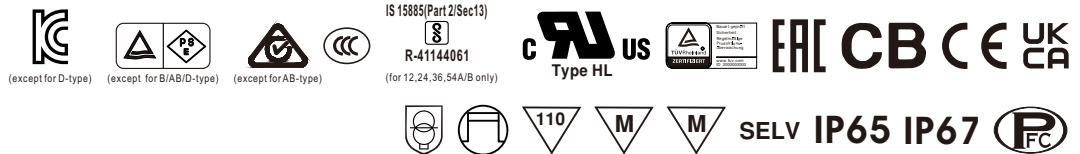




150W Constant Voltage + Constant Current LED Driver

HLG-150H series

User's Manual



Features

- Constant Voltage + Constant Current mode output
- Metal housing with class I design
- 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-150H series is a 150W AC/DC LED driver featuring the dual mode constant voltage and constant current output. HLG-150H 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-150H 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 - 150H - 15 A

- Function options
- Rated output voltage (12V/15V/20V/24V/30V/36V/42V/48V/54V)
- Rated wattage
- Series name

GTIN CODE

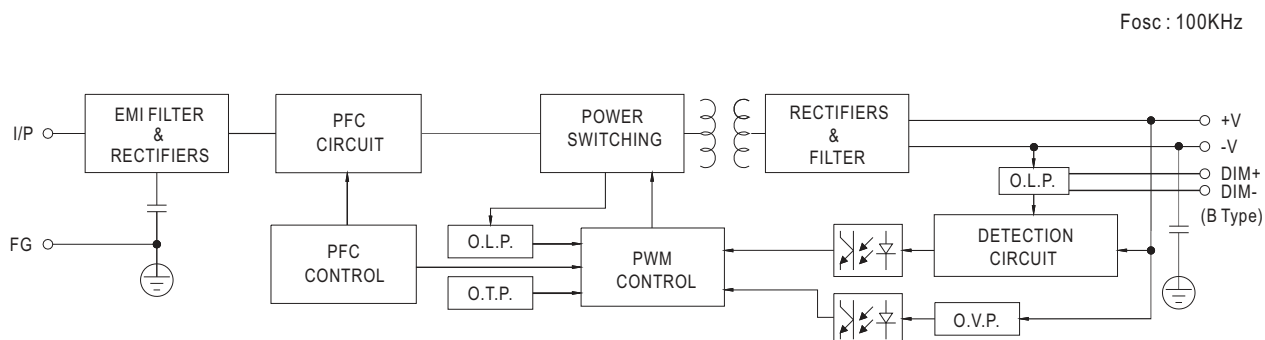
MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

