

ORLRPV48-150-HLG-A

ITEM NO. DRIVER - 15247

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.

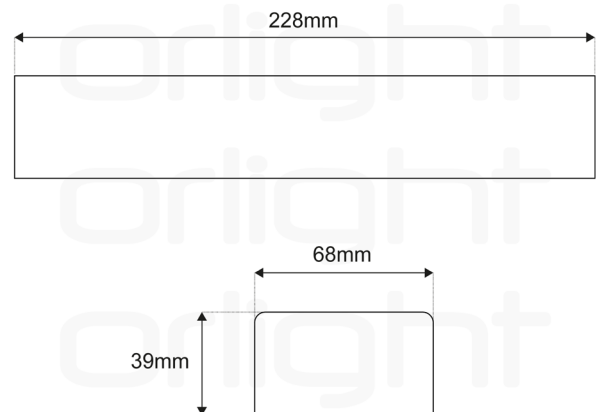
Features

- 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

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

Dimension



Technical Specification

Output	DC Voltage	48V
	Constant Current Region Note. 4	24 ~ 48V
	Rated Current	3.2A
	Rated Power	153.6W
	Ripple & Noise (max.) Note. 2	200mVp-p
	Voltage Adj. Range	Adjustable for A/AB- Type only (via built-in potentiometer) 43 ~ 53V
	Current Adj. Range	Adjustable for A/AB- Type only (via built-in potentiometer) 1.92 ~ 3.2A
	Voltage Tolerance Note. 3	±1.0%
	Line Regulation	±0.5%
	Load Regulation	±0.5%
	Setup, Rise Time Note. 6	1000ms,200ms/115VAC 500MS,200MS/230VAC
	Hold Up Time (Typ.)	16ms / 115VAC, 230VAC

Technical Specification Continued

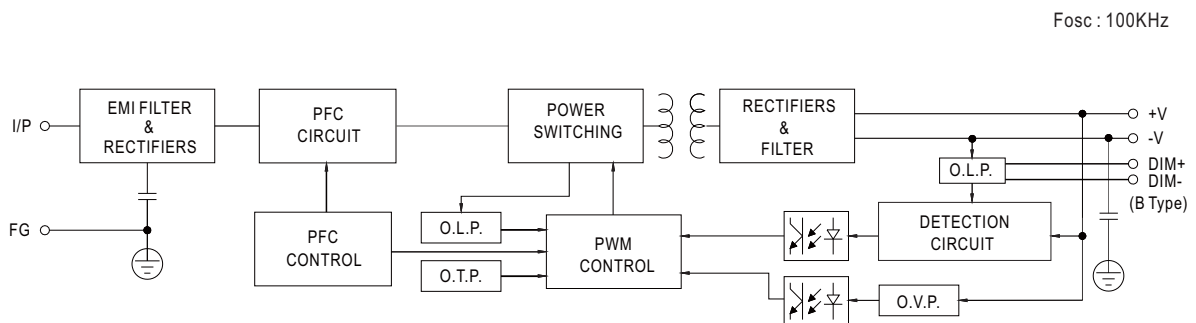
Input	Voltage Range	Note. 5 90 ~ 305VAC 127 ~ 431VDC (Please refer to "Static Characteristic" section)
	Frequency Range	47 ~ 63Hz
	Power Factor (Typ.)	PF>0.98/115VAC, PF>0.95/230VAC, PF>0.92/277VAC @ full load (Please refer to "Power Factor (PF) Characteristic" section)
	Total Harmonic Distortion	THD< 20% (@ load>60% / 115VAC,230VAC; @ load>75% / 277VAC) (Please refer to "Total Harmonic Distortion (THD)" section)
	Efficiency (Typ.)	94%
	AC Current (Typ.)	1.7A / 115VAC 0.75A / 230VAC 0.7A / 277VAC
	Inrush Current (Typ.)	COLD START 65A (twidh=425 μ s measured at 50% Ipeak) 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	54 ~ 63V Shut down o/p voltage with auto-recovery or re-power on to recovery
	Over Temperature	Shut down o/p voltage, recovers automatically after temperature goes down
Environment	Working Temp.	Tcase= -40 ~ +90°C (Please refer to "Output Load vs Temperature" section)
	Max. Case Temp.	Tcase= +90°C
	Working Humidity	20 ~ 95% RH non-condensing
	Storage Temp. Humidity	-40 ~ +80°C, 10 ~ 95% RH
	Temp. Coefficient	$\pm 0.03\%/^{\circ}\text{C}$ (0 ~ 60°C)
	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; EN/AS/NZS 61347-1, EN/AS/NZS 61347-2-13 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°C/ 70% RH
	EMC Emission	Compliance to EN55015, EN55032 (CISPR32) Class B, EN61000-3-2 Class C (@ load>60%) ; EN61000-3-3,GB17743 and GB17625.1, EAC TP TC 020
	EMC Immunity	Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, EN55024, light industry level (surge immunity Line-Earth 4KV, Line-Line 2KV), EAC TP TC 020
Others	MTBF	192.2K hrs min. MIL-HDBK-217F (25°C)
	Dimension	228 x 68 x 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 0.1μf & 47μf 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.	

