



120W Constant Voltage + Constant Current LED Driver

HLG-120H series

(except for D-type)



(except for B/AB/D-type)



(except for AB-type)



(Part 2/Sec13)

R-41027766



Type HL



■ 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; Timer 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.

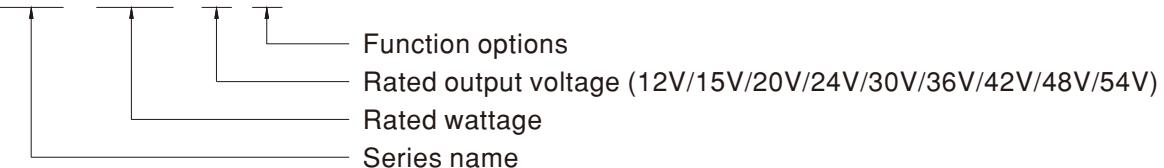
■ GTIN CODE

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

■ Description

HLG-120H series is a 120W AC/DC LED driver featuring the dual mode constant voltage and constant current output. HLG-120H operates from 90 ~ 305VAC and offers models with different rated voltage ranging between 12V and 54V. Thanks to the high efficiency up to 93.5%, 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-120H is equipped with various function options, such as dimming methodologies, so as to provide the optimal design flexibility for LED lighting system.

