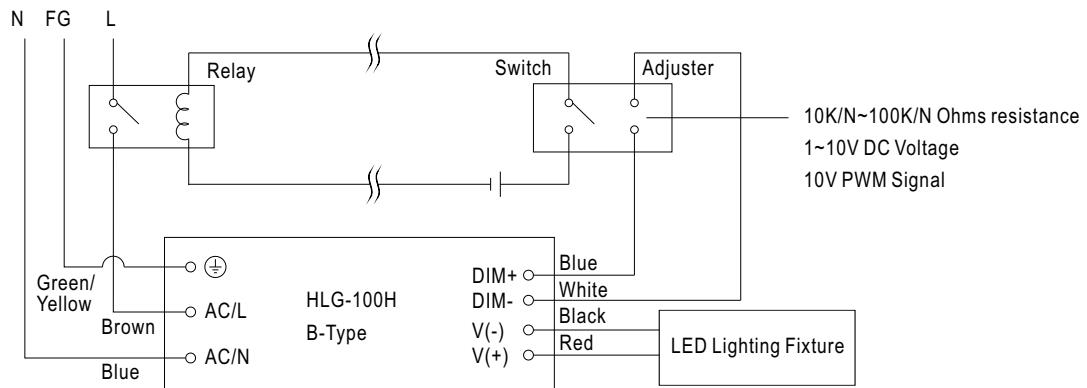




100W Constant Voltage + Constant Current LED Driver

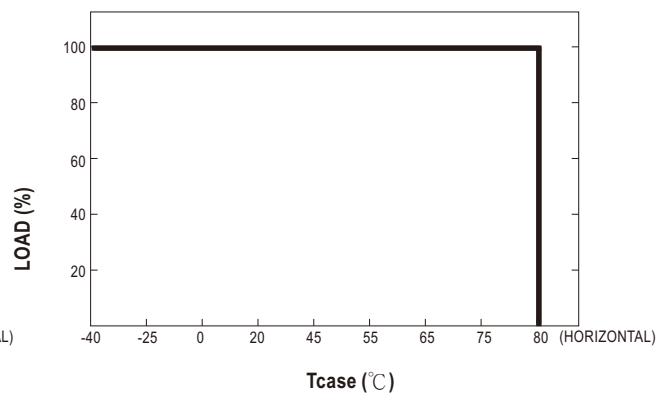
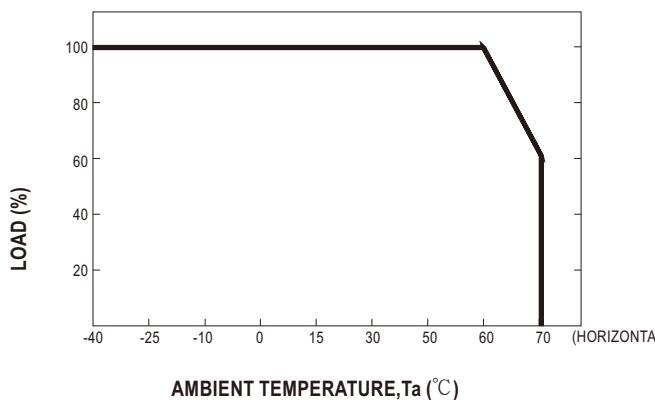
**HLG-100H series**

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.

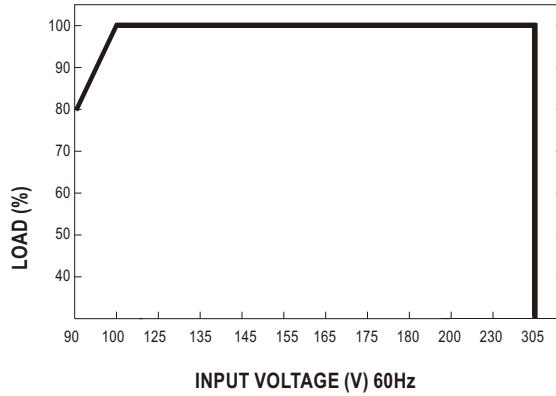


Using a switch and relay can turn ON/OFF the lighting fixture.