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Technical Specification Continued

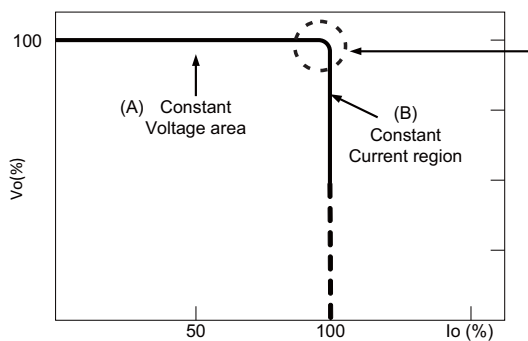
Note	1. To fulfill requirements of the latest ErP regulation for lighting fixtures, this LED driver can only be used behind a switch without permanently connected to the mains. 2. This series meets the typical life expectancy of >62,000 hours of operation when Tcase, particularly tc point (or TMP, per DLC), is about 80-C or less. 3. 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
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Block Diagram



Driving Methods of LED Module

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



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.

Typical output current normalized by rated current (%)

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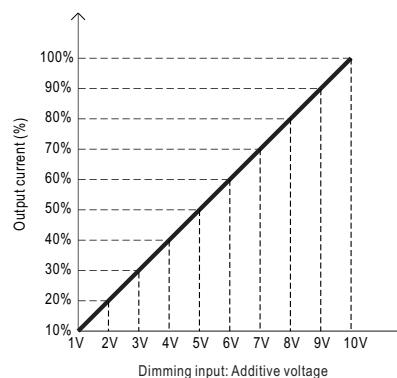
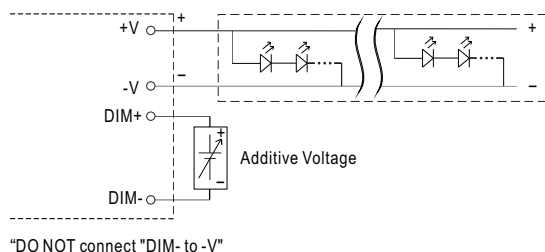
Dimming Operation



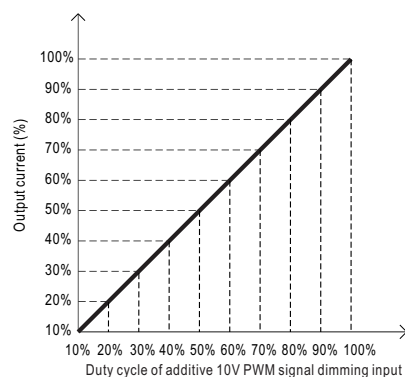
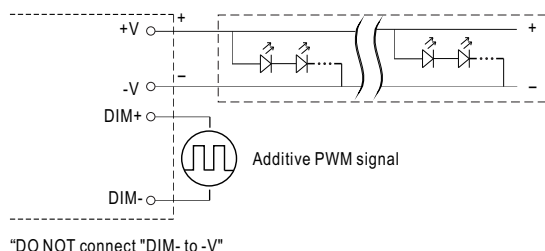
※ 3 in 1 dimming function (for B/AB-Type)

- 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.)

