



# MEAN WELL HLG-320H Series 320W Constant Voltage and Constant Current LED Driver Owner's Manual

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HLG-320H Series 320W Constant Voltage  
and Constant Current LED Driver  
Owner's Manual



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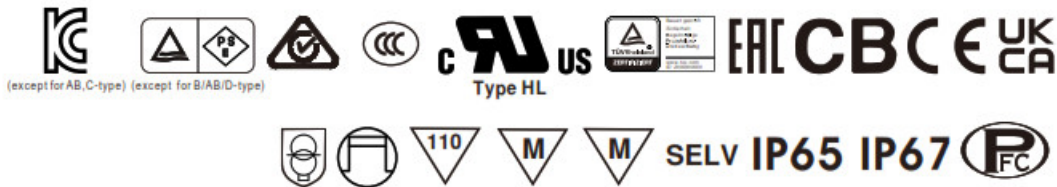
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## HLG-320H Series 320W Constant Voltage and Constant Current LED Driver

### User's Manual



[http://www.meanwell.com.cn/Upload/PDF/LED\\_EN.pdf](http://www.meanwell.com.cn/Upload/PDF/LED_EN.pdf)



## Features

- Constant Voltage + Constant Current mode output
- Metal housing with class 1 design
- Built-in active PFC function
- 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

## Applications

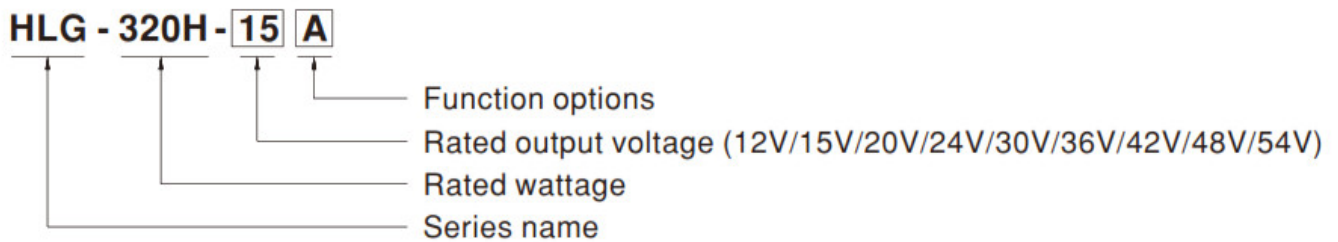
- LED street lighting
- LED high-bay lighting
- Parking space lighting
- LED fishing lamp

- LED greenhouse lighting
- Type “HL” for use in Class I, Division 2 hazardous (Classified) location.

### Description

HLG-320H series is a 320W AC/DC LED driver featuring the dual mode constant voltage and constant current output. HLG-320H operates from 90 – 305VAC and offers models with different rated voltages ranging between 12V and 54V. Thanks to the high efficiency up to 94%, 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-320H is equipped with various function options, such as dimming methodologies, so as to provide the optimal design flexibility for the LED lighting systems.

### Model Encoding



Type	IP Level	Function	Note
Blank	IP67	to 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 adjustable through built-in potentiometer & 3-in-1 dimming function (1-10Vdc, 10V PWM signal and resistance)	In Stock
C	IP66	Terminal block for I/O connection. Output voltage and constant current level can be adjusted through an internal potentiometer.	By request
D	IP67	Timer dimming function, contact MEAN WELL for details(safety pending).	By request

### SPECIFICATION

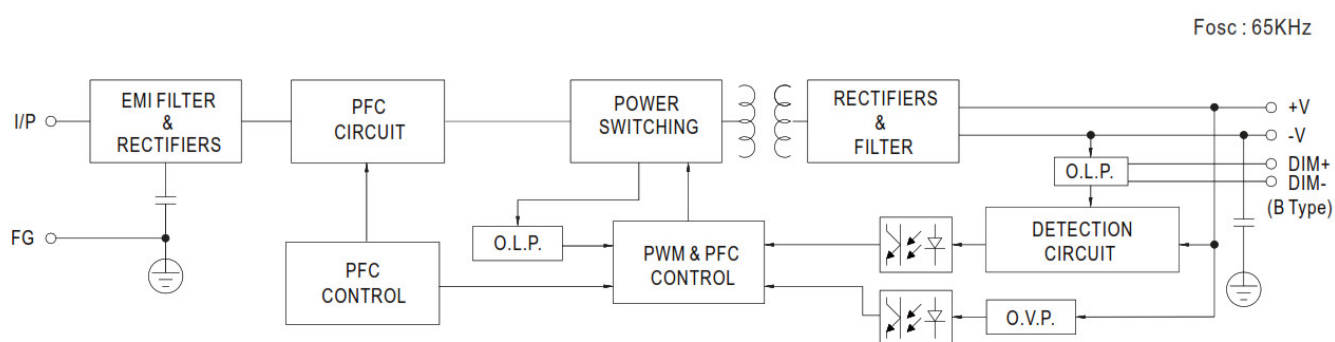
Model		11.6420542MI	H1G42041-15E	111.0429142CC	HIG.320042C	14.0.121:4440C	111.0-32011-60	1.0420114C	HLG4201141E	HLG42/AtC
	DC VOLTAGE	12V	15V	20V	24V	30V	36V	42V	48V	54V
	CONSTMIT CURRENT REGION No m	6 -12V	7.5-15V	10 – 20V	12 – 24V	15 – 30V	18 – 36V	21 – 42V	24 – 4W	27 – 54V
	RATED CURRENT	22A	19A	15A	1334A	11.	8.9A	755A	6.7A	595A



