150W Single Output LED Power Supply — HLG-120H-C series

Features :

- Constant current design
- Universal AC input / Full range (up to 305VAC)
- Built-in active PFC function
- High efficiency up to 93.5%
- Protections: Short circuit / Over voltage / Over temperature
- Cooling by free air convection
- Output current adjustable through output cable or internal potentiometer
- IP67 / IP65 design for indoor or outdoor installations
- Three in one dimming function (1~10Vdc or 10V PWM signal or resistance)
- Suitable for dry / damp / wet locations
- 5 years warranty (Note.5)

IP65 IP67

HLG-120H-C350[A] A : IP65 rated. Constant current level can be adjusted through internal potentiometer.
B : IP67 rated. Constant current level adjustable through output cable with 1~10Vdc or 10V PWM signal or resistance.
D (option) : IP67 rated. Timer dimming function, contact MEAN WELL for details.

SPECIFICATION

MODEL		HLG-120H-C350□	HLG-120H-C500□	HLG-120H-C700□	HLG-120H-C1050□	HLG-120H-C1400□
OUTPUT	RATED CURRENT	350mA	500mA	700mA	1050mA	1400mA
	CURRENT ACCURACY	±5.0%				
	CONSTANT CURRENT REGION Note.6	215 ~ 430V	150V ~ 300V	107V ~ 215V	74V ~ 148V	54V ~ 108V
	RATED POWER	150.5W	150W	150.5W	155.4W	151.2W
	RIPPLE CURRENT	±5%				
	RIPPLE & NOISE	1Vp-p	1Vp-p	0.5Vp-p	0.5Vp-p	0.5Vp-p
	CURRENT ADJ. RANGE	Can be adjusted by internal potentiometer (A type)				
		175 ~ 350mA	250 ~ 500mA	350 ~ 700mA	525 ~ 1050mA	700 ~ 1400mA
	LINE REGULATION	±1%	±1%	±1%	±1%	±1%
	SETUP, RISE TIME	2000ms, 80ms / 115VAC at full load 1000ms, 80ms / 230VAC at full load				
	HOLD UP TIME (Typ.)	16ms at full load 230VAC / 115VAC				
INPUT	VOLTAGE RANGE Note.2	90 ~ 305VAC 127VDC ~ 431VDC				
	FREQUENCY RANGE	47 ~ 63Hz				
	POWER FACTOR (Typ.)	PF>0.98/115VAC, PF>0.96/230VAC, PF>0.94/277VAC at full load (Please refer to "Power Factor Characteristic" curve)				
	EFFICIENCY (Typ.)	93.5%				
	AC CURRENT (Typ.)	A / 115VAC A / 230VAC / 277VAC				
	INRUSH CURRENT (Typ.)	COLD START 70A(twidth= μs measured at 50% Ipeak) at 230VAC				
	LEAKAGE CURRENT	<0.75mA / 277VAC				
PROTECTION	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed				
	OVER VOLTAGE	475 ~ 495V	335 ~ 355V	240 ~ 260V	165 ~ 175V	120 ~ 130V
		Protection type : Shut down o/p voltage with auto-recovery or re-power on to recovery				
	OVER TEMPERATURE	85℃ ±10℃ (RTH2)				
		Protection type : Shut down o/p voltage, re-power on to recover				
ENVIRONMENT	WORKING TEMP.	-40 ~ +70℃ (Refer to "Derating Curve")				
	WORKING HUMIDITY	10 ~ 95% RH non-condensing				
	STORAGE TEMP., HUMIDITY	-40 ~ +80℃, 10 ~ 95% RH				
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)				
	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes				
SAFETY & EMC	SAFETY STANDARDS Note.3	UL8750, CSA C22.2 No. 250.0-08, EN61347-1, EN61347-2-13, EN62384 independent, IP65 or IP67 approved				
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC				
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25℃ / 70% RH				
	EMC EMISSION	Compliance to EN55015, EN61000-3-2 Class C (≧50% load) ; EN61000-3-3				
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, heavy industry level (surge L,N-FG: 4KV), criteria A				
OTHERS	MTBF	K hrs min. MIL-HDBK-217F (25℃)				
	DIMENSION	220*68*38.8mm (L*W*H)				
	PACKING	Kg; 12pcs/ Kg/0.8CUFT				