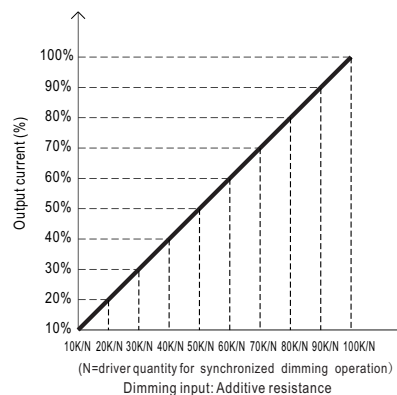
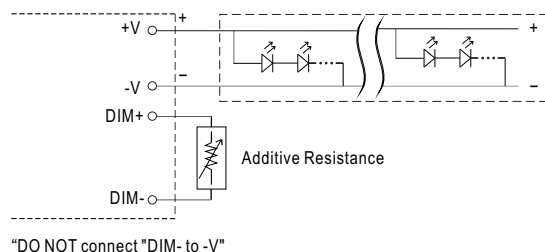
◎ Applying additive 1 ~ 10VDC



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

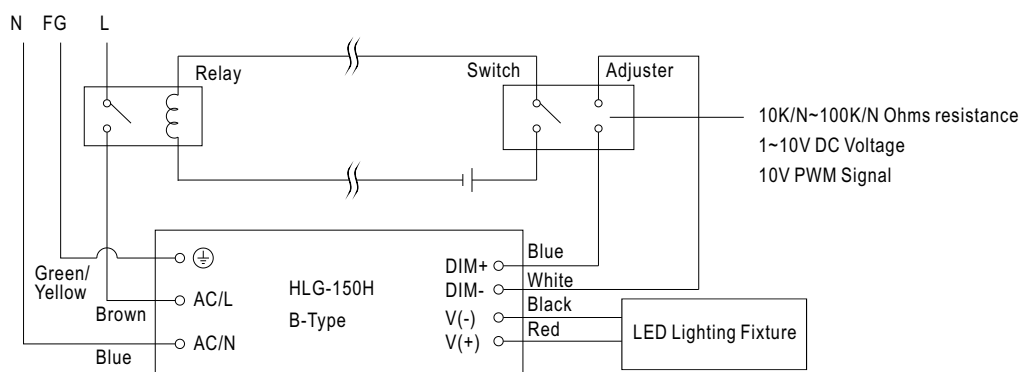


◎ Applying additive resistance:

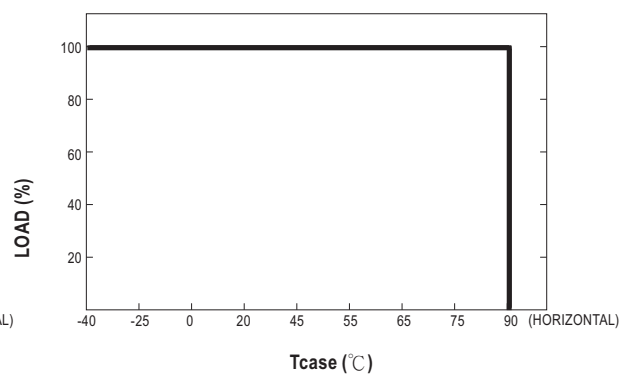
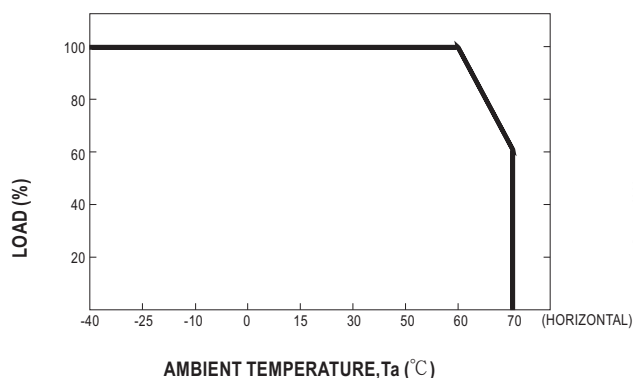