	INRUSH CURRENT(Typ.)	COLD START 70A(twoh1010fts measured at 50% laa) at 230VAC; Per NE6IA410)
	MAX. No. of PSUs on 164 CIRCUIT BREAKER	1 unit (circuit breaker of type B)/ 2 units (circuit breaker& type C) at 230VAC
	LEAKAGE CURRENT	<0.75mA f 27 NAC
PROTECTION	OVER CURRENT Nots. 4	95-108% Constant current Mating recovers automatically after fault calcination is removed
	SHORT CIRCUIT	Hiccup mode recovers automatically after the fault condition is removed
	OVERVOLTAGE	14 – 17V 1 17.5 – 21V 1 22.5 – 27V 1 27 – 33V 1 33 – 37V 1 40- 46V 1 46.5-53V 1 53.5 – 60V 1 59- 65V Shut down and latch off op voltage, re-power on to recover
	OVER TEMPERATURE	Shut down and latch off op voltage, re-power co to recover
EP/Nag ai	WORKING TEMP.	Ica se: -40 – +90'C (Please refer to "OUTPUT LOAD vs TEMPERATURE" section)
	MAX. CASE TEMP.	These: +90t
	WORKING HUMIDITY	20-95% RH non-conden Op
	STORAGE TEMP., HUMIDITY	40 – '80C, 10 – 95% RH
	TEMP. COEFFICIENT	±0.03%/t (0- 50t )
	VIBRATION	10- 500Hz. 56 12minilcycle. period br 72min. each along X. Y. Z axes
SAFETY & EMC	SAFETY STANDARDS	UL8750(typell.), CSA C22.2 No. 250.048; BS EN/EN/AS/NZS 61347-1, BSEN/EN/AS/ICS 61347-2-13 i &Moen:lent GB19510.1,6819510.14; IP65 or P67 (except br HLG-320H C-type); J61347-1, J61347-2-13 (except tor B ABC and D-type), EAC TPTC 004 ;KC61341-1.KC61347-2-13(except tct AB.C4type) a pprowd
	WITHSTAND VOLTAGE	I/P-0/P:3.75KVAC I/ P-FG:2KVAC 0/P-FG:1.5KVAC
	ISOLATION RESISTANCE	I/P-0/P, I/P-FG, 0/ P-FG:100M Ohms /500VDC / 25t / 70% RH
	EMC EMISSION	Catipiance to BS EN/EN55015, 85 EN/EN55032 (C ISPR32)CI ass B. BS EN1E N61000-3-2 Class C (fp bad 250%); BS EN/EN61000-3-3.GB17743 and GB17625.1. EAC TP TC 020

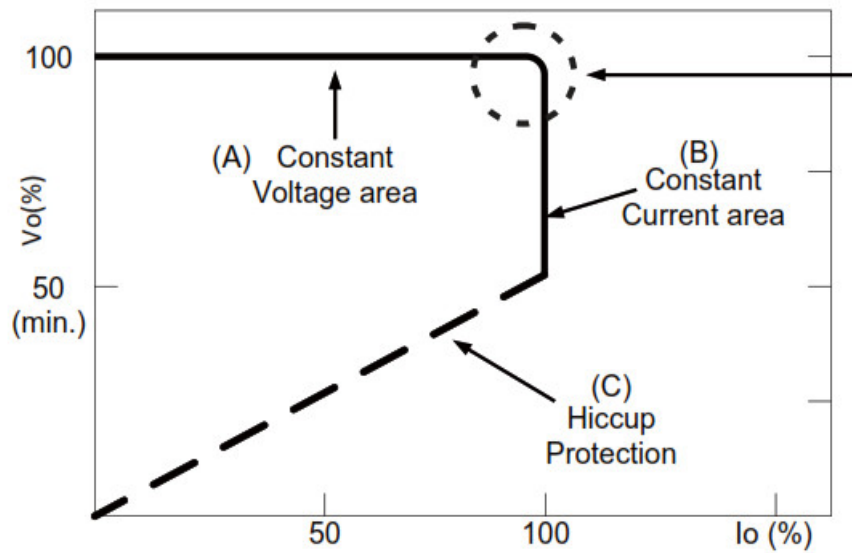
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,45,58,11, BS EN1EN61547, BS EN1EN55024, igM industry level (surge immunity Line-Earth 4KV, Lite-Lie 2KV). EAC TPTC 020
OTHERS	MTBF	157.1Khrs min. MIL-HDBK-217F (25°C )
	DIMENSION	252'90'43.8mm (L'1APH)
	PACKING	1.88Kg; 8pcs/16KgX).92CUFT
NOTE	<p>1. All parameters 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 0.1uF &amp; 47th 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 the STATIC CHARACTERISTICS sections for details</p> <p>6. Length of set up time is measured at first cold start Turning ON/OFF the &lt;V&gt; 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 the final equipment. Since EMC performance will be affected by the complete installation, the LED equipment manufacturers must re-family EMC Directive on the complete installation again.</p> <p>8. To meet requirements of the latest ErP regulation for lighting fixtures this LED driver can only be used behind a meter without being 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 (D point (or TMP, per DLC), is 75°C or less.</p> <p>10. Please refer to the warranty statement on the MEAN WELL website at .</p> <p>11. The ambient temperature clearing of 35°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitudes higher than 2000m(6600ft).</p> <p>12. For any application note and IP waterproof function installation caution, please refer our user manual before using. <a href="https://Avwww.meanwellann/Upload/PDRLEDEN.pdf">https://Avwww.meanwellann/Upload/PDRLEDEN.pdf</a></p> <p>X Product Liability Disclaimer: For detailed information, please refer to <a href="httpss://Minvwxneersvelloorn/serviceDisclaimer.aspx">httpss://Minvwxneersvelloorn/serviceDisclaimer.aspx</a></p>	