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-150H-12	HLG-150H-15	HLG-150H-20	HLG-150H-24	HLG-150H-30	HLG-150H-36	HLG-150H-42	HLG-150H-48	HLG-150H-54	
OUTPUT	DC VOLTAGE	12V	15V	20V	24V	30V	36V	42V	48V	54V	
	CONSTANT CURRENT REGION <small>Note.4</small>	6 ~ 12V	7.5 ~ 15V	10 ~ 20V	12 ~ 24V	15 ~ 30V	18 ~ 36V	21 ~ 42V	24 ~ 48V	27 ~ 54V	
	RATED CURRENT	12.5A	10A	7.5A	6.3A	5A	4.2A	3.6A	3.2A	2.8A	
	RATED POWER	150W	150W	150W	151.2W	150W	151.2W	151.2W	153.6W	151.2W	
	RIPPLE & NOISE (max.) <small>Note.2</small>	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) 7.5 ~ 12.5A 6 ~ 10A 4.5 ~ 7.5A 3.8 ~ 6.3A 3 ~ 5A 2.5 ~ 4.2A 2.16 ~ 3.6A 1.92 ~ 3.2A 1.68 ~ 2.8A									
	VOLTAGE TOLERANCE <small>Note.3</small>	±2.5%	±2.0%	±1.0%	±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%	±0.5%	±0.5%	±0.5%	
	LOAD REGULATION	±2.0%	±1.5%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	
SETUP, RISE TIME <small>Note.6</small>	1000ms,200ms/115VAC 500ms,200ms/230VAC										
HOLD UP TIME (Typ.)	16ms / 115VAC, 230VAC										
INPUT	VOLTAGE RANGE <small>Note.5</small>	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 ≥ 0.92/277VAC @ 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.)	91.5%	92%	93%	93%	93.5%	93.5%	94%	94%	94%	
	AC CURRENT (Typ.)	1.7A / 115VAC	0.75A / 230VAC	0.7A / 277VAC							
	INRUSH CURRENT (Typ.)	COLD START 65A($t_{width}=425\mu s$ measured at 50% I _{peak}) at 230VAC; Per NEMA 410									
	MAX. No. of PSUs on 16A CIRCUIT BREAKER	4 units (circuit breaker of type B) / 7 units (circuit breaker of type C) at 230VAC									
	LEAKAGE CURRENT	<0.75mA / 277VAC									
PROTECTION	OVER CURRENT	95 ~ 108% Constant current limiting, recovers automatically after fault condition is removed									
	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									
	WORKING TEMP.	T _{case} = -40 ~ +90℃ (Please refer to "OUTPUT LOAD vs TEMPERATURE" section)									
ENVIRONMENT	MAX. CASE TEMP.	T _{case} = +90℃									
	WORKING HUMIDITY	20 ~ 95% RH non-condensing									
	STORAGE TEMP., HUMIDITY	-40 ~ +80℃, 10 ~ 95% RH									
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 60℃)									
	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes									
SAFETY & EMC	SAFETY STANDARDS	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 12,24,36,54A/B 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℃ / 70% RH									
	EMC EMISSION	Compliance to BS EN/EN55015, BS EN/EN55032 (CISPR32) Class B, BS EN/EN61000-3-2 Class C (@ load ≥ 60%) ; BS EN/EN61000-3-3,GB17743 and GB17625.1, EAC TP TC 020									
	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									
OTHERS	MTBF	2176.1K hrs min. Telcordia SR-332(Bellcore) ; 166.4K hrs min. MIL-HDBK-217F (25℃)									
	DIMENSION	228*68*38.8mm									
	PACKING	1.15Kg; 12pcs/14.8Kg/0.8CUFT									

- NOTE**
- All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25°C of ambient temperature.
 - Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
 - Tolerance : includes set up tolerance, line regulation and load regulation.
 - Please refer to "DRIVING METHODS OF LED MODULE".
 - De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details.
 - 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.
 - 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.
 - 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.
 - This series meets the typical life expectancy of >62,000 hours of operation when T_{case}, particularly (T_c) point (or T_{MP}, per DLC), is about 80°C or less.
 - Please refer to the warranty statement on MEAN WELL's website at <http://www.meanwell.com>.
 - 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).
 - 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



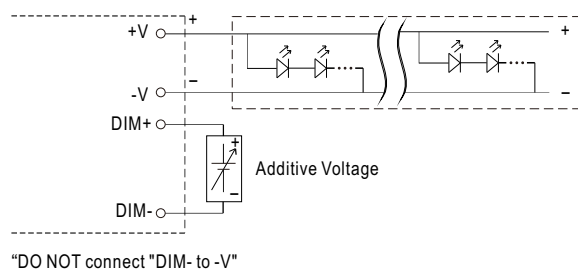
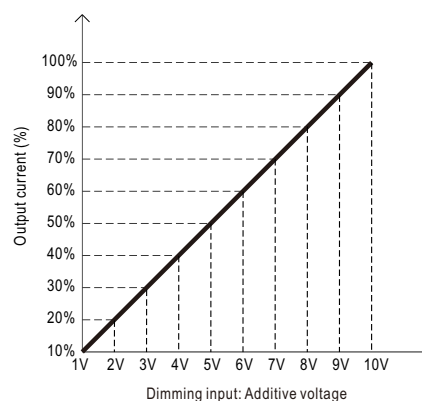
DIMMING OPERATION