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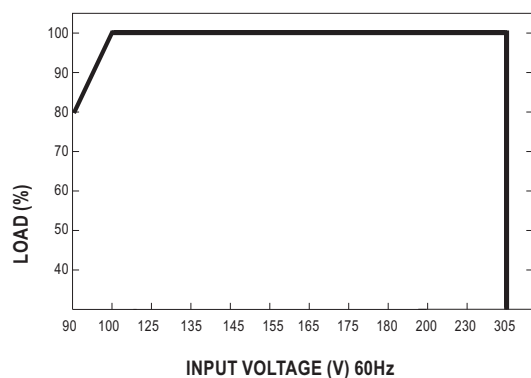
Dimming Operation Continued



Output Load vs Temperature

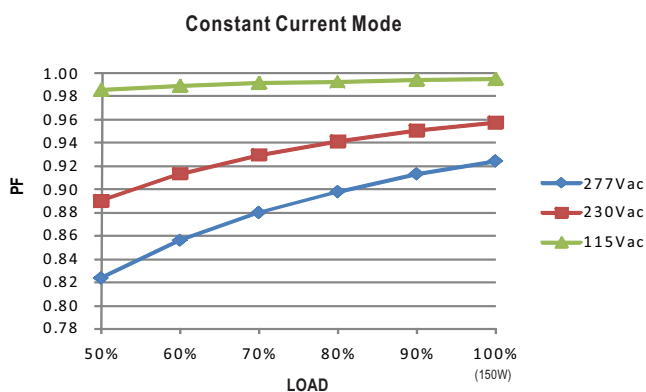


Static Characteristics



Power Factor (PF) Characteristic

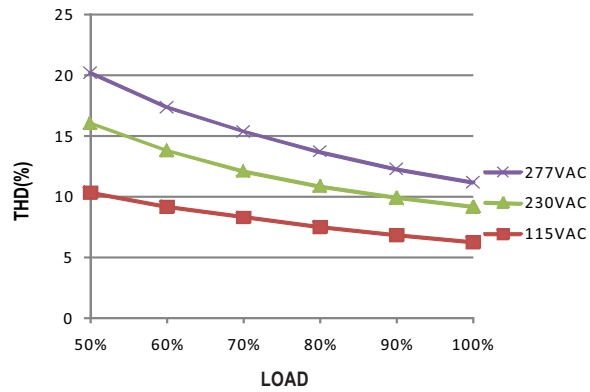
※ Tcase at 80°C



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Total Harmonic Distortion (THD)