## ■ OUTPUT LOAD vs TEMPERATURE (Note.10)

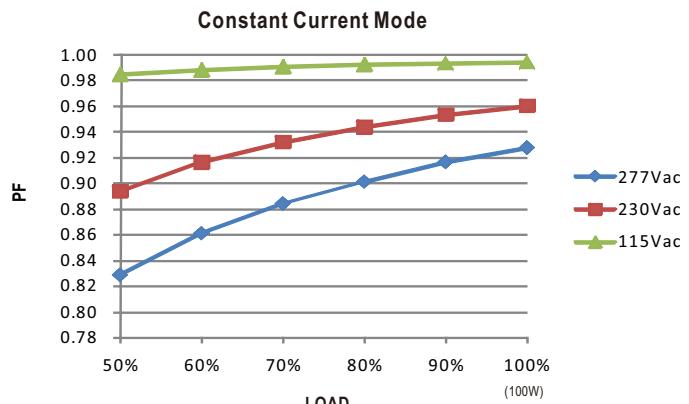


## ■ STATIC CHARACTERISTICS



## ■ POWER FACTOR(PF) CHARACTERISTIC

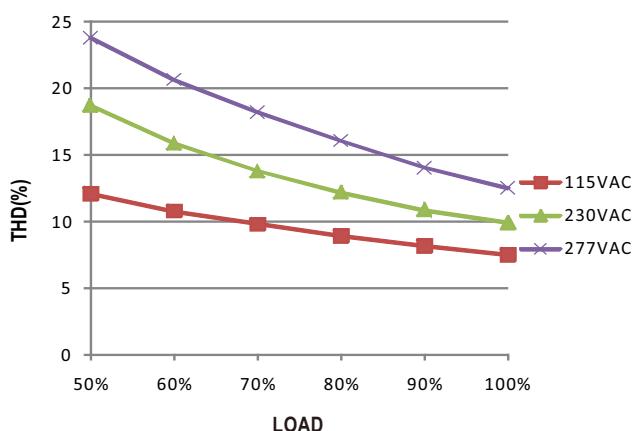
※ Tcase at 80°C



※ De-rating is needed under low input voltage.

## ■ TOTAL HARMONIC DISTORTION (THD)

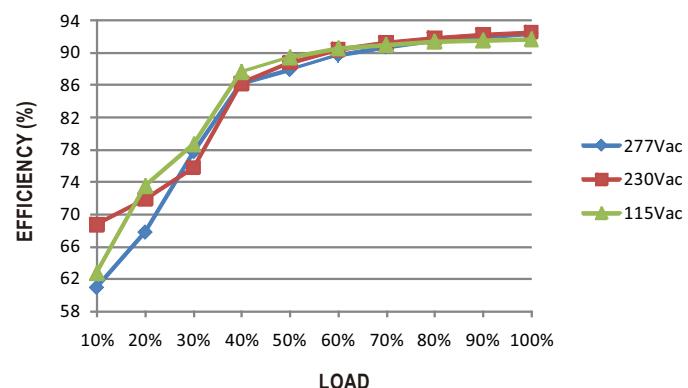
※ 48V Model, Tcase at 80°C



## ■ EFFICIENCY vs LOAD

HLG-100H series possess superior working efficiency that up to 93% can be reached in field applications.