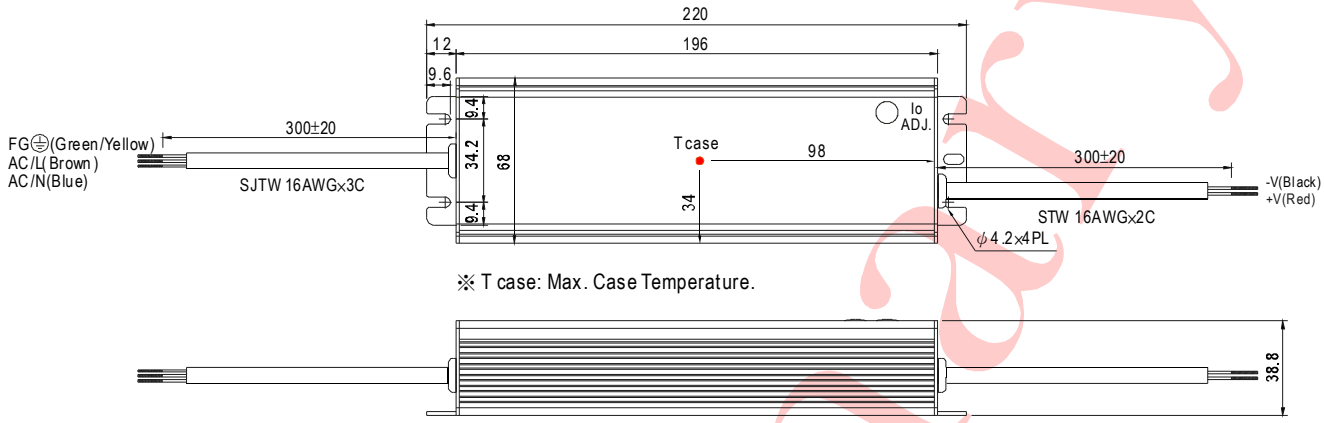
NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.
2. Derating may be needed under low input voltages. Please check the static characteristics for more details.
3. Safety and EMC design refer to EN60598-1, CNS15233, GB7000.1.
4. The power supply 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.
5. Refer to warranty statement.
6. Constant current operation region is within 50% ~100% rated output voltage. This is the suitable operation region for LED related applications, but please reconfirm special electrical requirements for some specific system design.

■ Mechanical Specification

Case No.994A Unit:mm

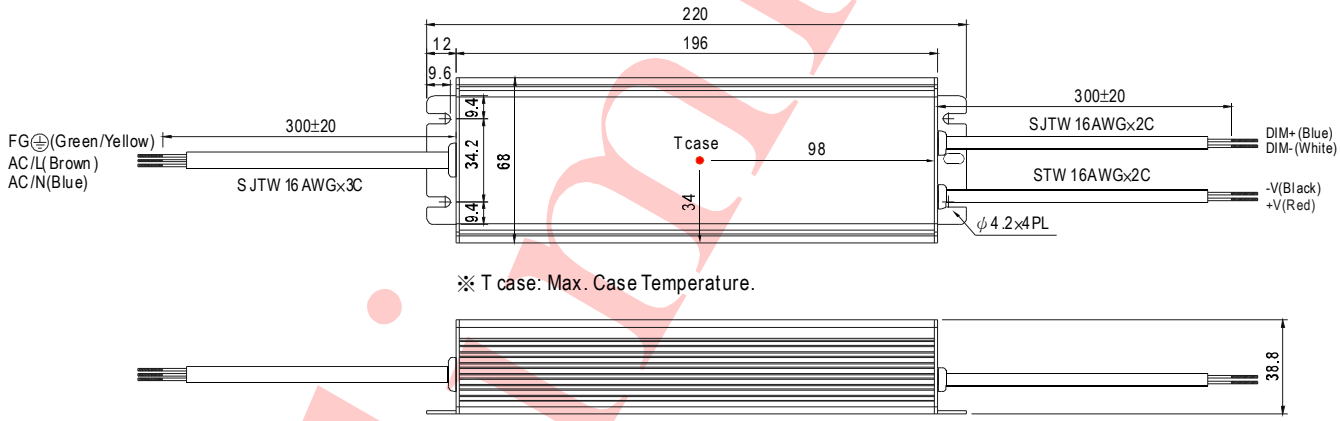
A Type:(HLG-120H-C_A)



※ T case: Max. Case Temperature.