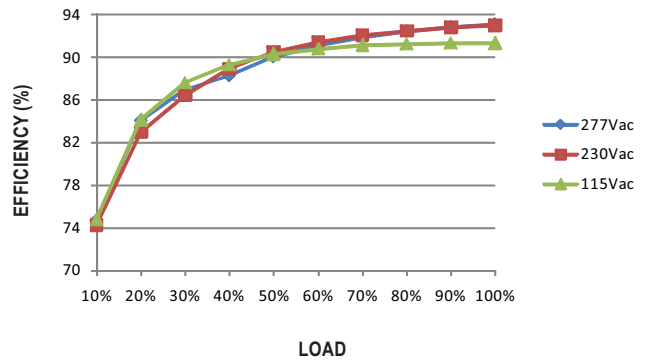
※ 48V Model, T_{case} at 80°C



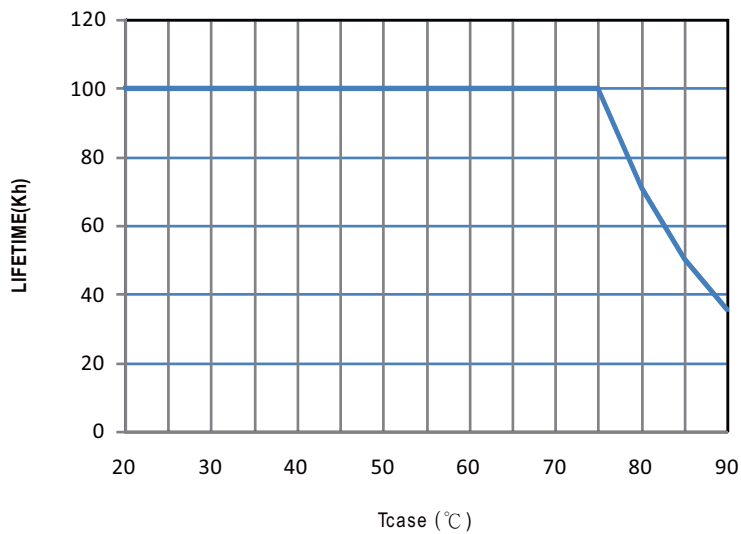
Efficiency vs LOAD

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

※ 48V Model, T_{case} at 80°C



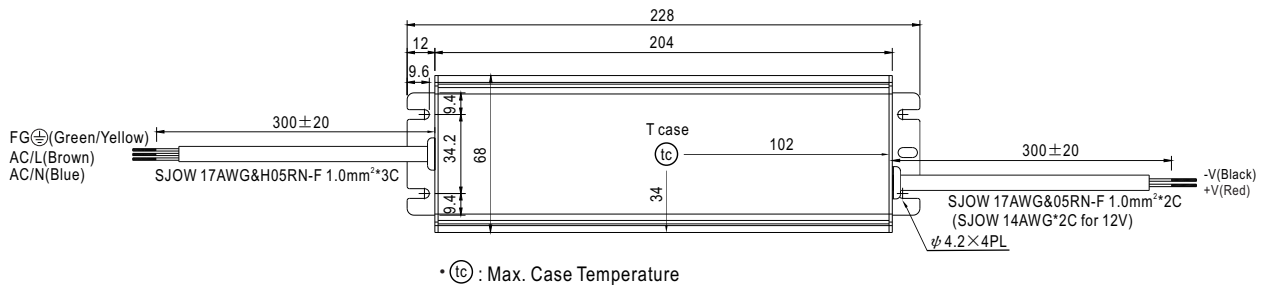
Life Time



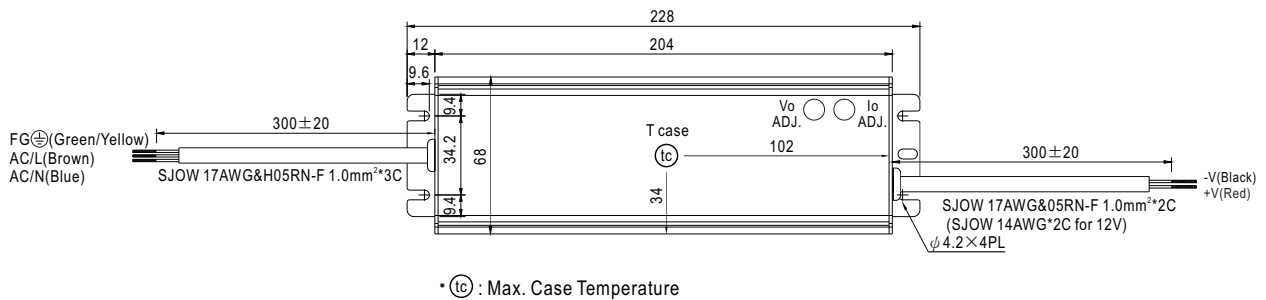
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Mechanical Specification