## BLOCK DIAGRAM



## DRIVING METHODS OF LED MODULE

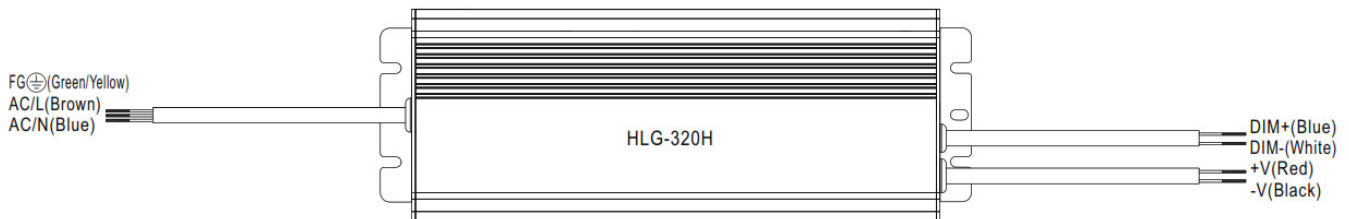
※ This series is able to work in either Constant Current mode (a direct driveway) or Constant Voltage mode (usually through an additional DC/DC driver) to drive the LEDs.



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.

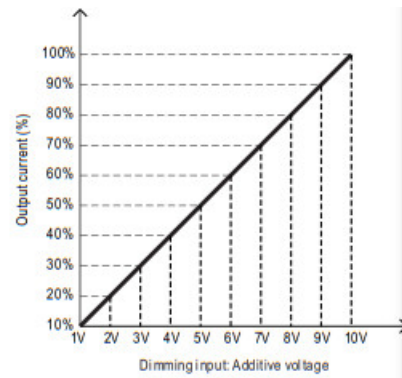
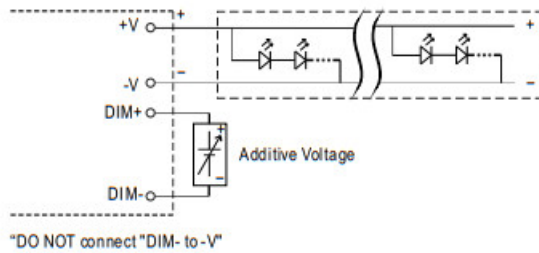
## DIMMING OPERATION



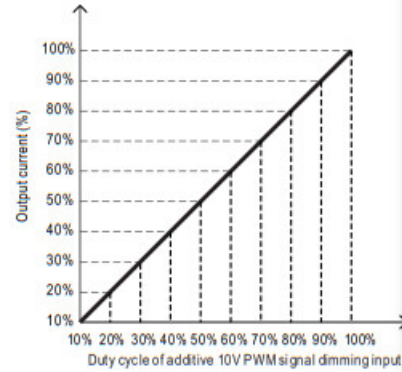
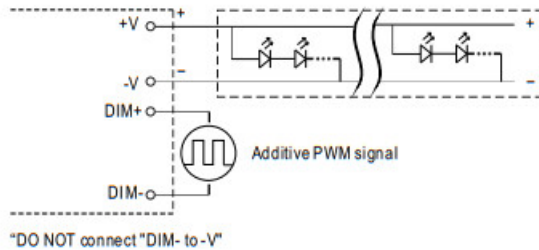
### ※ 3 in 1 dimming function (for B/AB-Type)

- 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: 10 A (Typ.) 0  $\mu$  @ Applying additive 1 ~ 10VDC