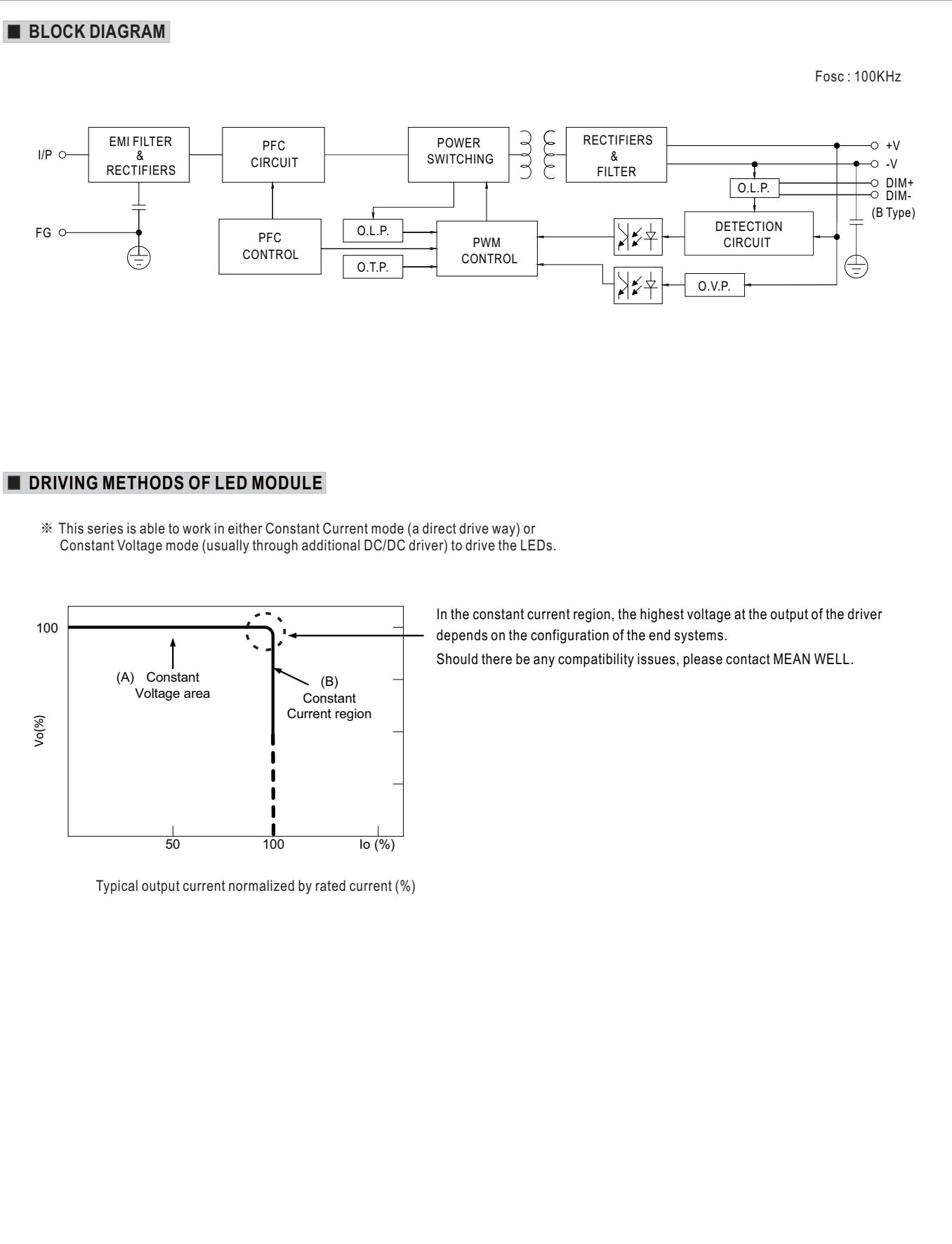
■ Model Encoding

HLG - 120H - 48 A

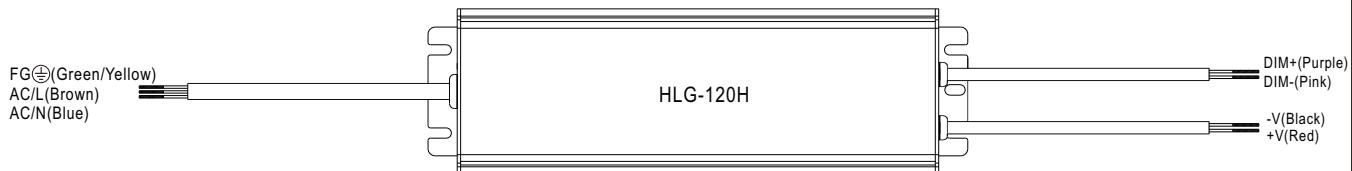
Type	IP Level	Function	Note
Blank	IP67	Io and Vo fixed	In Stock
A	IP65	Io and Vo adjustable through built-in potentiometer	In Stock
B	IP67	3 in 1 dimming function (1~10VDC, 10V PWM signal and resistance)	In Stock
AB	IP65	Io and Vo adjustable through built-in potentiometer & 3 in 1 dimming function (1~10Vdc, 10V PWM signal and resistance)	In Stock
D	IP67	Timer dimming function, contact MEAN WELL for details(safety pending).	By request

SPECIFICATION

MODEL	HLG-120H-12	HLG-120H-15	HLG-120H-20	HLG-120H-24	HLG-120H-30	HLG-120H-36	HLG-120H-42	HLG-120H-48	HLG-120H-54	
OUTPUT	DC VOLTAGE	12V	15V	20V	24V	30V	36V	42V	48V	54V
	CONSTANT CURRENT REGION Note.4	6~12V	7.5~15V	10~20V	12~24V	15~30V	18~36V	21~42V	24~48V	27~54V
	RATED CURRENT	10A	8A	6A	5A	4A	3.4A	2.9A	2.5A	2.3A
	RATED POWER	120W	120W	120W	120W	120W	122.4W	121.8W	120W	124.2W
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p	200mVp-p	200mVp-p	200mVp-p	200mVp-p
	VOLTAGE ADJ. RANGE	Adjustable for A/AB-Type only (via built-in potentiometer)								
		10.8~13.5V	13.5~17V	17~22V	22~27V	27~33V	33~40V	38~46V	43~53V	49~58V
	CURRENT ADJ. RANGE	Adjustable for A/AB-Type only (via built-in potentiometer)								
		5~10A	4~8A	3~6A	2.5~5A	2~4A	1.7~3.4A	1.4~2.9A	1.2~2.5A	1.1~2.3A
	VOLTAGE TOLERANCE Note.3	±2.5%	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
INPUT	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±2.0%	±1.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	SETUP, RISE TIME Note.6	1200ms,50ms/115VAC 500ms,50ms/230VAC								
	HOLD UP TIME (Typ.)	12ms / 115VAC, 230VAC								
	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≥50% / 115VAC,230VAC; @load≥75% / 277VAC) (Please refer to "TOTAL HARMONIC DISTORTION (THD)" section)								
	EFFICIENCY (Typ.)	92%	92%	93%	93%	93%	93%	93%	93.5%	93.5%