※ 48V Model, Tcase at 80°C

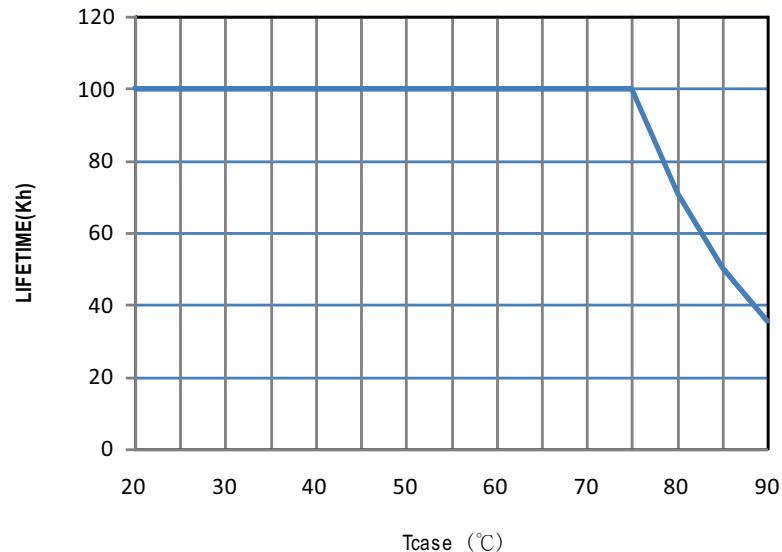




100W Constant Voltage + Constant Current LED Driver

**HLG-100H** series

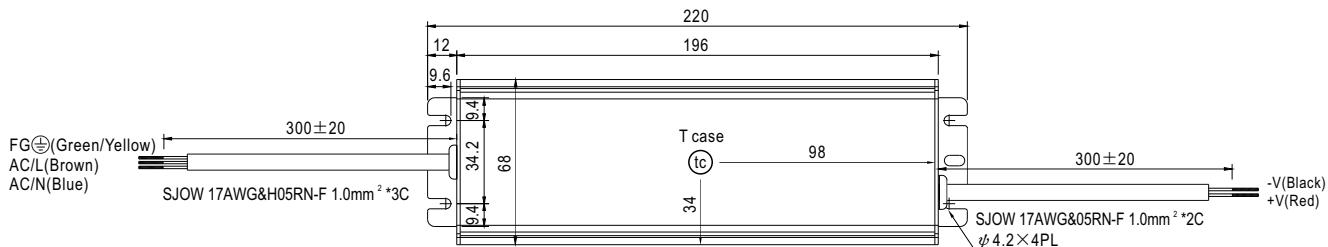
■ LIFE TIME



## ■ MECHANICAL SPECIFICATION

Case No.994A Unit:mm

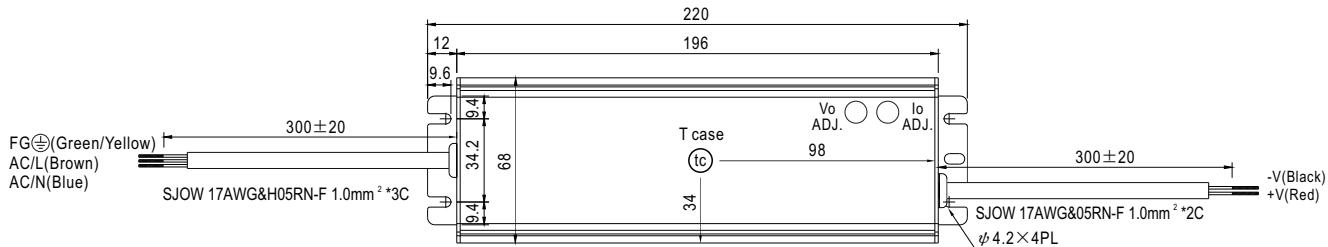
## ※Blank/D-Type



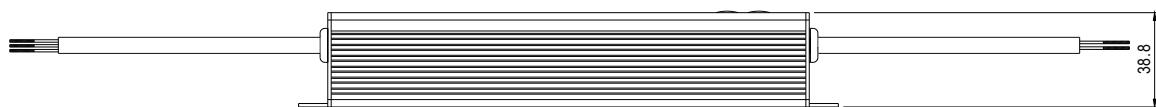
- $t_c$  : Max. Case Temperature



## ※A-Type



- $t_c$  : Max. Case Temperature

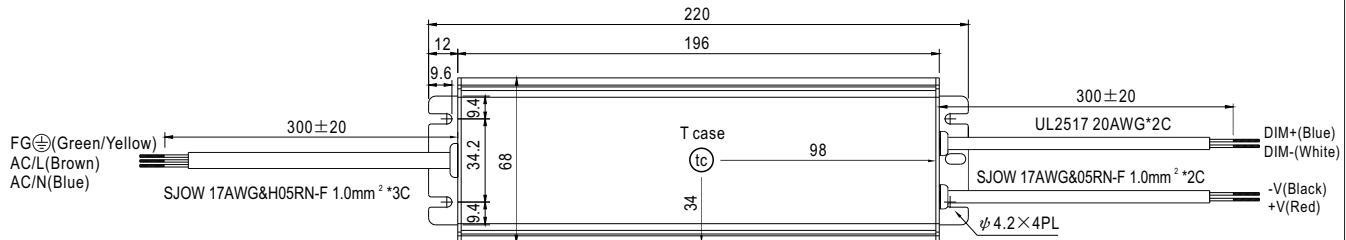




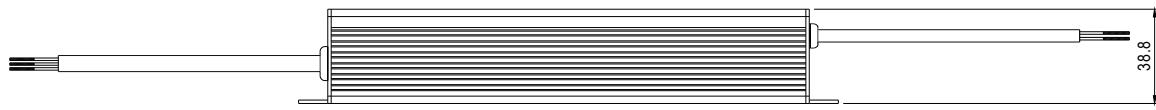
## 100W Constant Voltage + Constant Current LED Driver