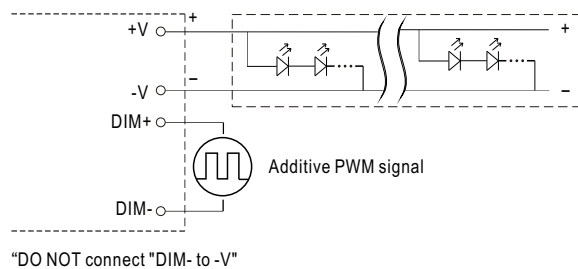
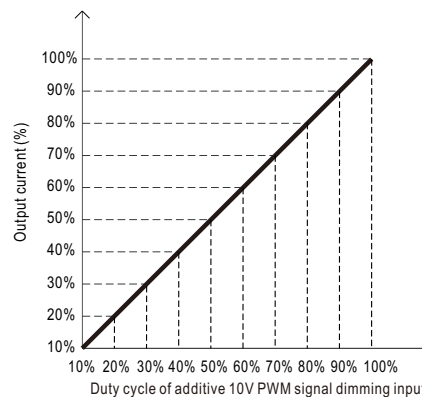
※ 3 in 1 dimming function (for B/AB-Type)

- 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 μ A (typ.)

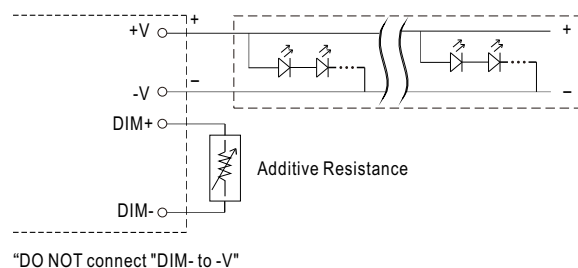
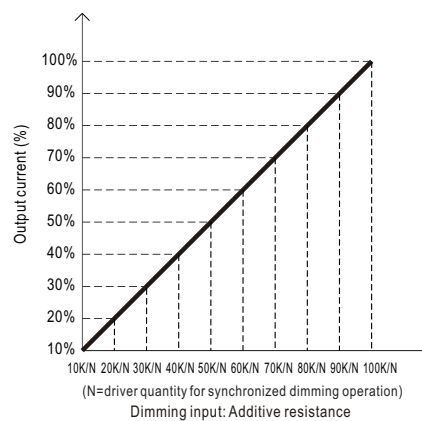
◎ Applying additive 1 ~ 10VDC



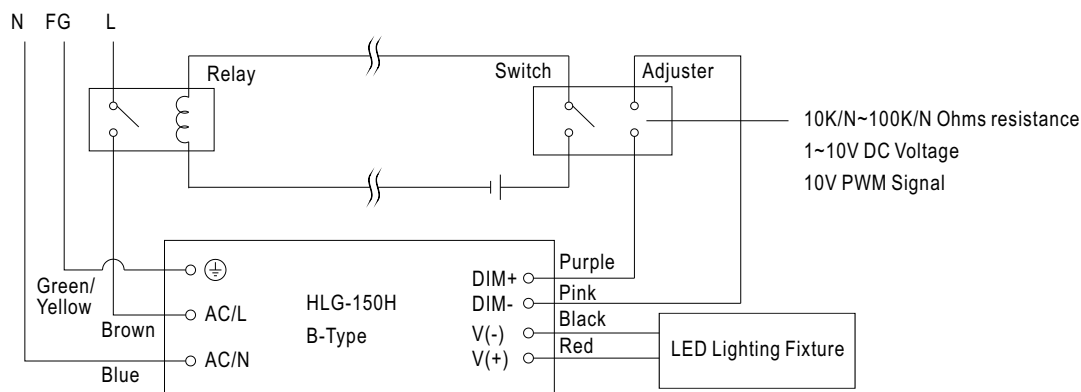
◎ Applying additive 10V PWM signal (frequency range 100Hz ~ 3KHz):