	AC CURRENT (Typ.)	1.4A / 115VAC	0.6A / 230VAC	0.55A / 277VAC						
PROTECTION	INRUSH CURRENT (Typ.)	COLD START 60A(twidth=375μs measured at 50% Ipeak) at 230VAC; Per NEMA 410								
	MAX. No. of PSUs on 16A CIRCUIT BREAKER	5 units (circuit breaker of type B) / 9 units (circuit breaker of type C) at 230VAC								
	LEAKAGE CURRENT	<0.75mA / 277VAC								
	OVER CURRENT	95~108% Constant current limiting, recovers automatically after fault condition is removed								
ENVIRONMENT	SHORT CIRCUIT	Constant current limiting, recovers automatically after fault condition is removed								
	OVER VOLTAGE	14~17V	18~21V	23~27V	28~34V	34~38V	41~46V	47~53V	54~63V	59~65V
	OVER TEMPERATURE	Shut down o/p voltage with auto-recovery or re-power on to recovery								
		Shut down o/p voltage, recovers automatically after temperature goes down								
SAFETY & EMC	WORKING TEMP.	Tcase= -40~+80°C (Please refer to "OUTPUT LOAD vs TEMPERATURE" section)								
	MAX. CASE TEMP.	Tcase= +80°C								
	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								
OTHERS	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), BIS IS15885(for 12B,24B,36A,54A only), EAC TP TC 004, KC61347-1, KC61347-2-13(except for D-type) 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≥50%) ; BS EN/EN61000-3-3, GB17743 and GB17625.1, EAC TP TC 020, KSC 9815(except for D-type)								
NOTE	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, KSC 9547(except for D-type)								
	MTBF	2185.8K hrs min. Telcordia SR-332 (Bellcore); 167.1Khrs min. MIL-HDBK-217F (25°C)								
	DIMENSION	220*68*38.8mm (L*W*H)								
NOTE	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 (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 http://www.meanwell.com									
	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. https://www.meanwell.com/Upload/PDF/LED_EN.pdf									
	※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx									