# HLG-100H series

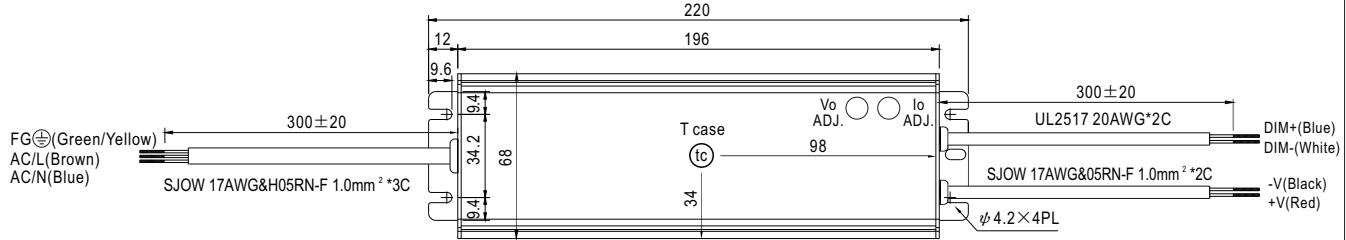
※B-Type



- $t_c$  : Max. Case Temperature



## ※AB-Type



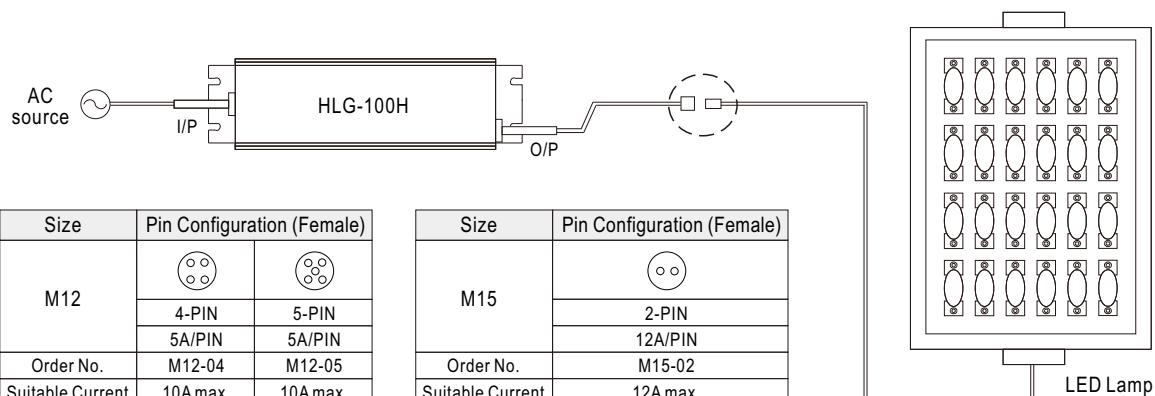
- $t_c$  : Max. Case Temperature



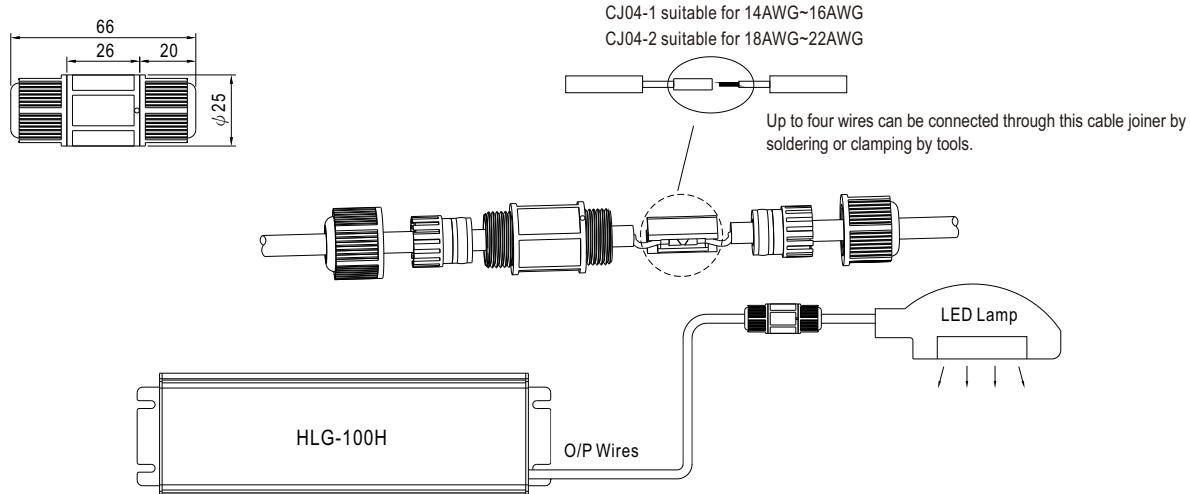
### ■ WATERPROOF CONNECTION

#### ※ Waterproof connector

Waterproof