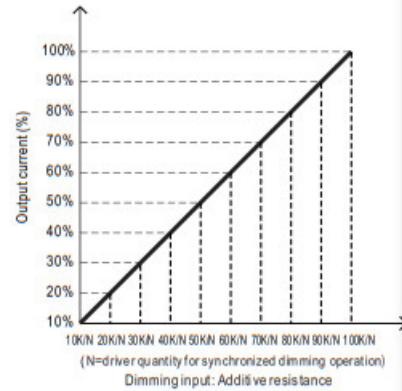
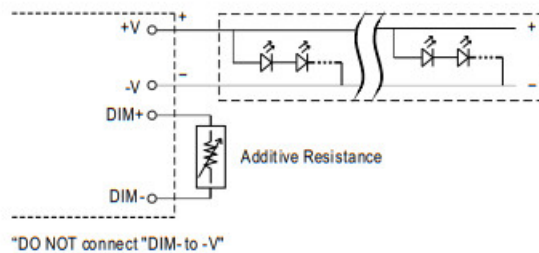
⊙ Applying additive 1 ~ 10VDC



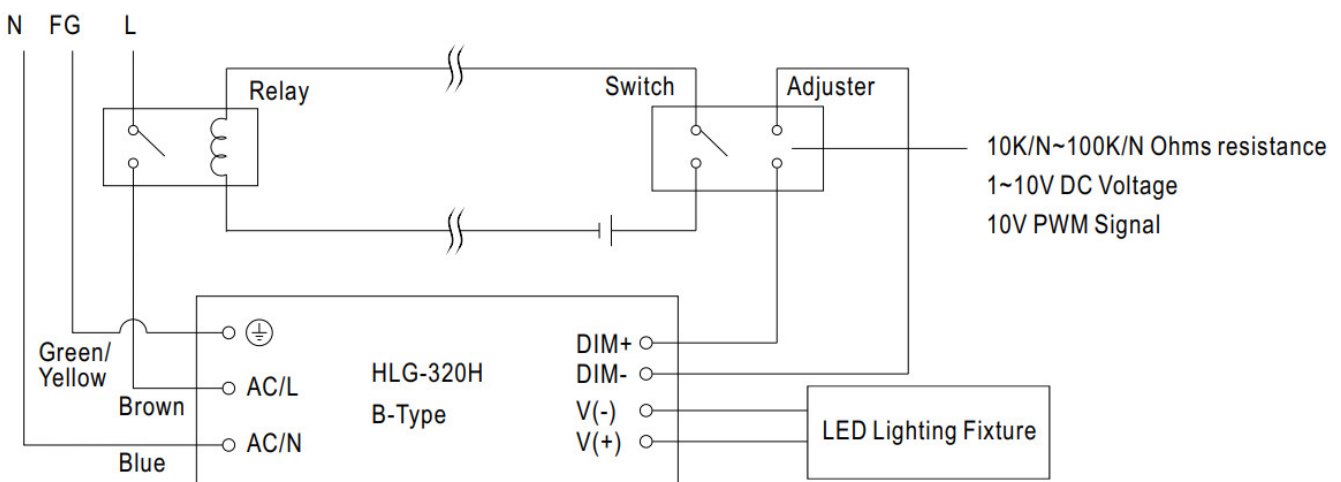
⊙ Applying additive 10V PWM signal (frequency range 100Hz ~ 3KHz):



⊙ Applying additive resistance:



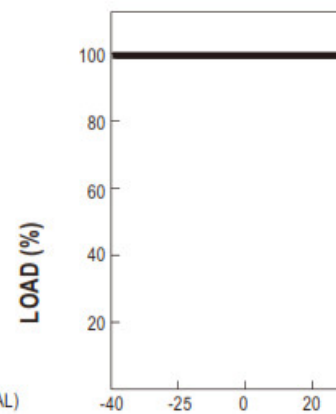
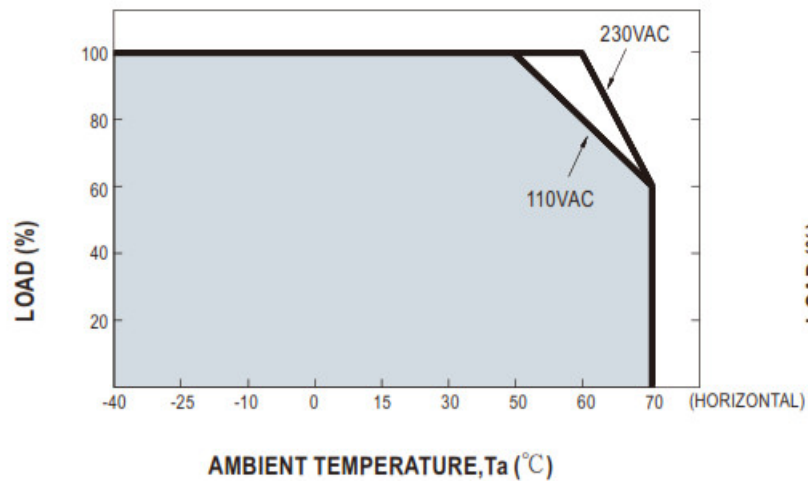
**Note:** In the case of turning the lighting fixture down to 0% brightness, please refer to the configuration as follow, or please contact MEAN WELL for other options.