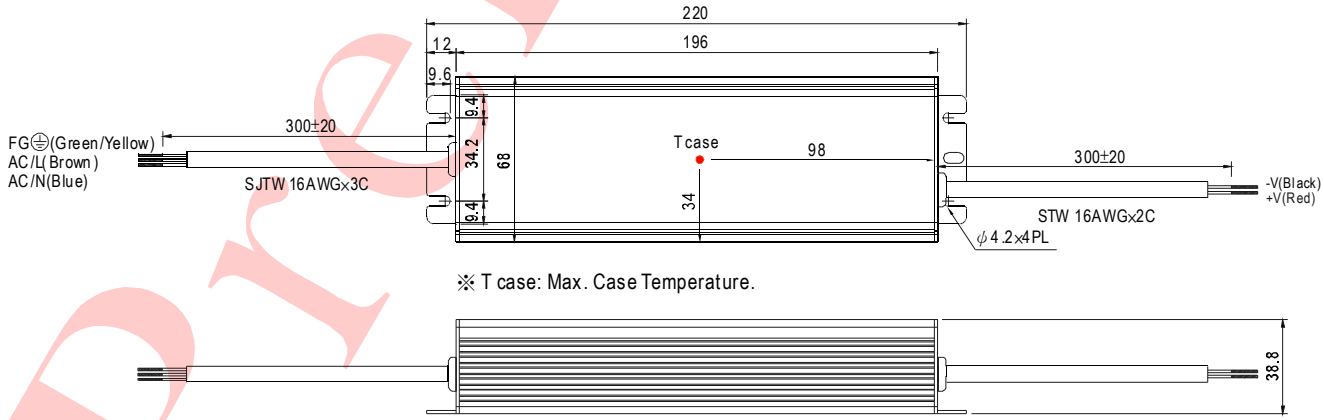
※ IP65 rated. Output voltage and constant current level can be adjusted through internal potentiometer.
(Can access by removing the rubber stopper on the case.)

B Type:(HLG-120H-C_B)



※ T case: Max. Case Temperature.

D Type:(HLG-120H-C_D)

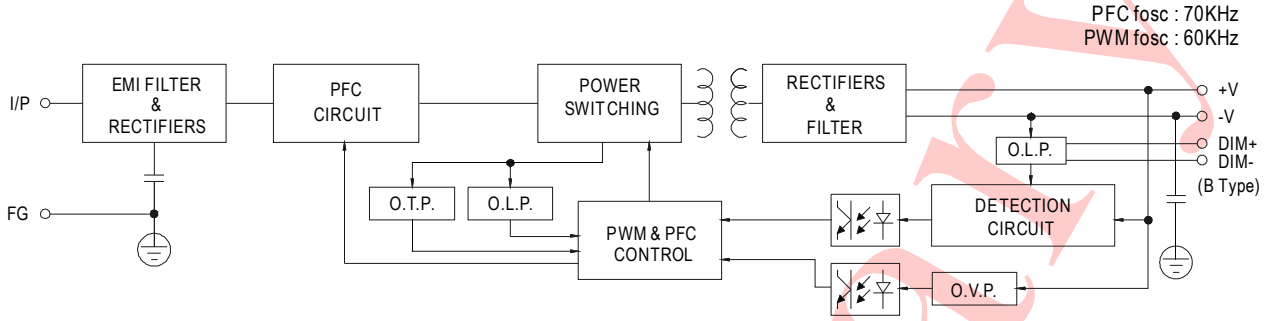


※ T case: Max. Case Temperature.

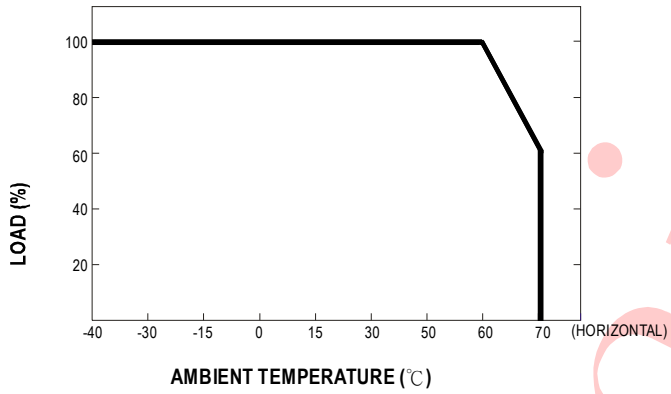
※ IP67 rated. Timer dimming function, contact MEAN WELL for details.

