



320W Constant Voltage + Constant Current LED Driver

**HLG-320H series**

## ■ Features

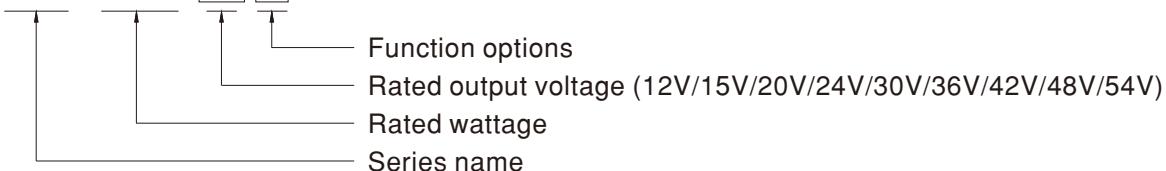
- Constant Voltage + Constant Current mode output
- Metal housing with class I design
- Built-in active PFC function
- IP67 / IP65 rating for indoor or outdoor installations
- Function options: output adjustable via potentiometer; 3 in 1 dimming
- Typical lifetime > 62000 hours
- 7 years warranty

## ■ 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 voltage 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 LED lighting system.

## ■ Model Encoding

HLG - 320H - 15 [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 adjustable through built-in potentiometer & 3 in 1 dimming function (1~10Vdc, 10V PWM signal and resistance)	In Stock
C	-----	Terminal block for I/O 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