◎ Applying additive resistance:

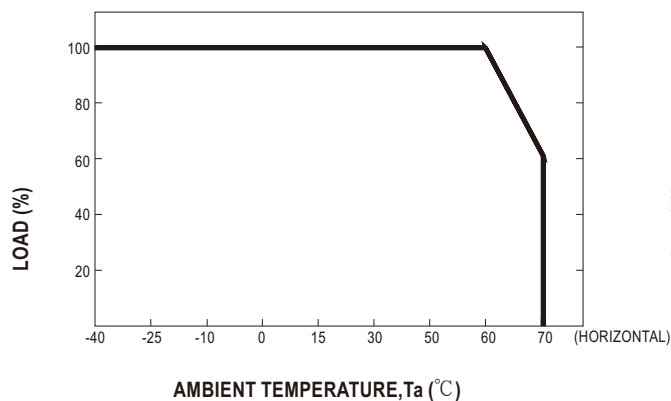
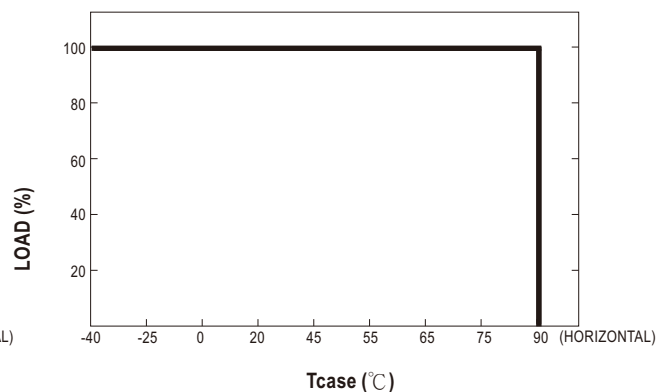


Note: In the case of turning the lighting fixture down to 0% brightness, please refer to the configuration as follow, or please contact MEAN WELL for other options.

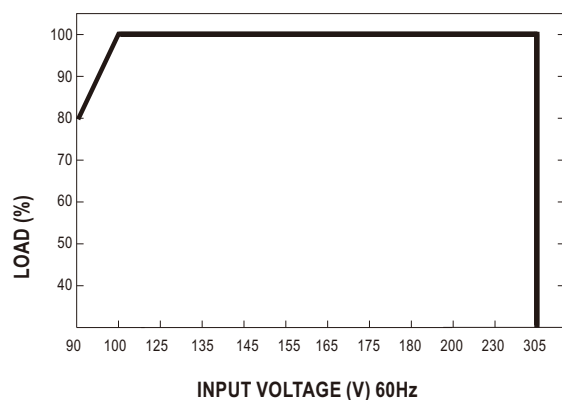


Using a switch and relay can turn ON/OFF the lighting fixture.

■ OUTPUT LOAD vs TEMPERATURE(Note.10)



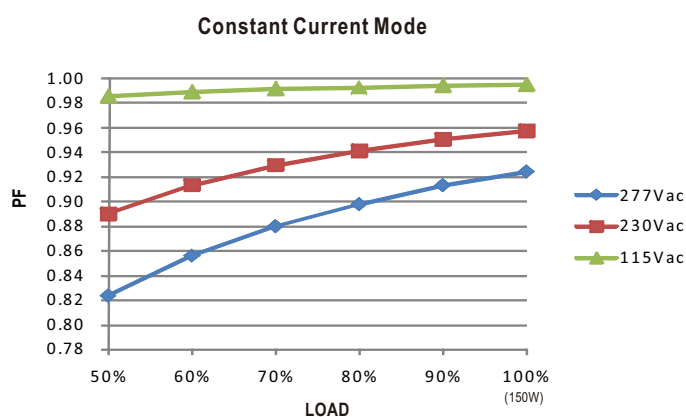
■ STATIC CHARACTERISTICS



※ De-rating is needed under low input voltage.