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

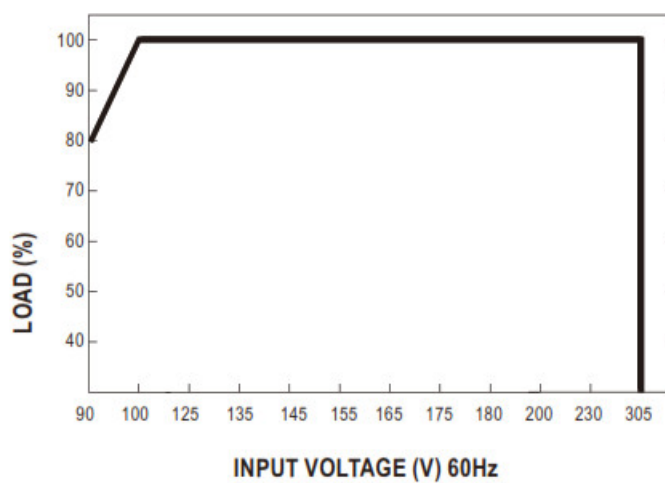
**OUTPUT LOAD vs TEMPERATURE(Note.10)**



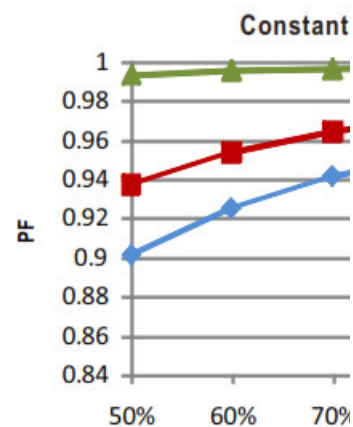


## STATIC CHARACTERISTICS

## POWER FACTOR(PF) CHARACTERISTIC



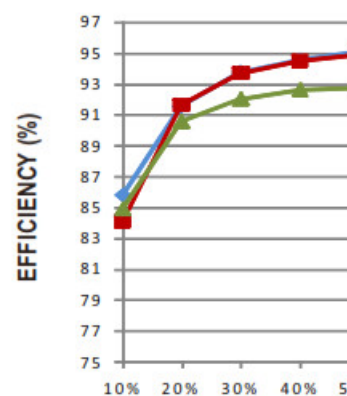
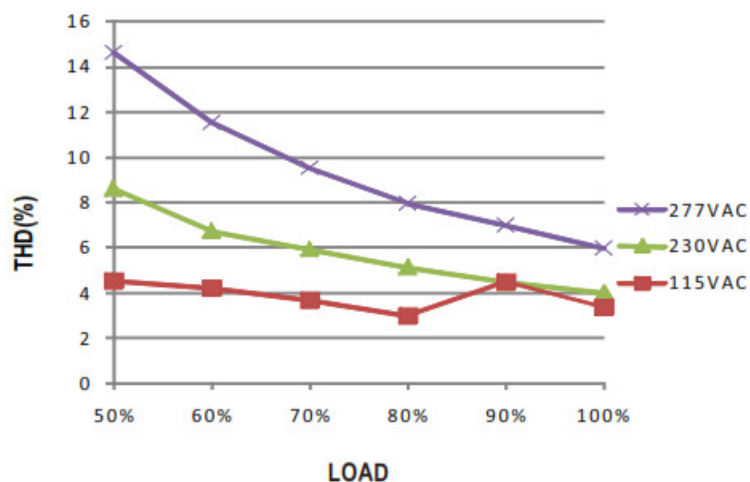
※  $T_{case}$  at 80°C



※ De-rating is needed under low input voltage.

※ De-rating is needed under low input voltage.