connector can be assembled on the output cable of HLG-100H to operate in dry/wet/damp or outdoor environment.



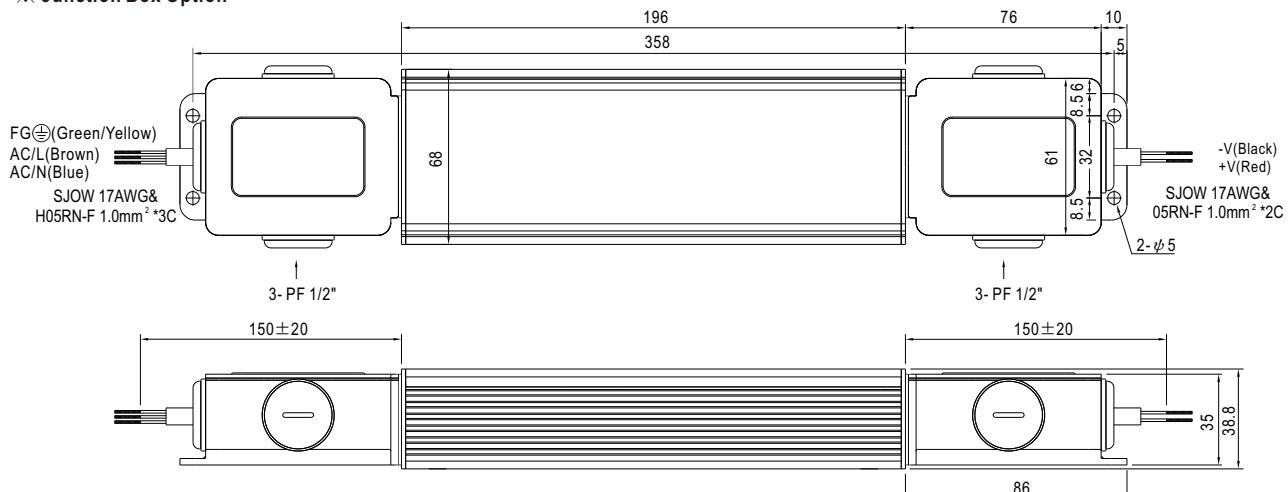
#### ※ Cable Joiner



◎ 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.

### ■ INSTALLATION MANUAL

Please refer to: <http://www.meanwell.com/manual.html>