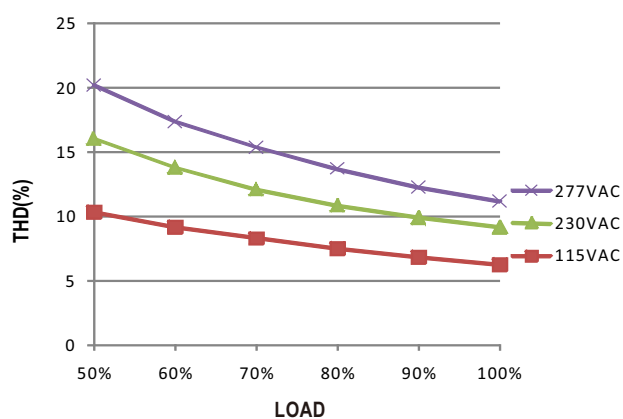
■ POWER FACTOR(PF) CHARACTERISTIC

※ Tcase at 80°C



■ TOTAL HARMONIC DISTORTION (THD)

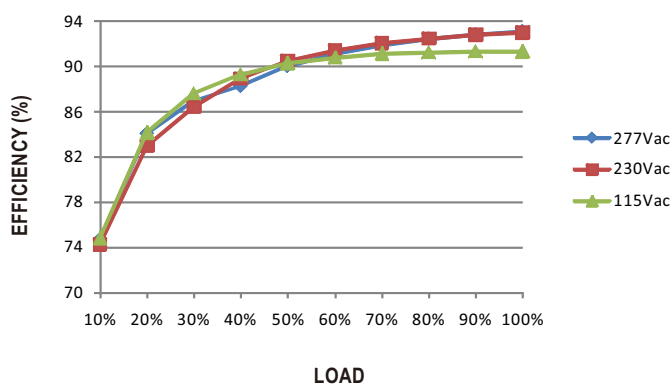
※ 48V Model, Tcase at 80°C



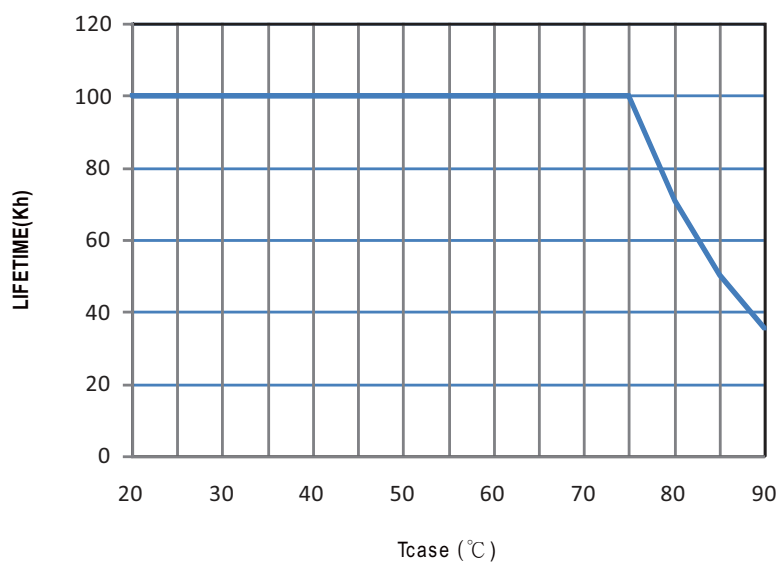
■ EFFICIENCY vs LOAD

HLG-150H series possess superior working efficiency that up to 94% can be reached in field applications.