Preliminary

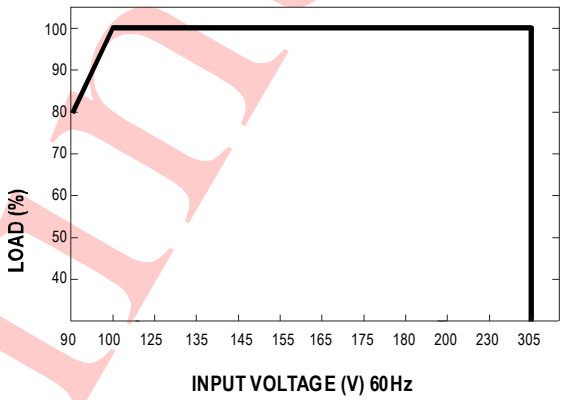
Block Diagram



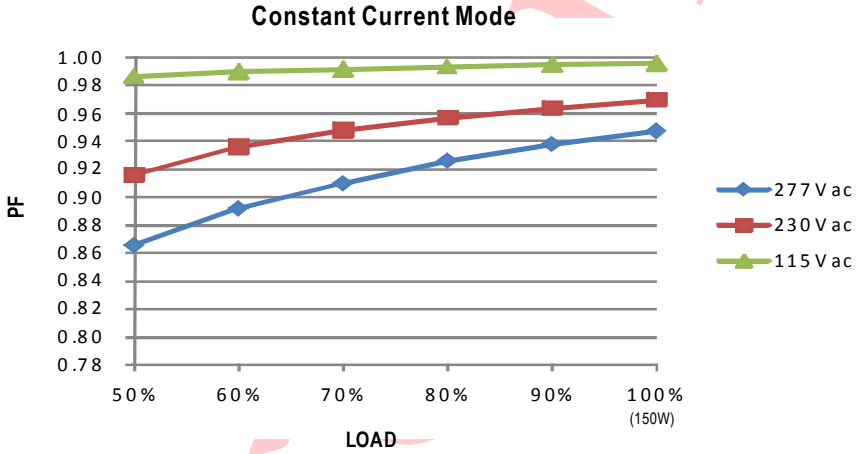
Derating Curve



Static Characteristics



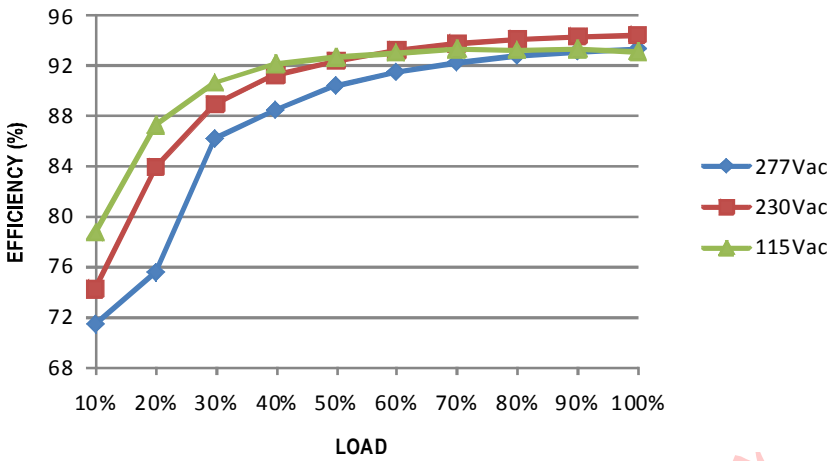
Power Factor Characteristic



Primary

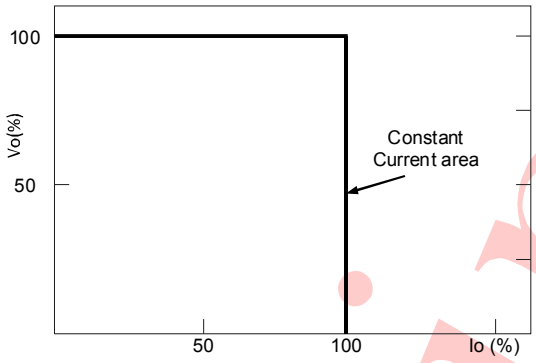
■ EFFICIENCY vs LOAD (HLG-120H-C700A Model)