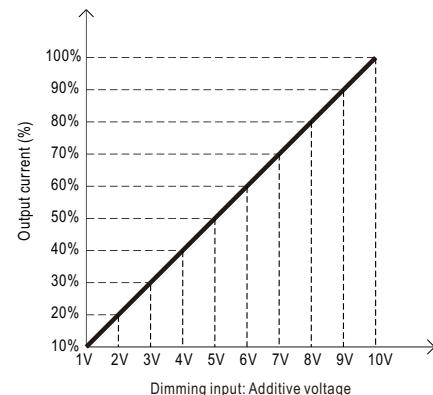
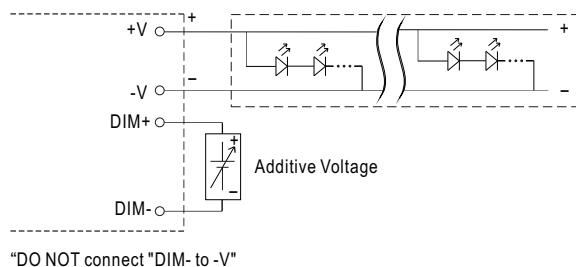
DIMMING OPERATION



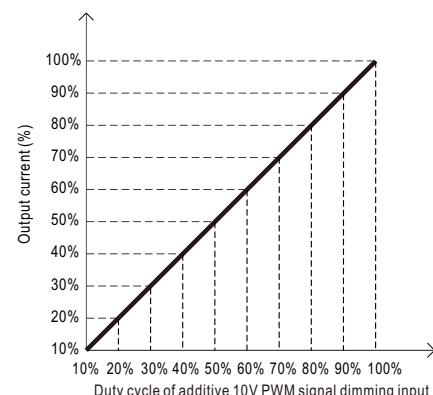
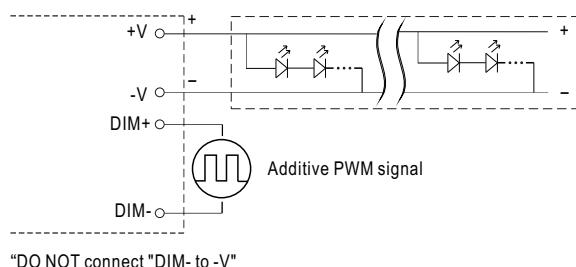
※ 3 in 1 dimming function (for B/AB-Type)

- 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.)