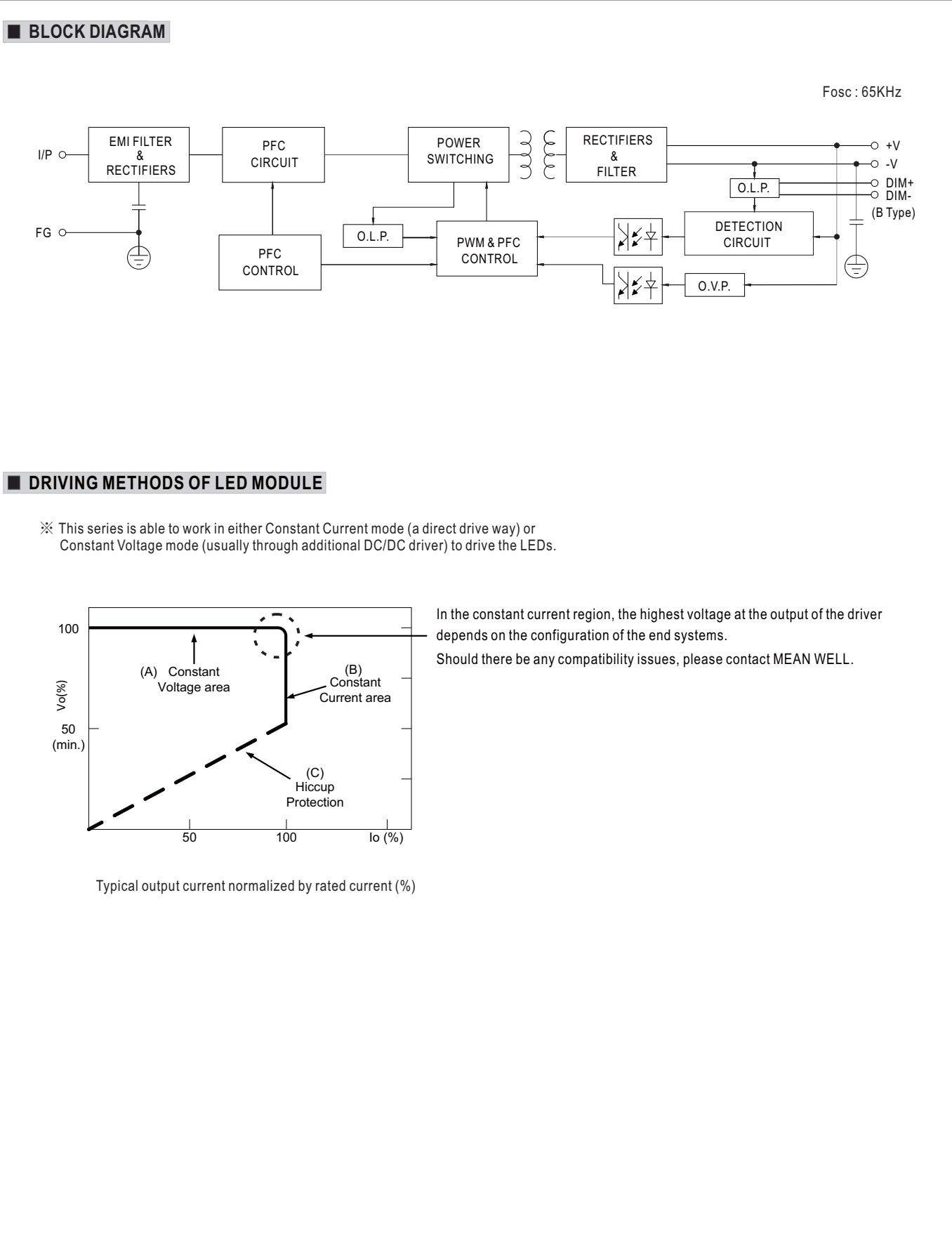
**SPECIFICATION**

MODEL	HLG-320H-12	HLG-320H-15	HLG-320H-20	HLG-320H-24	HLG-320H-30	HLG-320H-36	HLG-320H-42	HLG-320H-48	HLG-320H-54
OUTPUT	<b>DC VOLTAGE</b>	12V	15V	20V	24V	30V	36V	42V	48V
	<b>CONSTANT CURRENT REGION Note.4</b>	6 ~ 12V	7.5 ~ 15V	10 ~ 20V	12 ~ 24V	15 ~ 30V	18 ~ 36V	21 ~ 42V	24 ~ 48V
	<b>RATED CURRENT</b>	22A	19A	15A	13.34A	10.7A	8.9A	7.65A	6.7A
	<b>RATED POWER</b>	264W	285W	300W	320.16W	321W	320.4W	321.3W	321.3W
	<b>RIPPLE &amp; NOISE (max.) Note.2</b>	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p	250mVp-p	250mVp-p	350mVp-p
	<b>VOLTAGE ADJ. RANGE</b>	Adjustable for A/C-Type only (via built-in potentiometer)							
		10.8 ~ 13.5V	13.5 ~ 17V	17 ~ 22V	21 ~ 26V	26 ~ 32V	32 ~ 39V	38 ~ 45V	43 ~ 52V
	<b>CURRENT ADJ. RANGE</b>	Adjustable for A/AB/C-Type only (via built-in potentiometer)							
		11 ~ 22A	9.5 ~ 19A	7.5 ~ 15A	6.67 ~ 13.34A	5.35 ~ 10.7A	4.45 ~ 8.9A	3.8 ~ 7.65A	3.35 ~ 6.7A
	<b>VOLTAGE TOLERANCE Note.3</b>	± 3.0%	± 2.0%	± 1.5%	± 1.0%	± 1.0%	± 1.0%	± 1.0%	± 1.0%
INPUT	<b>LINE REGULATION</b>	± 0.5%	± 0.5%	± 0.5%	± 0.5%	± 0.5%	± 0.5%	± 0.5%	± 0.5%
	<b>LOAD REGULATION</b>	± 2.0%	± 1.5%	± 1.0%	± 0.5%	± 0.5%	± 0.5%	± 0.5%	± 0.5%
	<b>SETUP, RISE TIME Note.6</b>	2500ms,80ms/115VAC 500ms,80ms/230VAC							
	<b>HOLD UP TIME (Typ.)</b>	15ms / 115VAC, 230VAC							
	<b>VOLTAGE RANGE Note.5</b>	90 ~ 305VAC 127 ~ 431VDC (Please refer to "STATIC CHARACTERISTIC" section)							
	<b>FREQUENCY RANGE</b>	47 ~ 63Hz							
	<b>POWER FACTOR (Typ.)</b>	PF ≥ 0.98/115VAC, PF ≥ 0.95/230VAC, PF ≥ 0.94/277VAC @ full load (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)							
	<b>TOTAL HARMONIC DISTORTION</b>	THD < 20% (@ load ≥ 50% / 115VAC, 230VAC; @ load ≥ 75% / 277VAC) (Please refer to "TOTAL HARMONIC DISTORTION (THD)" section)							
	<b>EFFICIENCY (Typ.) (230Vac)</b>	91%	92.5%	93.5%	94%	94%	94.5%	95%	95%
	<b>EFFICIENCY (Typ.) (277Vac)</b>	91.5%	93%	94%	94.5%	94.5%	95%	95%	95%
PROTECTION	<b>AC CURRENT (Typ.)</b>	3.5A / 115VAC 1.65A / 230VAC 1.45A / 277VAC							
	<b>INRUSH CURRENT(Typ.)</b>	COLD START 70A(twidth=1010μs measured at 50% Ipeak) at 230VAC; Per NEMA 410							
	<b>MAX. No. of PSUs on 16A CIRCUIT BREAKER</b>	1 unit (circuit breaker of type B) / 2 units (circuit breaker of type C) at 230VAC							
	<b>LEAKAGE CURRENT</b>	<0.75mA / 277VAC							
ENVIRONMENT	<b>OVER CURRENT Note.4</b>	95 ~ 108% Constant current limiting, recovers automatically after fault condition is removed							
	<b>SHORT CIRCUIT</b>	Hiccup mode, recovers automatically after fault condition is removed							
	<b>OVER VOLTAGE</b>	14 ~ 17V	17.5 ~ 21V	22.5 ~ 27V	27 ~ 33V	33 ~ 37V	40 ~ 46V	46.5 ~ 53V	53.5 ~ 60V
	<b>OVER TEMPERATURE</b>	Shut down and latch off o/p voltage, re-power on to recover							
SAFETY & EMC	<b>WORKING TEMP.</b>	Tcase = -40 ~ +90°C (Please refer to "OUTPUT LOAD vs TEMPERATURE" section)							
	<b>MAX. CASE TEMP.</b>	Tcase = +90°C							
	<b>WORKING HUMIDITY</b>	20 ~ 95% RH non-condensing							
	<b>STORAGE TEMP., HUMIDITY</b>	-40 ~ +80°C, 10 ~ 95% RH							
	<b>TEMP. COEFFICIENT</b>	± 0.03%/°C (0 ~ 50°C)							
SAFETY & EMC	<b>VIBRATION</b>	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes							
	<b>SAFETY STANDARDS</b>	UL8750(type "HL"), CSA C22.2 No. 250.0-08; BS EN/EN/AS/NZS 61347-1, BS EN/EN/AS/NZS 61347-2-13 independent; GB19510.1, GB19510.14; IP65 or IP67 (except for HLG-320H C-type); J61347-1, J61347-2-13 (except for AB, C and D-type); EAC TP TC 004; KC61347-1, KC61347-2-13(except for AB, C-type) approved							
	<b>WITHSTAND VOLTAGE</b>	I/P-O/P: 3.75KVAC I/P-FG: 2KVAC O/P-FG: 1.5KVAC							
	<b>ISOLATION RESISTANCE</b>	I/P-O/P, I/P-FG, O/P-FG: 100M Ohms / 500VDC / 25°C / 70% RH							
OTHERS	<b>EMC EMISSION</b>	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, GB17743 and GB17625.1, EAC TP TC 020							
	<b>EMC IMMUNITY</b>	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							
	<b>MTBF</b>	157.1K hrs min. MIL-HDBK-217F (25°C)							
OTHERS	<b>DIMENSION</b>	252*90*43.8mm (L*W*H)							
	<b>PACKING</b>	1.88Kg; 8pcs/16Kg/0.92CUFT							
NOTE	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 $t_c$ point (or TMP, per DLC), is about 75°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> ※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a>								