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



■ DRIVING METHODS OF LED MODULE

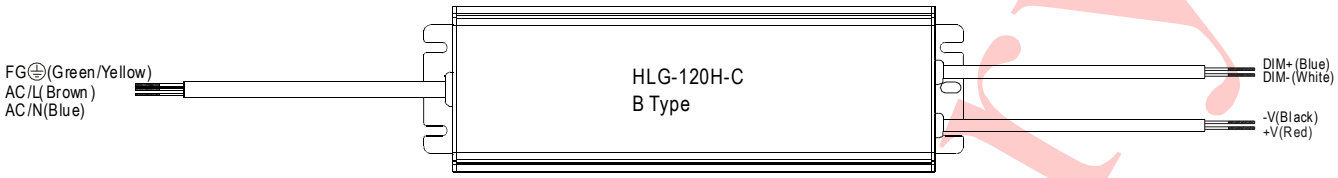
A typical LED power supply may work in "constant current mode (CC)" to drive the LEDs.
Mean Well's LED power supply with CC characteristic can be operated at CC mode (direct drive).



Typical LED power supply I-V curve

Preliminary

■ DIMMING OPERATION



※ Built-in 3 in 1 dimming function, IP67 rated. Output constant current level can be adjusted through output cable by connecting a resistance or 1 ~ 10Vdc or 10V PWM signal between DIM+ and DIM-.

※ Please DO NOT connect "DIM-" to "-V".

※ Reference resistance value for output current adjustment (Typical)

Resistance value	10KΩ	20KΩ	30KΩ	40KΩ	50KΩ	60KΩ	70KΩ	80KΩ	90KΩ	100KΩ	OPEN
Percentage of rated current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	102%~108%

※ 1 ~ 10V dimming function for output current adjustment (Typical)

Dimming value	1V	2V	3V	4V	5V	6V	7V	8V	9V	10V	OPEN
Percentage of rated current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	102%~108%

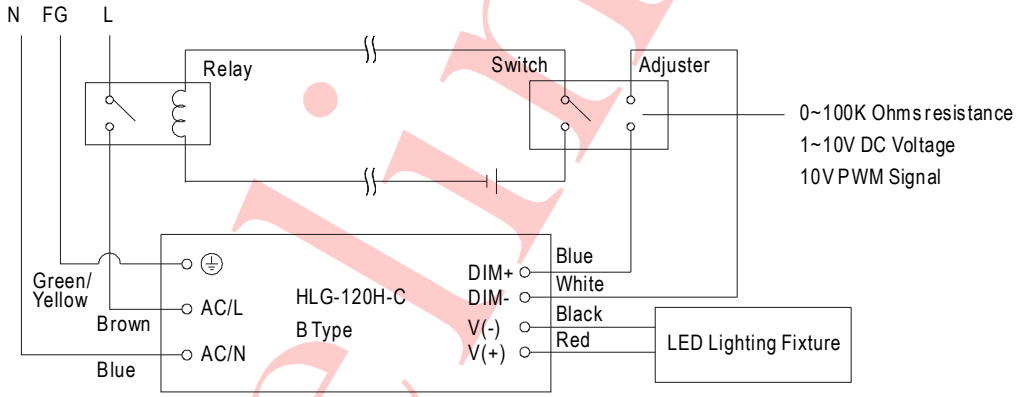
※ 10V PWM signal for output current adjustment (Typical): Frequency range :100Hz ~ 3KHz

Duty value	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	OPEN
Percentage of rated current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	102%~108%

※ Using the built-in dimming function on B-type model can't turn the lighting fixture totally dark. Please refer to the connection method below to achieve 0% brightness of the lighting fixture connecting to the LED power supply unit.

※ Direct connecting to LEDs is suggested, but is not suitable for using additional drivers.