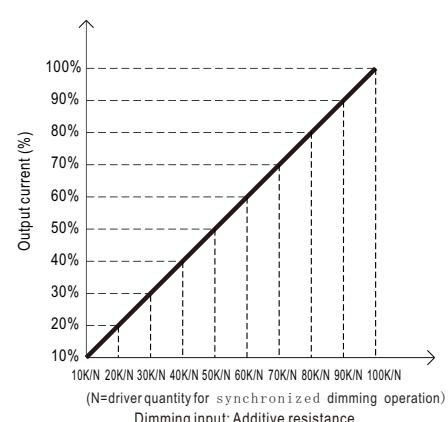
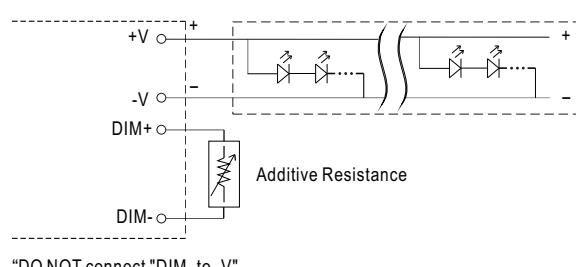
◎ Applying additive 1 ~ 10VDC



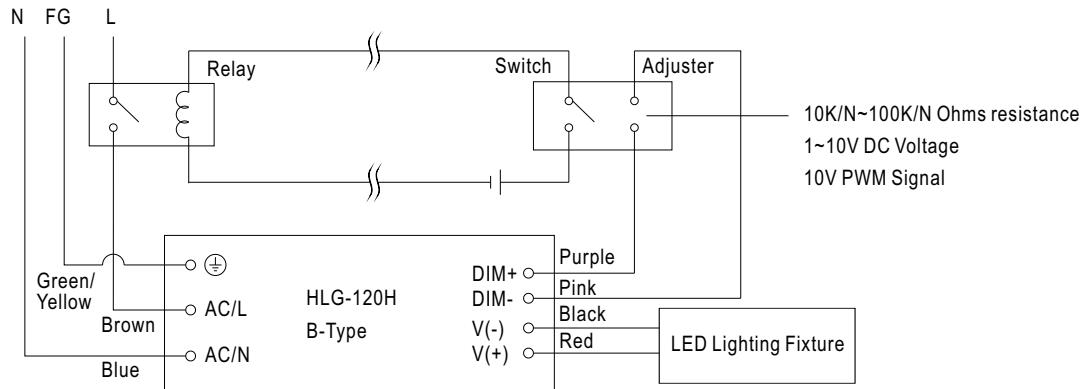
◎ Applying additive 10V PWM signal (frequency range 100Hz ~ 3KHz):



◎ Applying additive resistance:

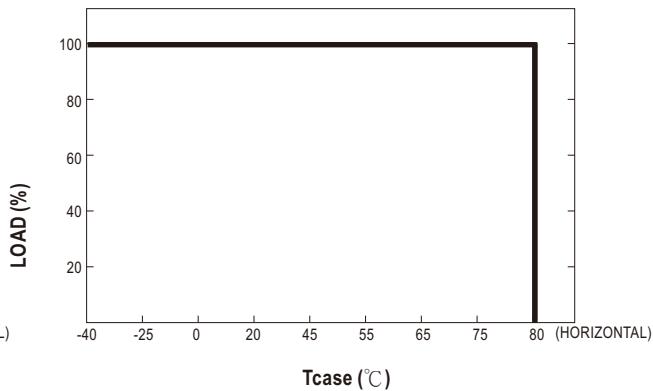
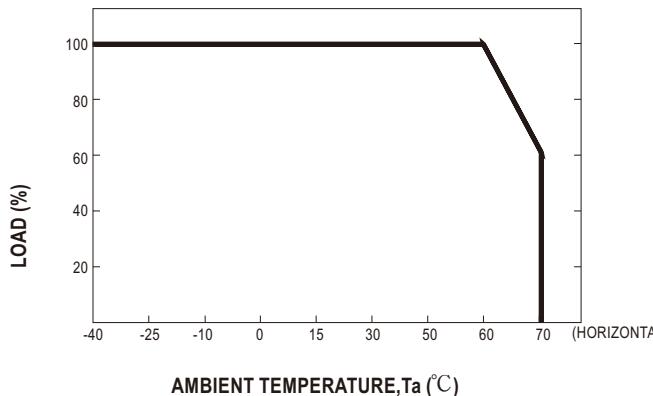


Note: In the case of turning the lighting fixture down to 0% brightness, please refer to the configuration as follow, or please contact MEAN WELL for other options.