※Blank/D-Type



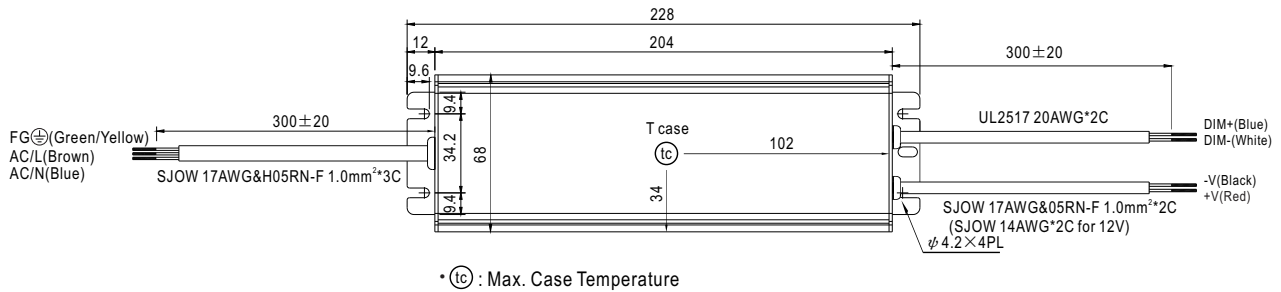
※A-Type



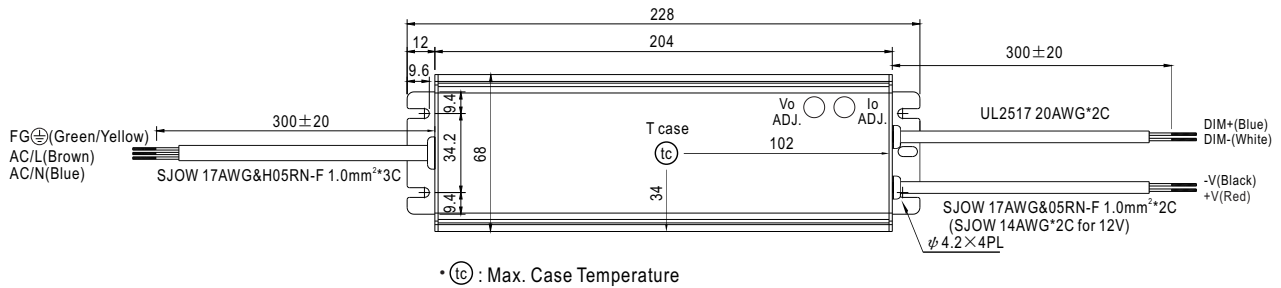
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Mechanical Specification Continued

※B-Type



※AB-Type

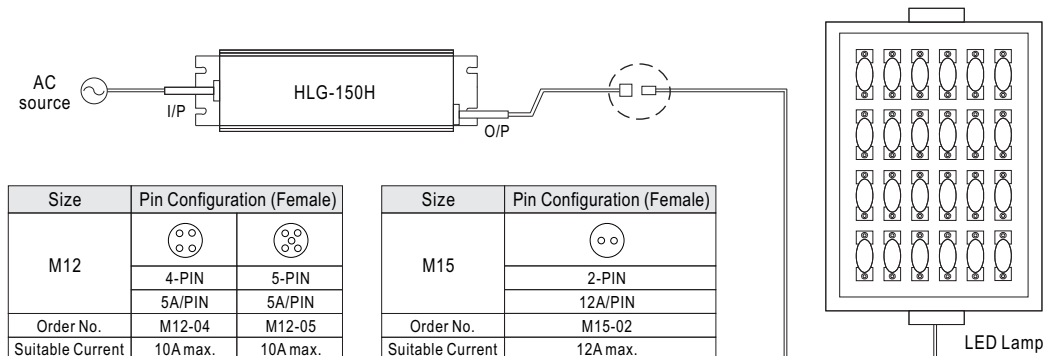


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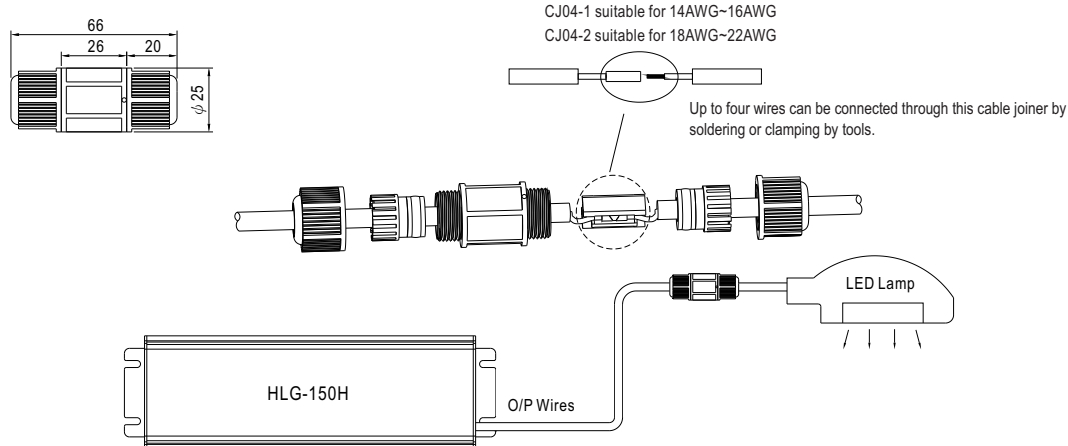
Waterproof Connection

※ 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



※ Junction Box Option