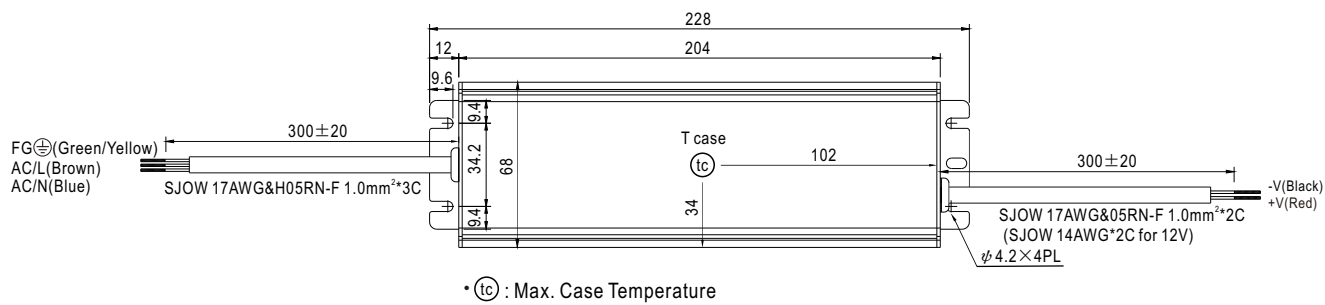
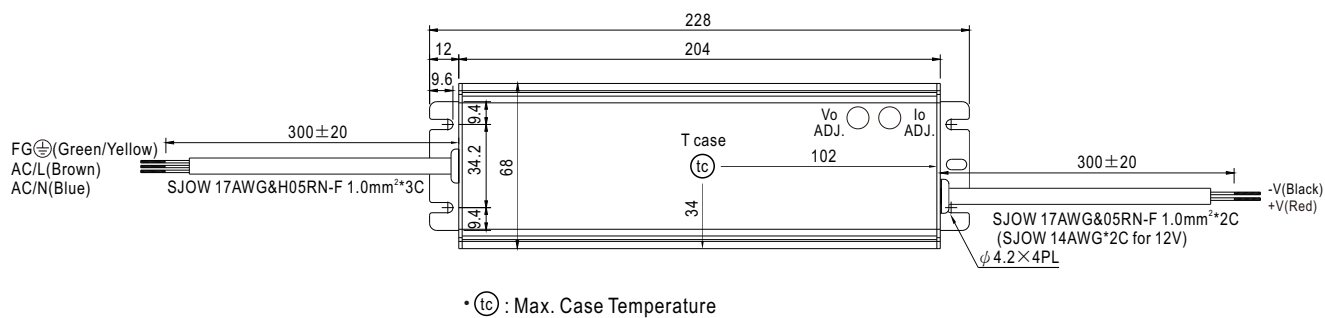
※ 48V Model, Tcase at 80°C