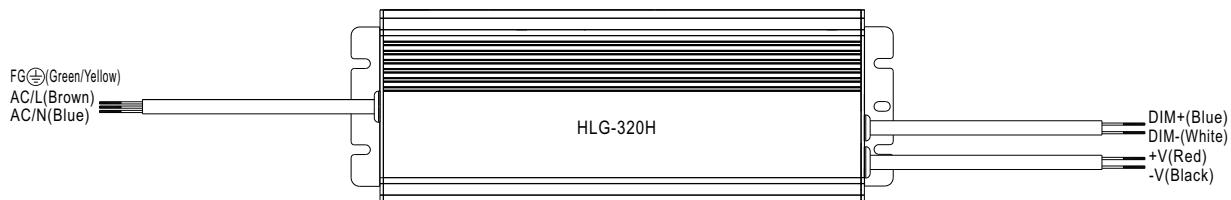


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HLG-320H series



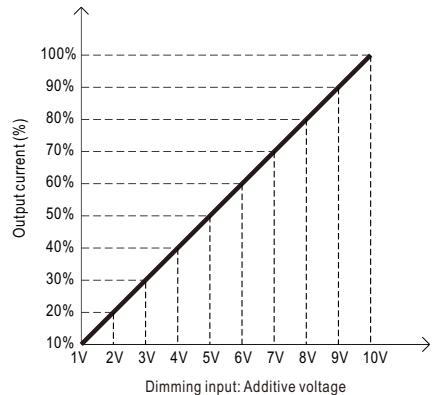
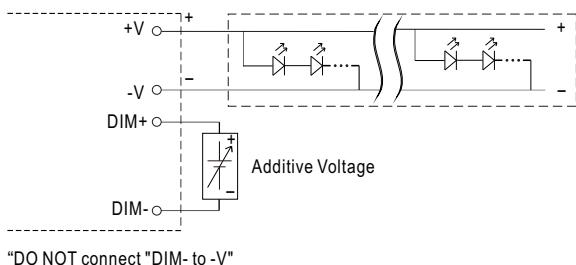
## DIMMING OPERATION



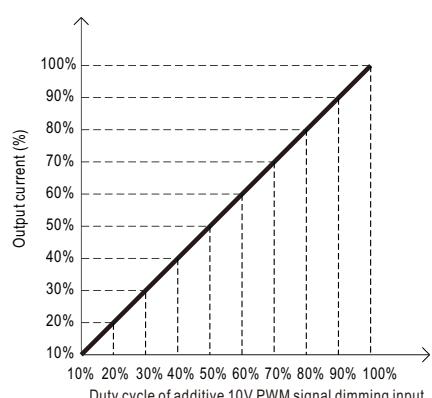
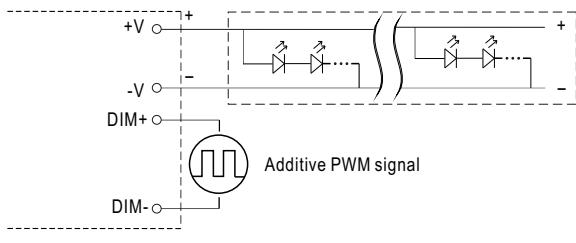
### ※ 3 in 1 dimming function (for B/AB-Type)

- 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: 100µA (typ.)