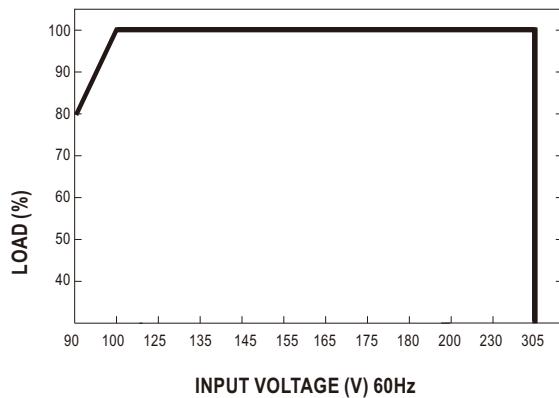


Using a switch and relay can turn ON/OFF the lighting fixture.

■ OUTPUT LOAD vs TEMPERATURE (Note.10)



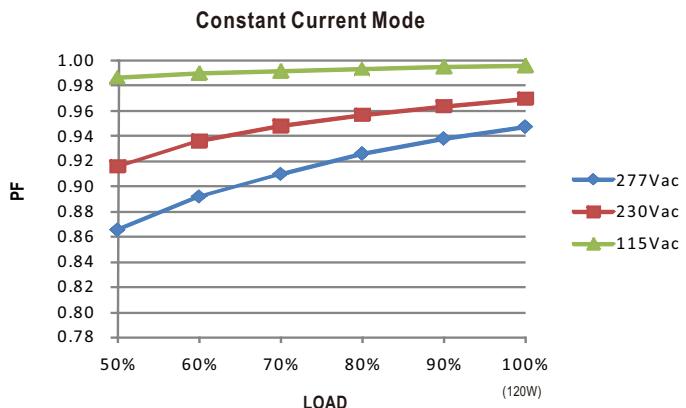
■ STATIC CHARACTERISTICS



※ De-rating is needed under low input voltage.

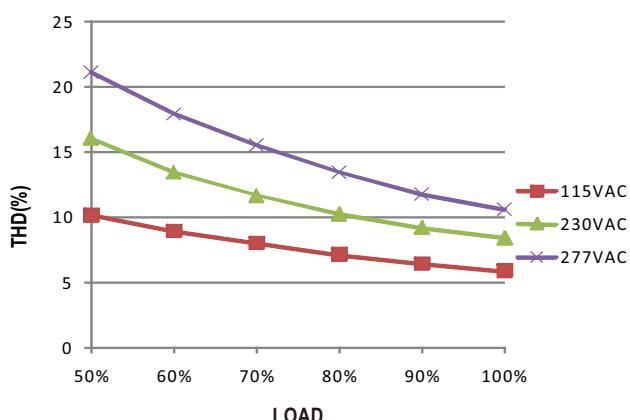
■ POWER FACTOR(PF) CHARACTERISTIC

※ Tcase at 70°C



■ TOTAL HARMONIC DISTORTION (THD)