## LOAD



## TOTAL HARMONIC DISTORTION (THD)

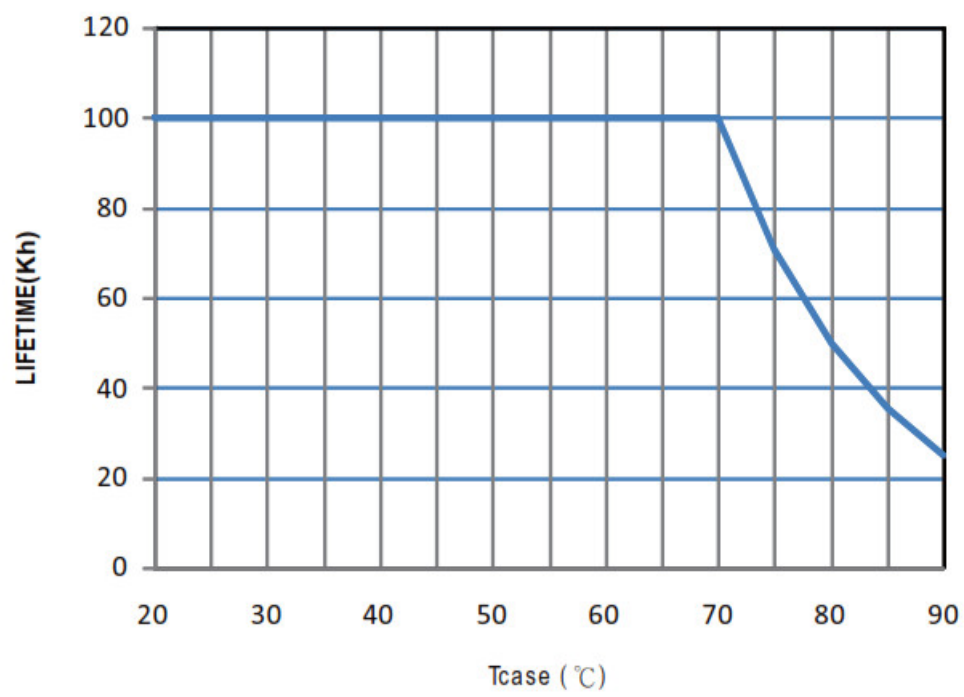
※ 48V Model,  $T_{case}$  at 80°C

## EFFICIENCY vs LOAD

HLG-320H series possess superior working efficiency the

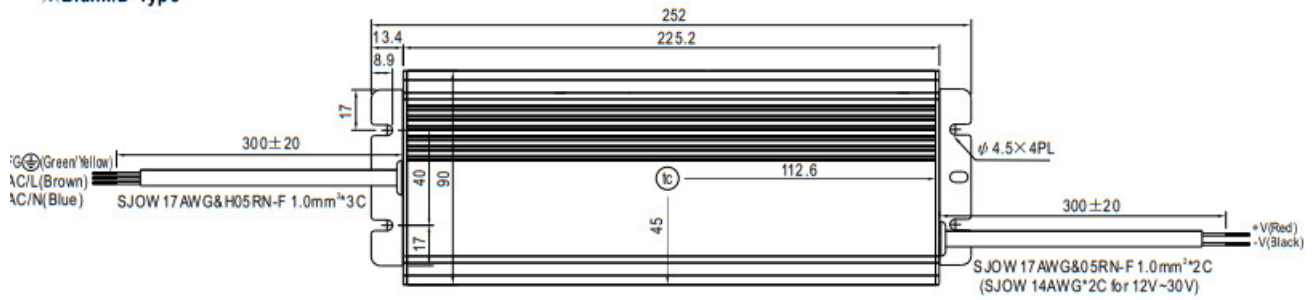
※ 48V Model,  $T_{case}$  at 80°C

LIFETIME



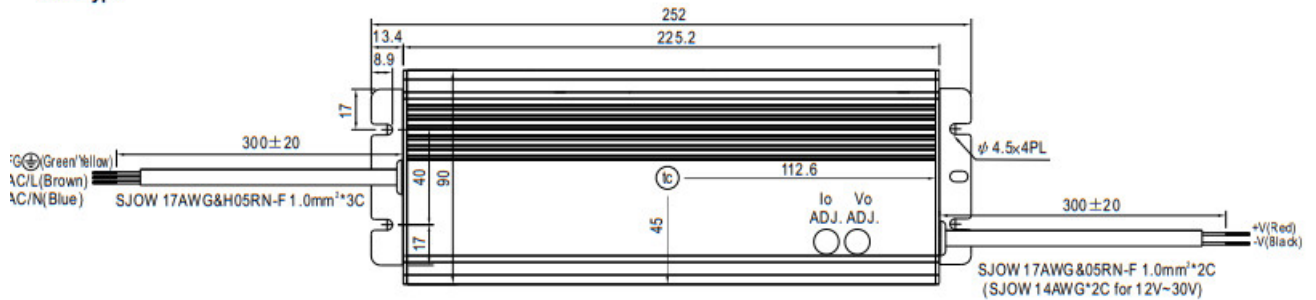
MECHANICAL SPECIFICATION

※Blank/D-Type



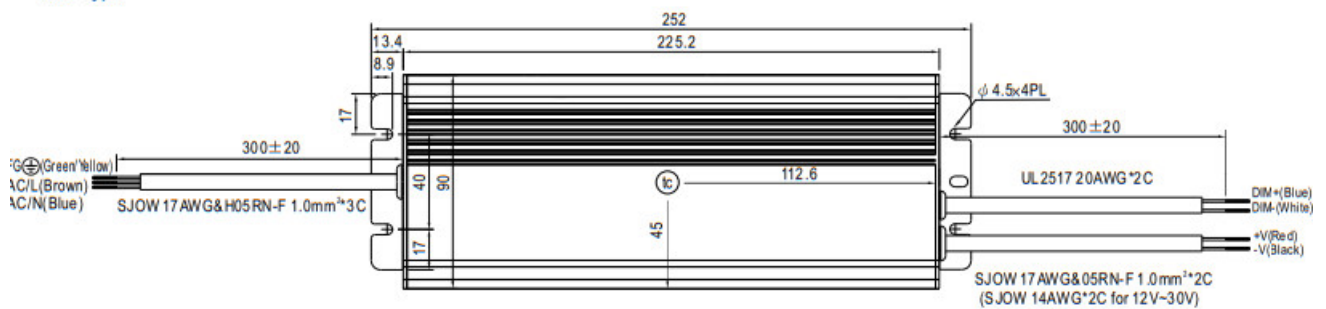
• (tc) : Max. Case Temperature

※A-Type



• (tc) : Max. Case Temperature

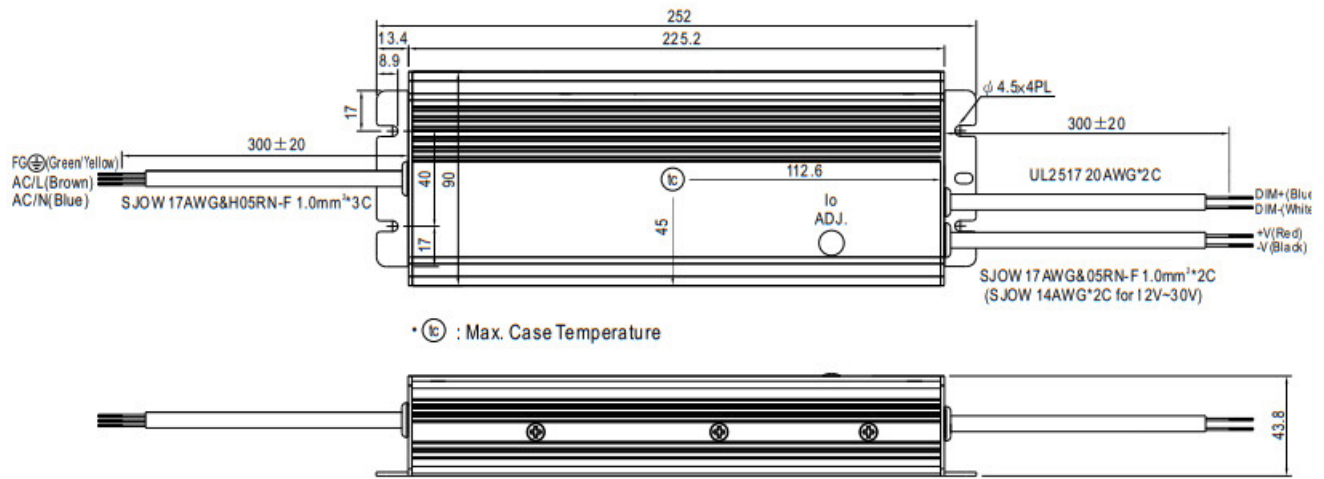
※B-Type



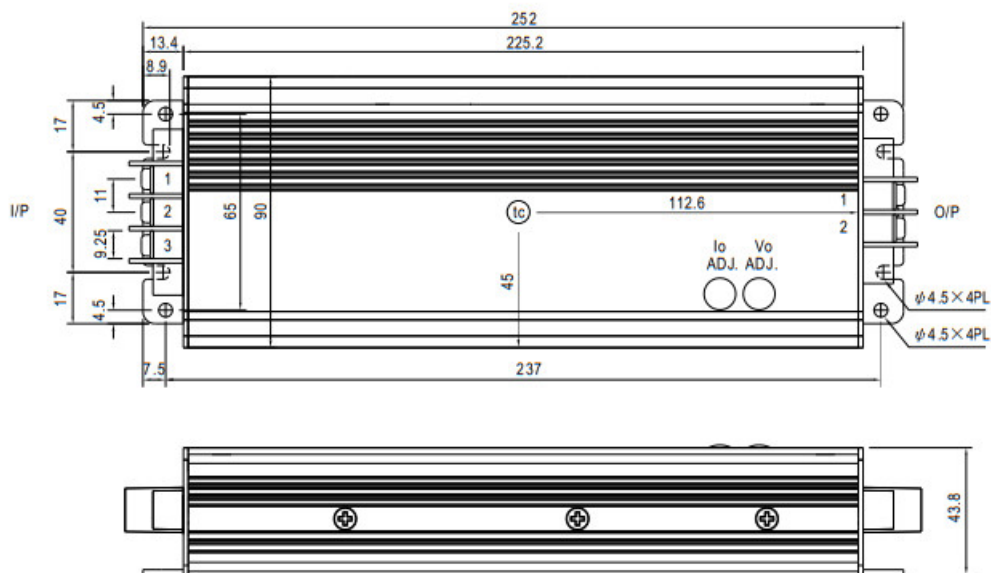