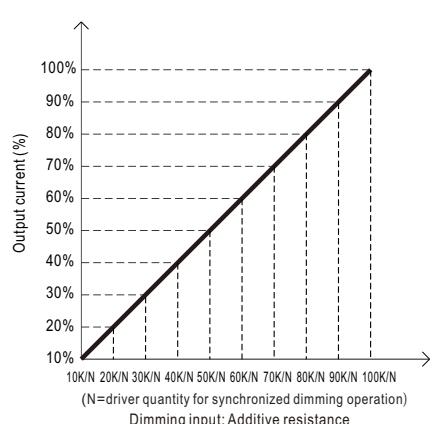
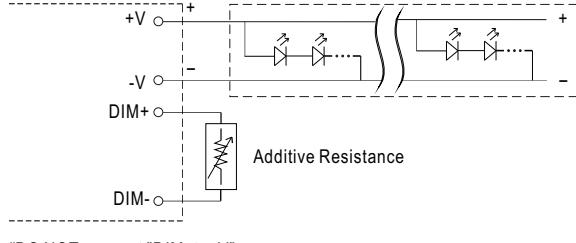
#### ◎ Applying additive 1 ~ 10VDC



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



#### ◎ Applying additive resistance:

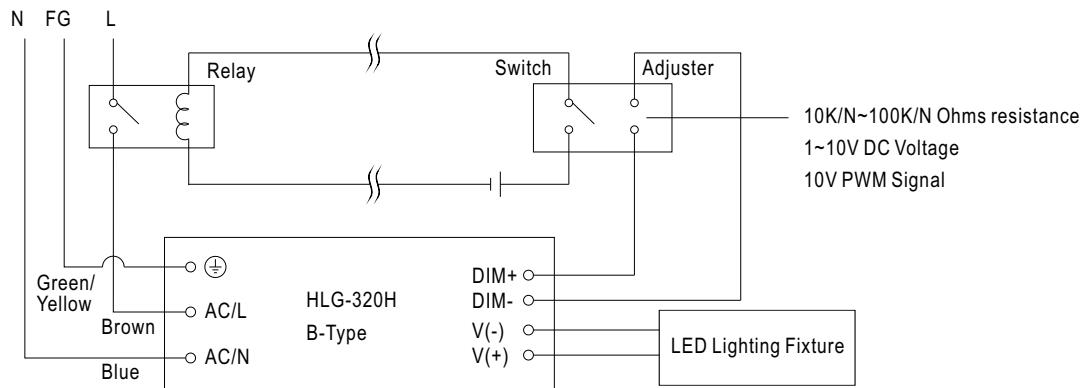




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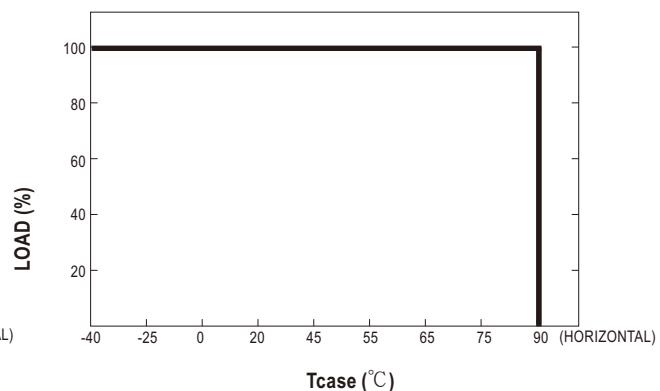
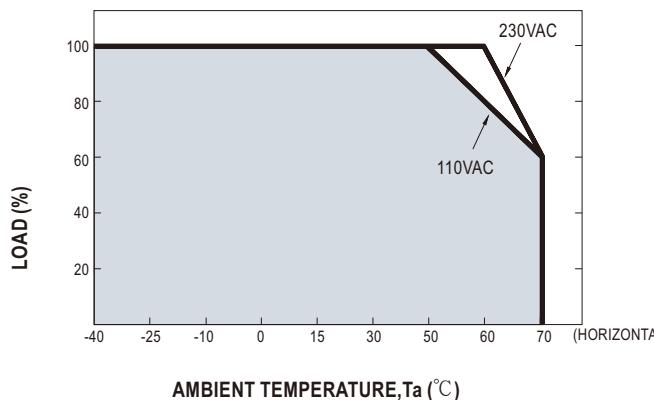
**HLG-320H** series

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.

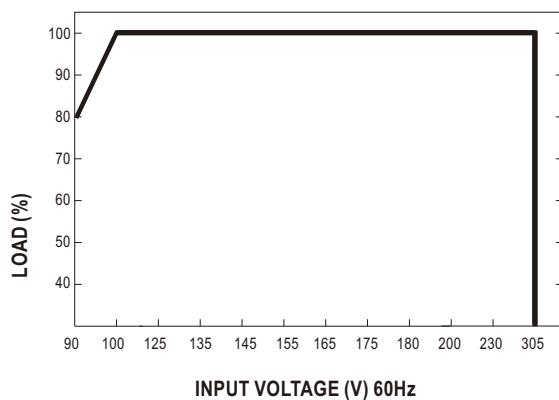


Using a switch and relay can turn ON/OFF the lighting fixture.