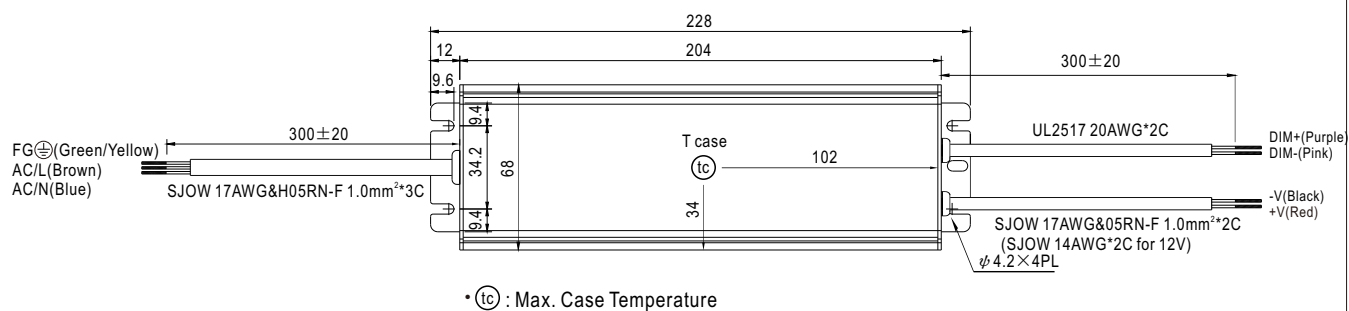
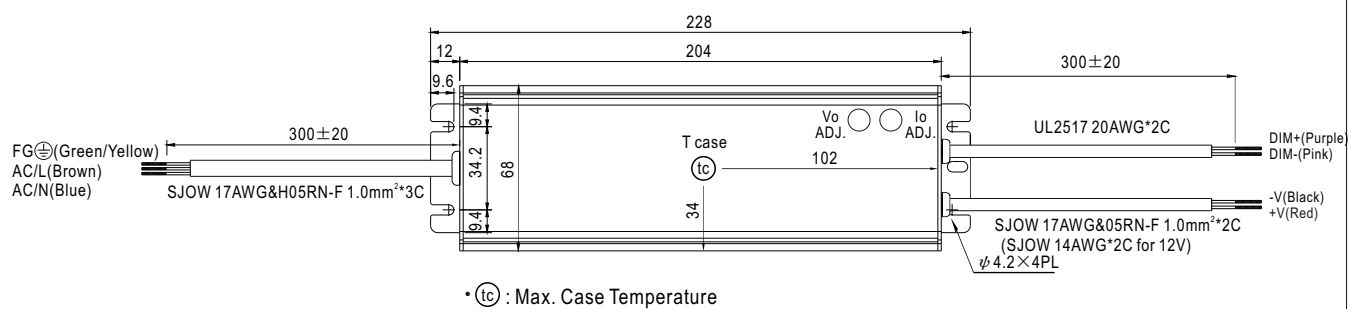