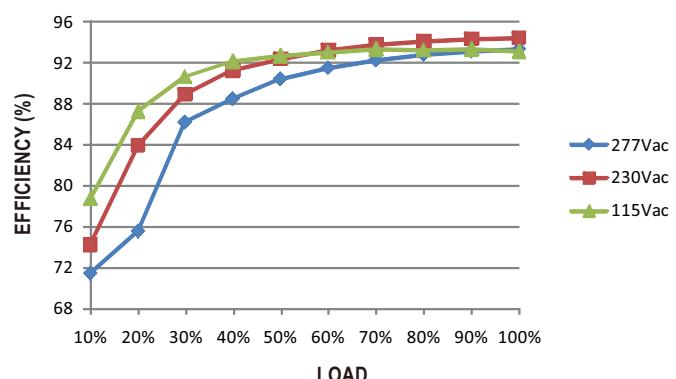
※ 48V Model, Tcase at 70°C

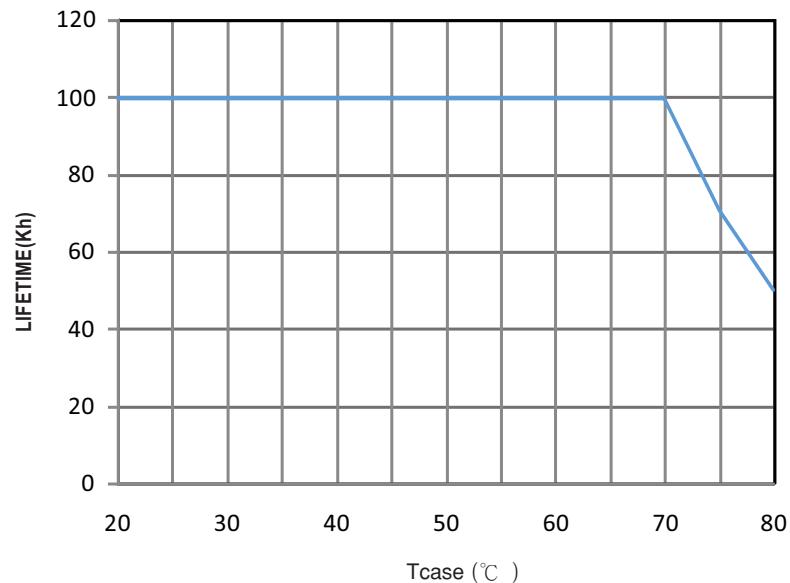


■ EFFICIENCY vs LOAD

HLG-120H series possess superior working efficiency that up to 93.5% can be reached in field applications.

※ 48V Model, Tcase at 70°C

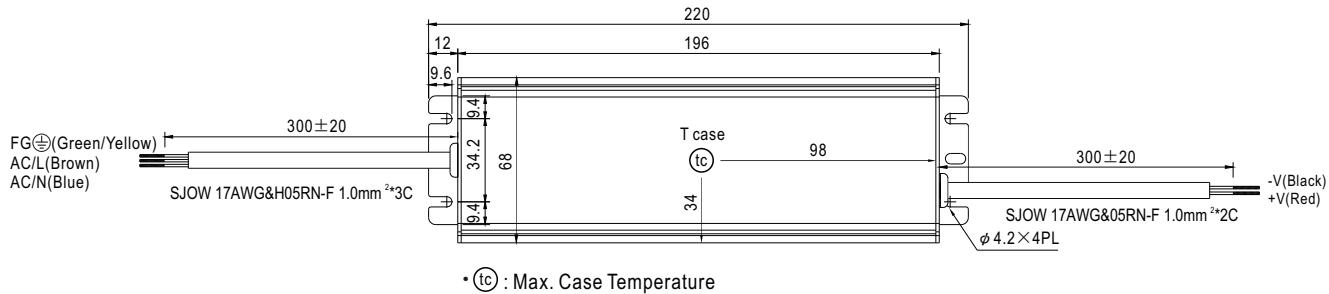


LIFE TIME

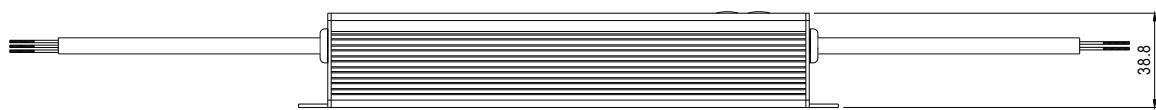
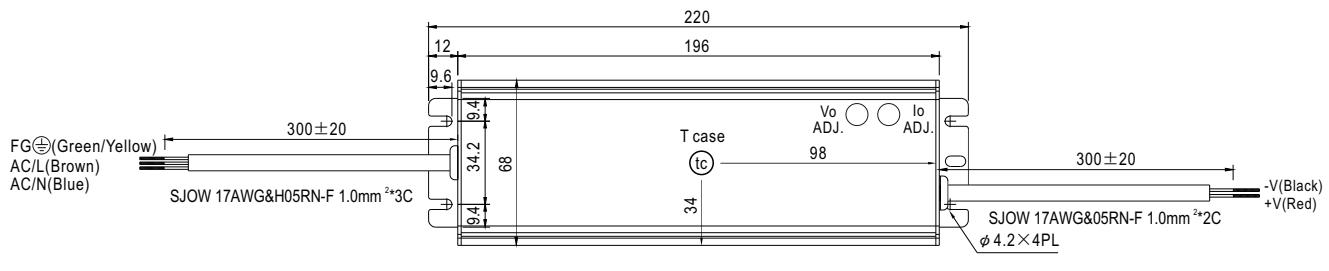
■ MECHANICAL SPECIFICATION