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

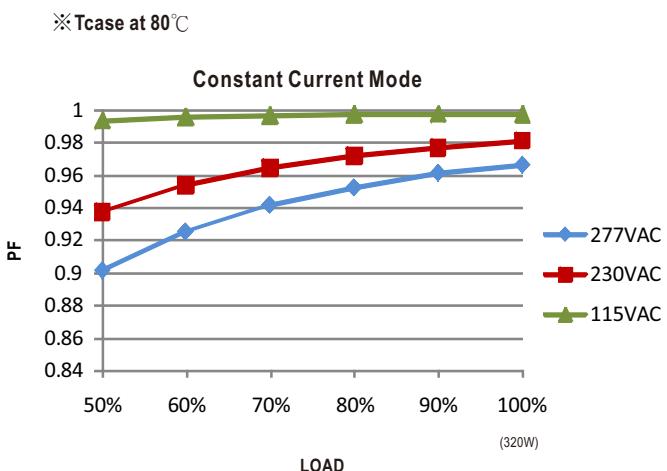


## ■ STATIC CHARACTERISTICS



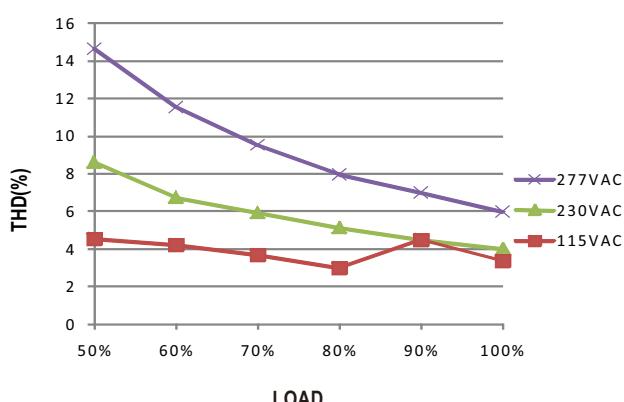
※ De-rating is needed under low input voltage.

## ■ POWER FACTOR(PF) CHARACTERISTIC



## ■ TOTAL HARMONIC DISTORTION (THD)

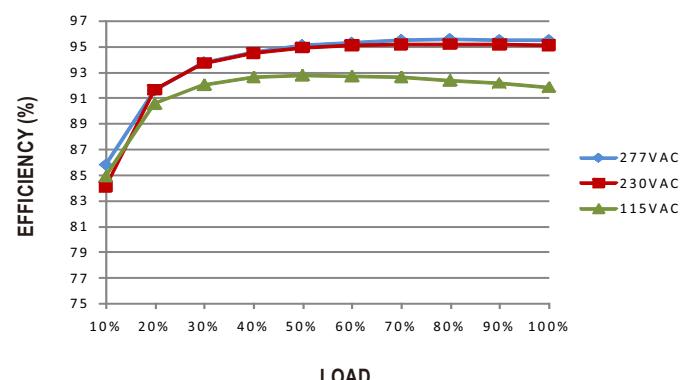
※ 48V Model,  $T_{\text{case}}$  at  $80^{\circ}\text{C}$



## ■ EFFICIENCY vs LOAD

H LG-320H series possess superior working efficiency that up to 95% can be reached in field applications.