■ LIFE TIME



Case No.954D Unit:mm

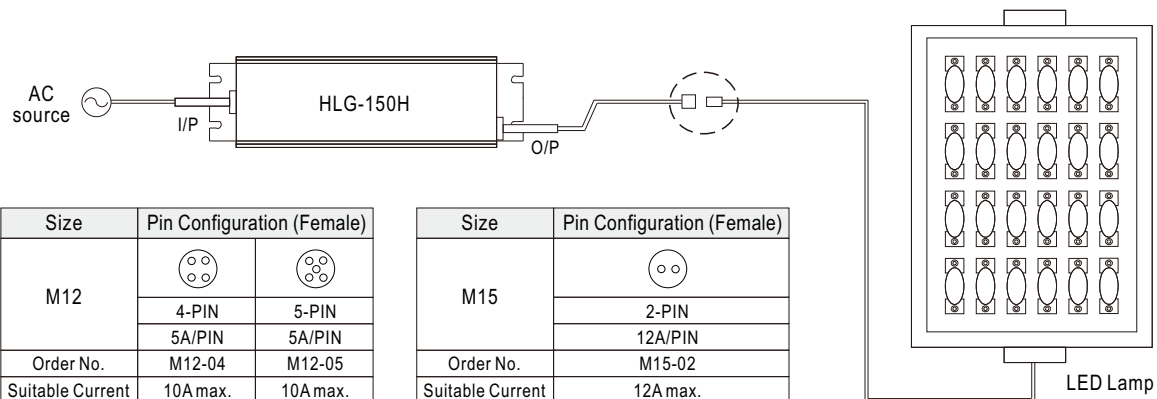
MECHANICAL SPECIFICATION
※Blank/D-Type

※A-Type


※B-Type

※AB-Type


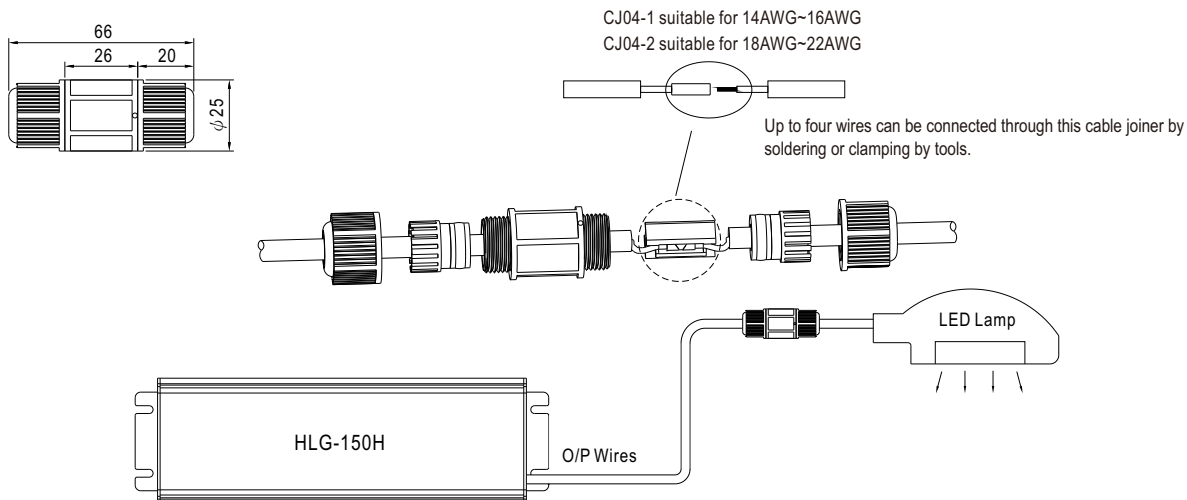
■ WATERPROOF CONNECTION

※ Waterproof connector

Waterproof connector can be assembled on the output cable of HLG-150H to operate in dry/wet/damp or outdoor environment.

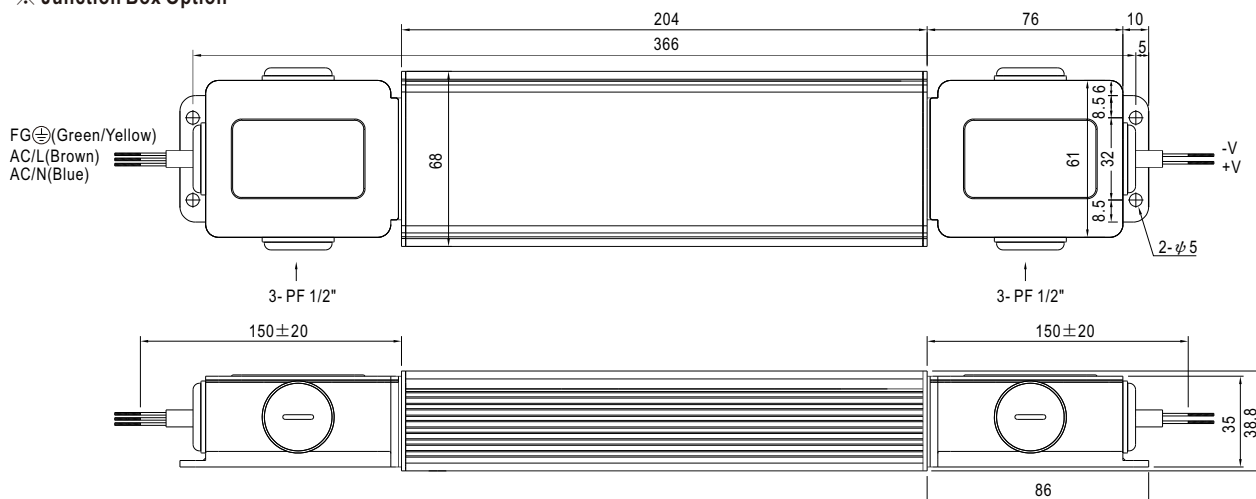


※ Cable Joiner



◎ 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>