• (tc) : Max. Case Temperature

320W Constant Voltage + Constant Current LED Driver

※AB-Type



※C-Type



AC Input Terminal Pin No. Assignment

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

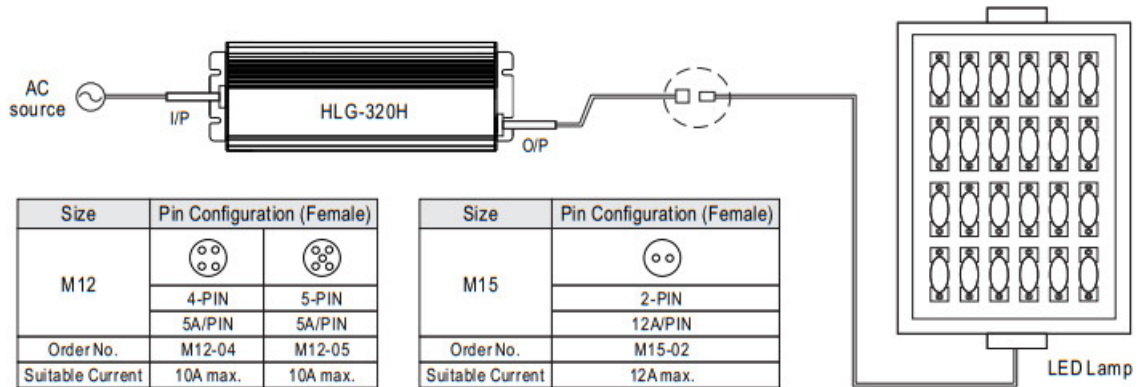
DC Output Terminal Pin No. Assignment

Pin No.	Assignment
1	+V
2	-V

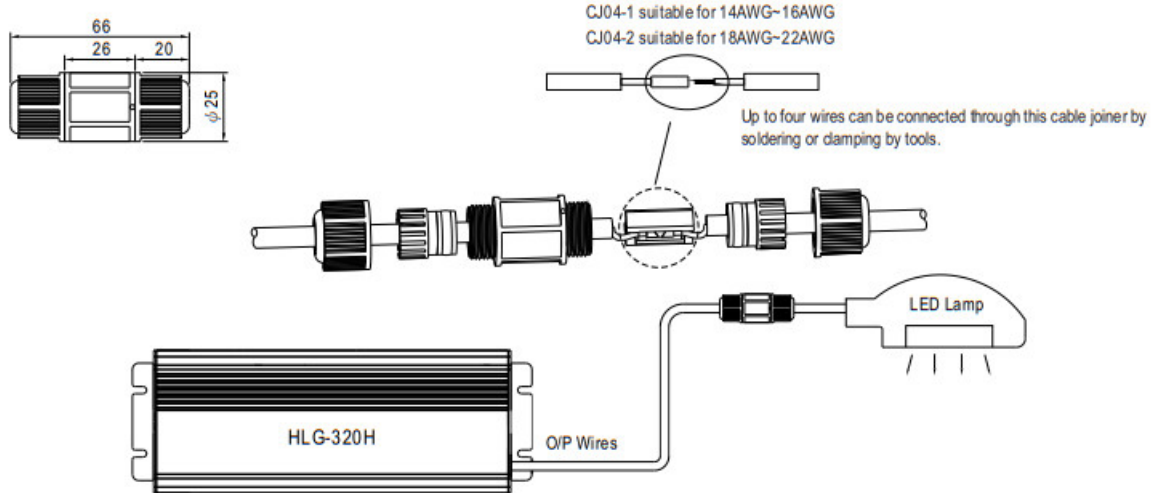
## WATERPROOF CONNECTION

※ Waterproof connector.

The waterproof connector can be assembled on the output cable of HLG-320H to operate in dry/wet/damp or outdoor environments.

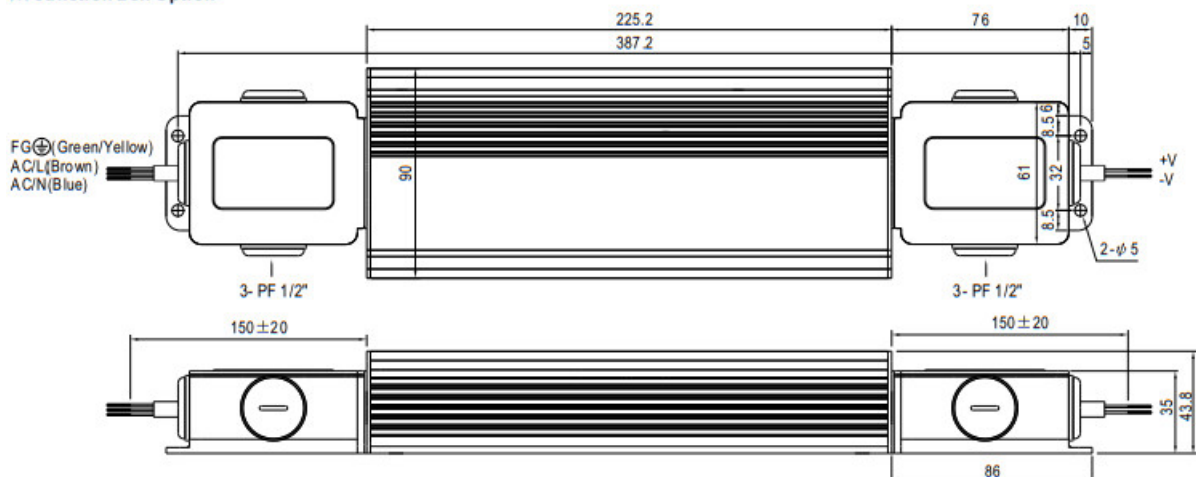


※ Cable Joiner



◎ 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.



Please refer to:

<http://www.meanwell.com/manual.html>

## Documents / Resources



### [MEAN WELL HLG-320H Series 320W Constant Voltage and Constant Current LED Driver](#)

[pdf] Owner's Manual

HLG-320H Series, 320W Constant Voltage and Constant Current LED Driver, HLG-320H Series 320W Constant Voltage and Constant Current LED Driver, Constant Voltage and Constant Current LED Driver, Constant Current LED Driver, LED Driver

## References

- [MEAN WELL Product Liability Disclaimer-MEAN WELL Switching Power Supply Manufacturer](#)

[Manuals+](#).