※ 48V Model,  $T_{\text{case}}$  at  $80^{\circ}\text{C}$

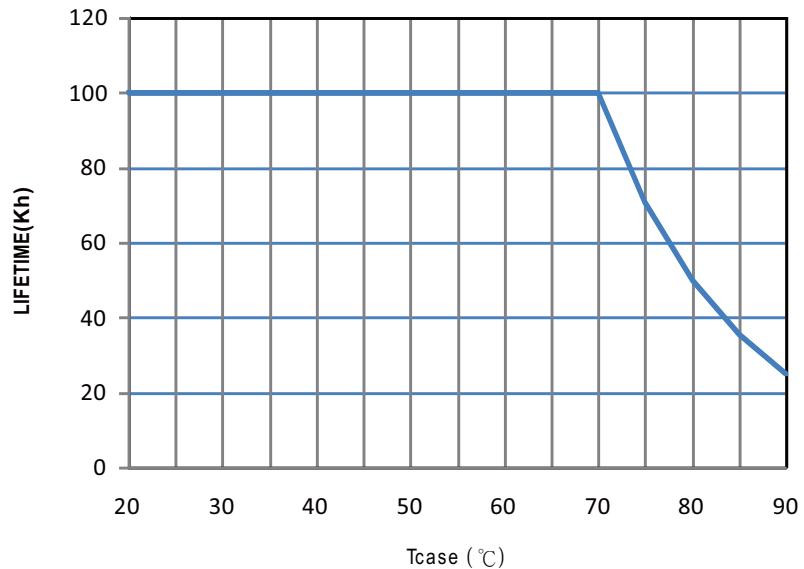




320W Constant Voltage + Constant Current LED Driver

**HLG-320H** series

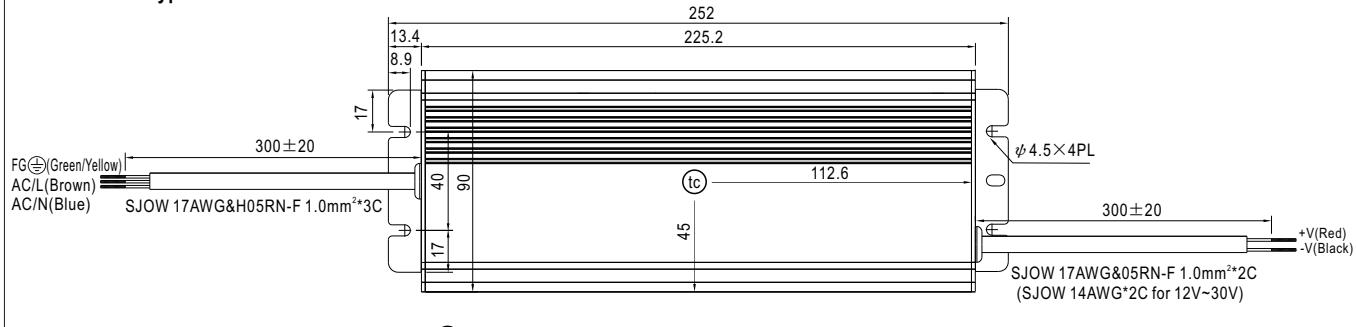
■ LIFE TIME



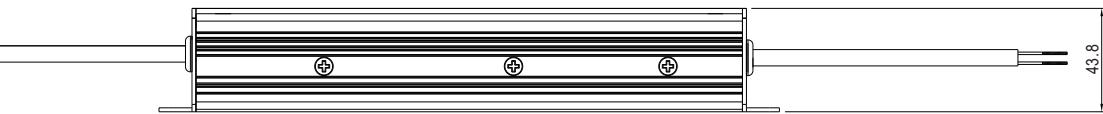
## ■ MECHANICAL SPECIFICATION

Case No.202A Unit:mm

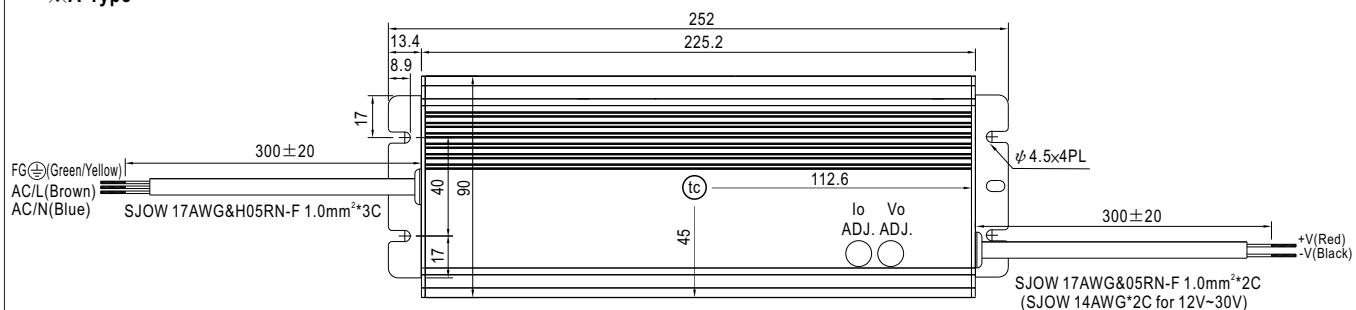
## ※Blank/D-Type



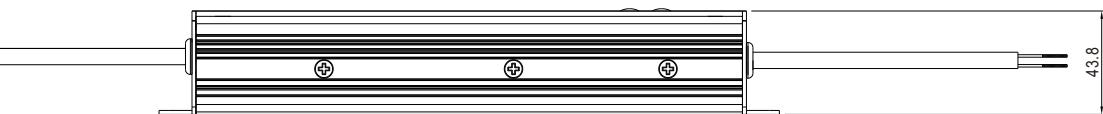
• (tc) : Max. Case Temperature