Case No.994A Unit:mm

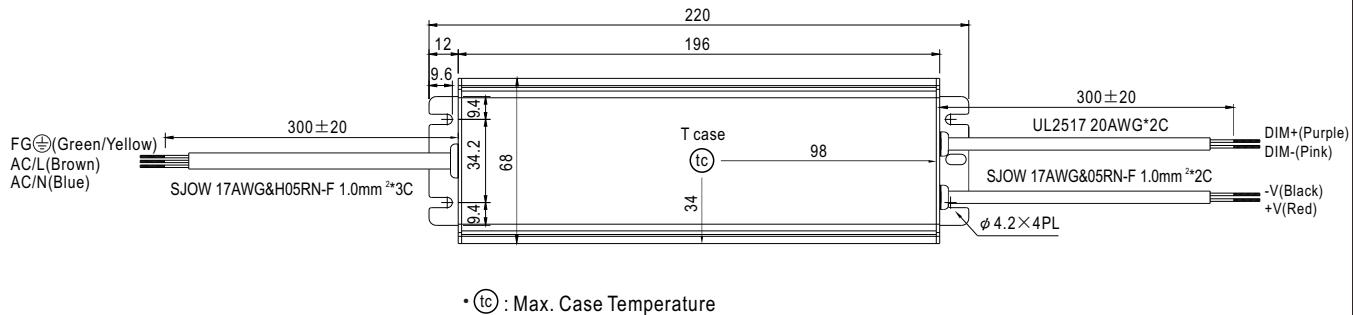
※Blank/D-Type



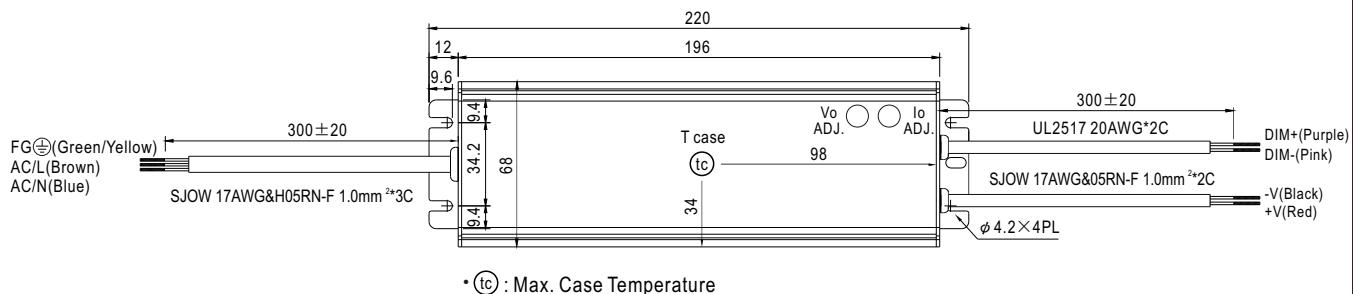
※A-Type



※B-Type



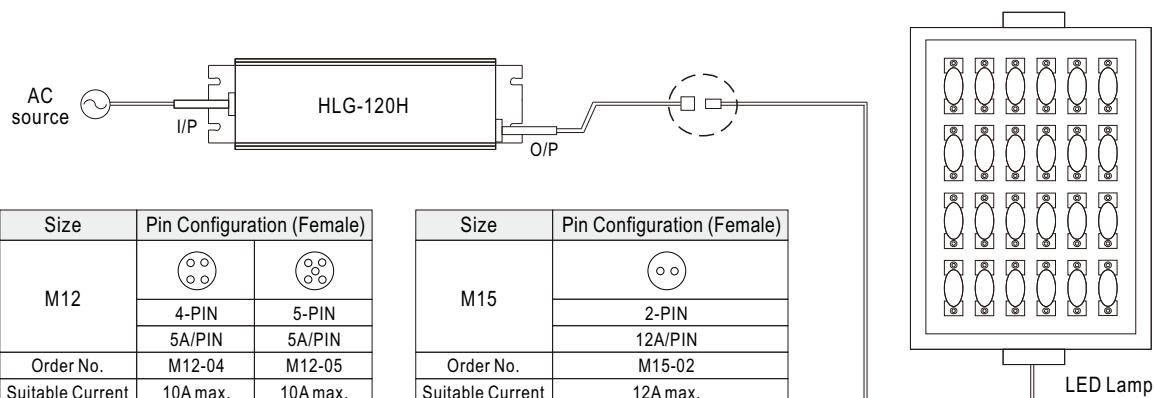
※AB-Type



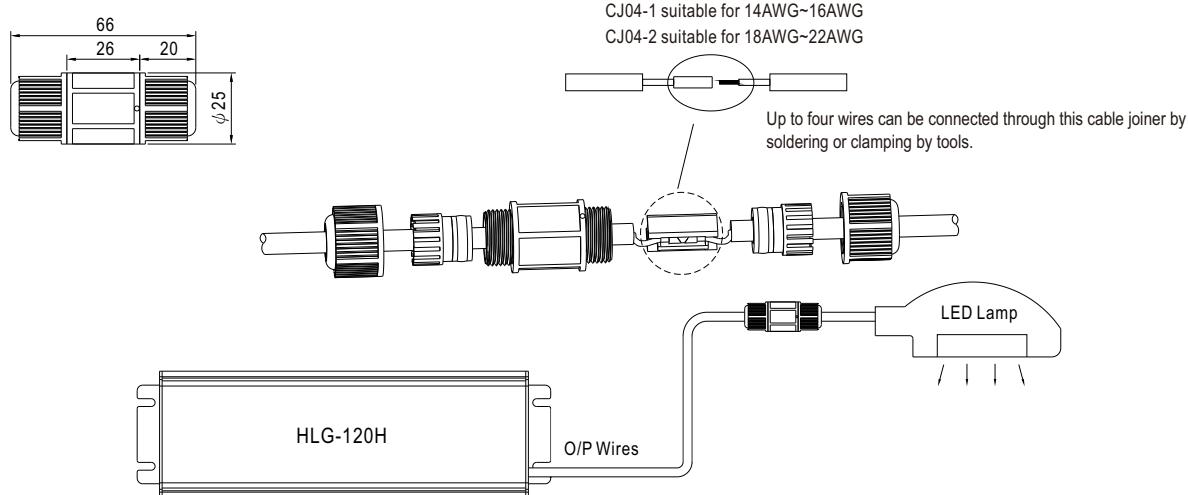
■ WATERPROOF CONNECTION

※ Waterproof connector

Waterproof connector can be assembled on the output cable of HLG-120H to operate in dry/wet/damp or outdoor environment.



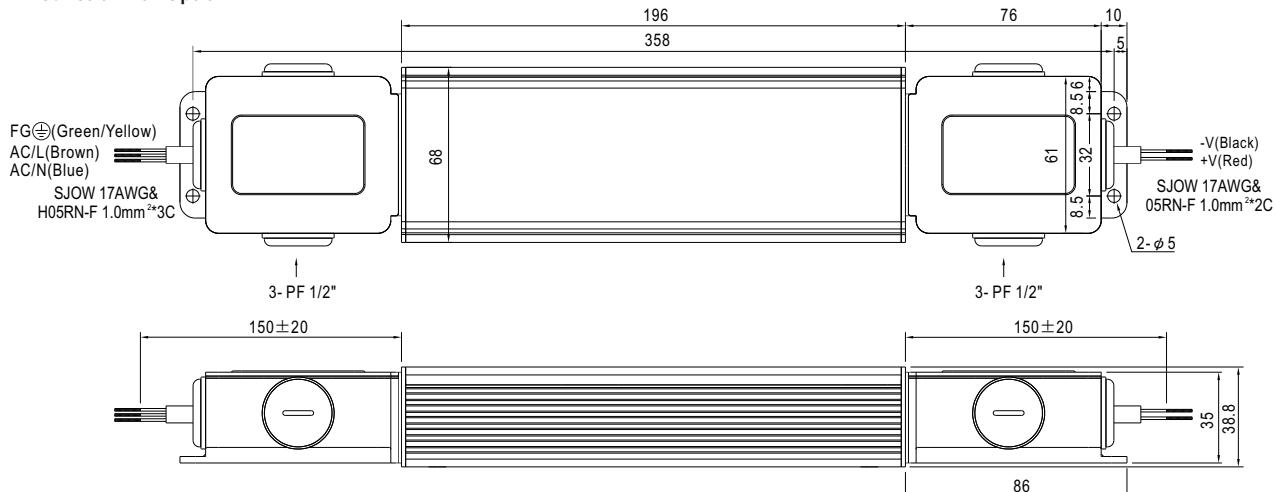
※ Cable Joiner



◎ 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>