Dimming connection diagram for turning the lighting fixture ON/OFF :



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

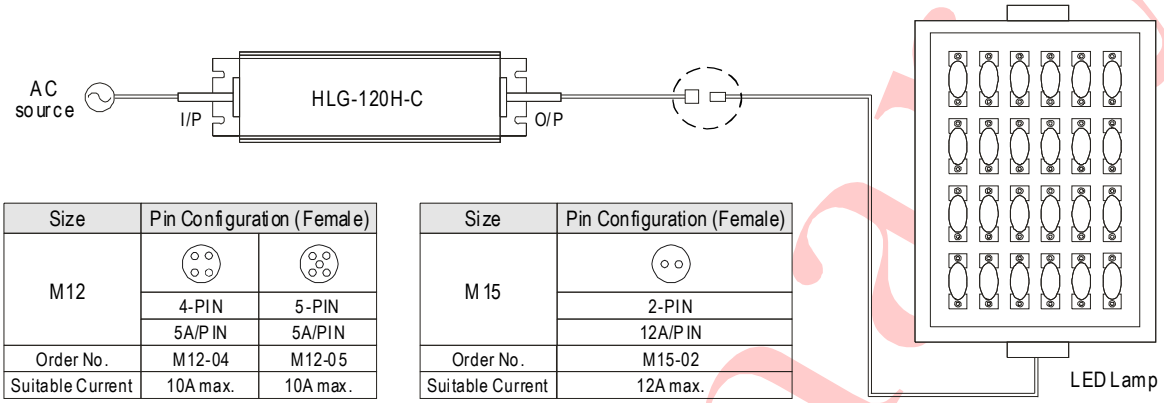
1. Output constant current level can be adjusted through output cable by connecting a resistance or 1~10Vdc or 10V PWM signal between DIM+ and DIM-.
2. The LED lighting fixture can be turned ON/OFF by the switch.

Preliminary

■ WATERPROOF CONNECTION

◎ Waterproof connector

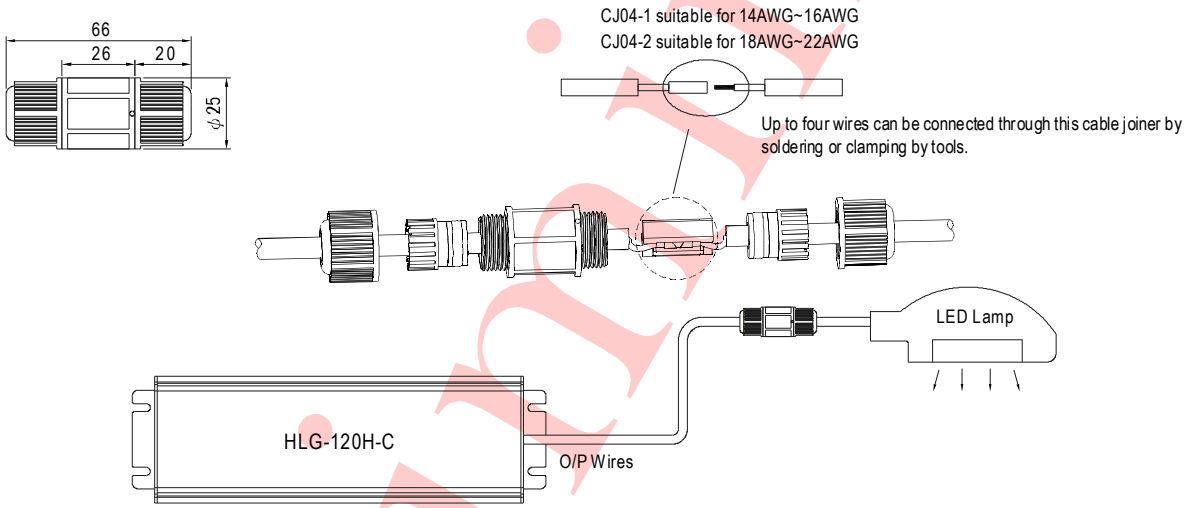
Waterproof connector can be assembled on the output cable of HLG-120H-C to operate in dry/wet/damp or outdoor environment.



Size	Pin Configuration (Female)	
M12		
	4-PIN	5-PIN
	5A/PIN	5A/PIN
Order No.	M12-04	M12-05
Suitable Current	10A max.	10A max.

Size	Pin Configuration (Female)
M15	
	2-PIN
	12A/PIN
Order No.	M15-02
Suitable Current	12A max.

◎ **Cable Joiner**



※CJ04 cable joiner can be purchased independently for user's own assembly.
MEAN WELL order No. : CJ04-1, CJ04-2.

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