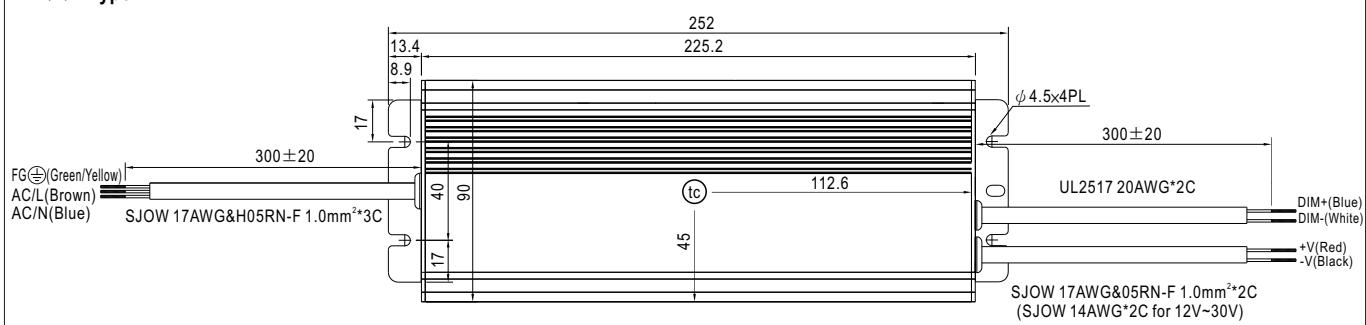
## ※A-Type



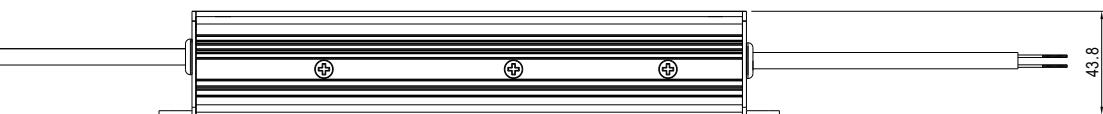
• (tc) : Max. Case Temperature



## ※B-Type



• (tc) : Max. Case Temperature

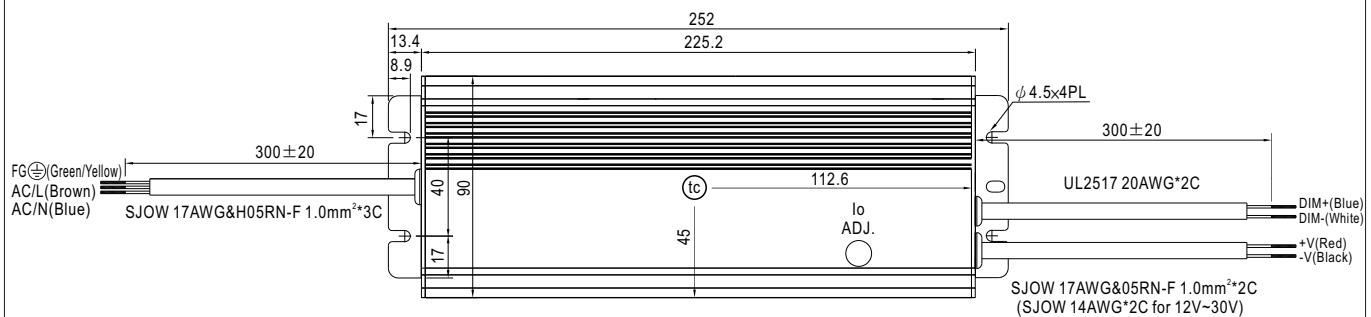




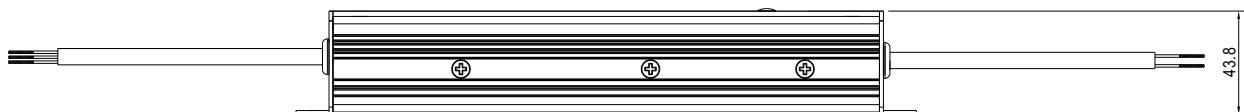
320W Constant Voltage + Constant Current LED Driver

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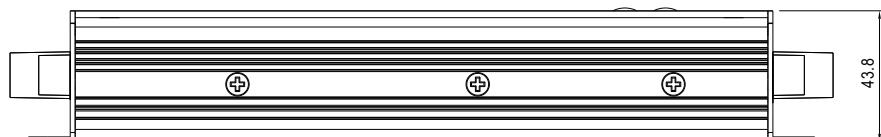
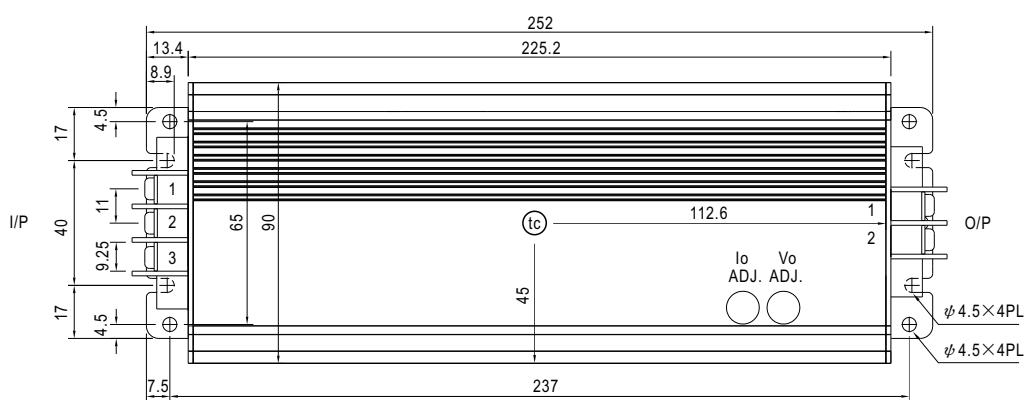
※AB-Type



• (tC) : Max. Case Temperature



※C-Type



AC Input Terminal Pin No. Assignment

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

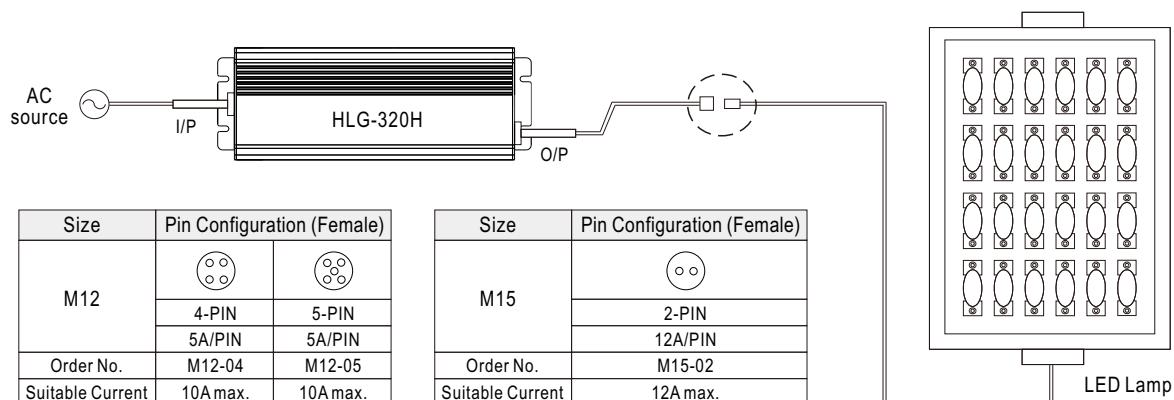
DC Output Terminal Pin No. Assignment

Pin No.	Assignment
1	+V
2	-V

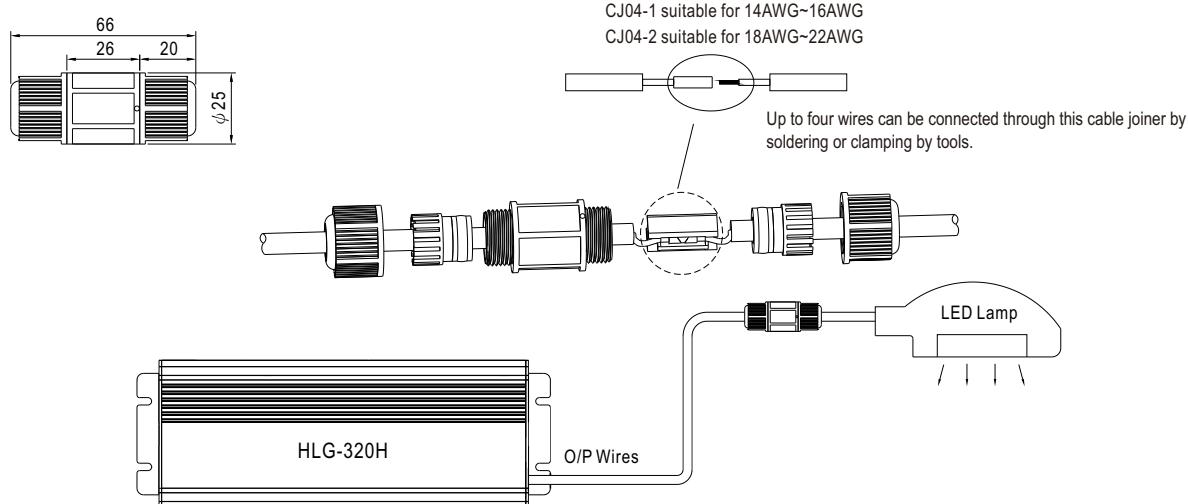
### ■ WATERPROOF CONNECTION

#### ※ Waterproof connector

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



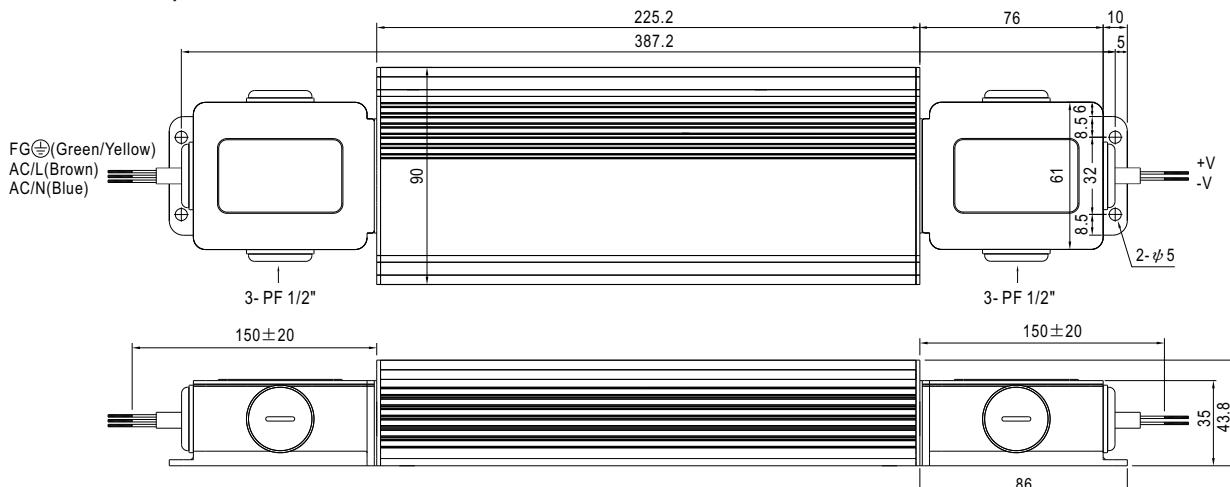
#### ※ Cable Joiner



◎ 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>