



### ■ Features :

- Universal AC input / Full range (up to 305VAC)
- Built-in active PFC function
- Protections: Short circuit / Over current / Over voltage / Over temperature
- Cooling by free air convection
- OCP point adjustable through output cable or internal potentiometer
- IP67 / IP65 design for indoor or outdoor installations
- "UL8750 listed" safety approved for HLG-80H-□BL
- Class 2 power unit
- Three in one dimming function (1~10Vdc or PWM signal or resistance)
- Suitable for LED lighting and moving sign applications
- Compliance to worldwide safety regulations for lighting
- Suitable for dry / damp / wet locations
- 5 years warranty (Note.10)



HLG-80H-12[A] Blank : IP67 rated. Cable for I/O connection.  
 A : IP65 rated. Output voltage and 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.  
 BL (option) : Contact MEAN WELL for details.  
 D (option) : IP67 rated. Timer dimming function, contact MEAN WELL for details.

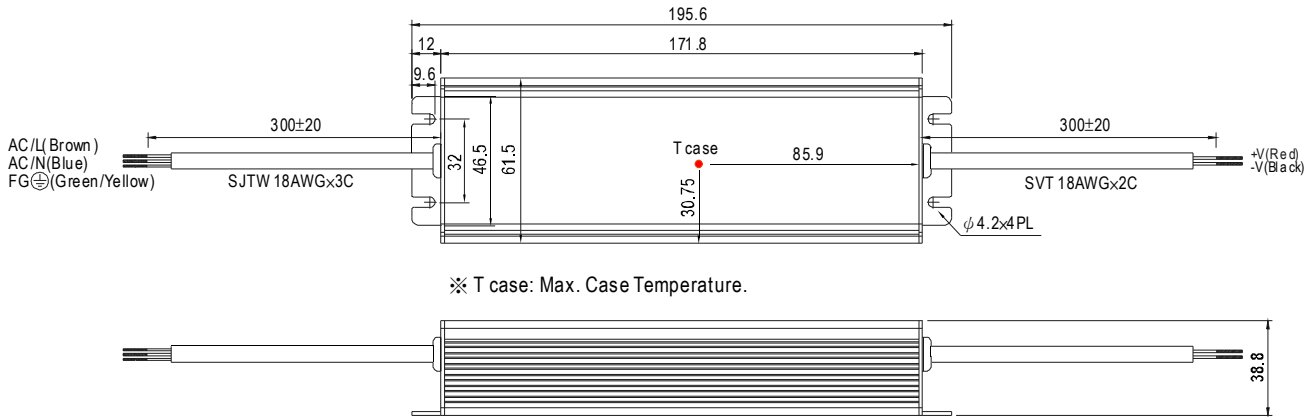
### SPECIFICATION

MODEL	HLG-80H-12	HLG-80H-15	HLG-80H-20	HLG-80H-24	HLG-80H-30	HLG-80H-36	HLG-80H-42	HLG-80H-48	HLG-80H-54		
OUTPUT	DC VOLTAGE	12V	15V	20V	24V	30V	36V	42V	48V	54V	
	CONSTANT CURRENT REGION Note.4	7.2~12V	9~15V	12~20V	14.4~24V	18~30V	21.6~36V	25.2~42V	28.8~48V	32.4~54V	
	RATED CURRENT	5A	5A	4A	3.4A	2.7A	2.3A	1.95A	1.7A	1.5A	
	RATED POWER	60W	75W	80W	81.6W	81W	82.8W	81.9W	81.6W	81W	
	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 Note.6	10.8~13.5V	13.5~17V	17~22V	22~27V	27~33V	33~40V	38~46V	43~53V	49~58V	
	CURRENT ADJ. RANGE	Can be adjusted by internal potentiometer A type only									
	VOLTAGE TOLERANCE Note.3	±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 Note.8	2000ms, 80ms / 115VAC at full load ; 1000ms, 80ms / 230VAC at full load ; B type 2000ms, 200ms at 95% load ; 230VAC / 115VAC										
HOLD UP TIME (Typ.)	16ms at full load ; 230VAC / 115VAC										
INPUT	VOLTAGE RANGE Note.5	90~305VAC		127~431VDC							
	FREQUENCY RANGE	47~63Hz									
	POWER FACTOR (Typ.)	PF>0.96/115VAC, PF>0.96/230VAC, PF>0.94/277VAC at full load (Please refer to "Power Factor Characteristic" curve)									
	TOTAL HARMONIC DISTORTION	THD<20% when output loading ≥60% at 115VAC/230VAC input and output loading ≥75% at 277VAC input									
	EFFICIENCY (Typ.)	88%	89%	90%	90.5%	91%	91%	91%	91%	91%	
	AC CURRENT (Typ.)	0.85A / 115VAC		0.425A / 230VAC		0.4A / 277VAC					
	INRUSH CURRENT (Typ.)	COLD START 70A (width=485μs measured at 50% Ipeak) at 230VAC									
	LEAKAGE CURRENT	<0.75mA / 277VAC									
PROTECTION	OVER CURRENT Note.4	95~108% Protection type : Constant current limiting, recovers automatically after fault condition is removed									
	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed									
	OVER VOLTAGE	14~17V	18~24V	23~30V	28~35V	35~43V	41~49V	48~58V	54~63V	59~68V	
	OVER TEMPERATURE	85°C ±10°C (RTH2) Protection type : Shut down o/p voltage, re-power on to recover									
	ENVIRONMENT	WORKING TEMP.	-40~+70°C (Refer to "Derating Curve")								
	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									
SAFETY & EMC	SAFETY STANDARDS Note.7	UL8750, CSA C22.2 No. 250.0-08(except for HLG-80H-48/54V & HLG-80H-48/54BL), UL8750 listed for HLG-80H-□BL EN61347-1, EN61347-2-13 independent, J61347-1, J61347-2-13, IP65 or IP67 approved ; Design refer to UL60950-1, TUV EN60950-1									
	WITHSTAND VOLTAGE	I/P-O/P: 3.75KVAC		I/P-FG: 2KVAC		O/P-F G: 0.5KVAC					
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG: 100M Ohms / 500VDC / 25°C / 70% RH									
	EMC EMISSION	Compliance to EN55015, EN61000-3-2 Class C (≥60% load) ; EN61000-3-3									
	EMC IMMUNITY	Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, EN61547, EN55024, light industry level (surge 4KV), criteria A									
OTHERS	MTBF	357.8K hrs min. MIL-HDBK-217F (25°C)									
	DIMENSION	195.6*61.5*38.8mm (L*W*H)									
	PACKING	0.84Kg ; 16pcs/14.4Kg/0.54CUFT									
NOTE	<ol style="list-style-type: none"> <li>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</li> <li>3. Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>4. Constant current operation region is within 60% ~ 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.</li> <li>5. Derating may be needed under low input voltages. Please check the static characteristics for more details.</li> <li>6. A type only.</li> <li>7. Safety and EMC design refer to EN60598-1, CNS15233, GB7000.1, FCC part18.</li> <li>8. Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time.</li> <li>9. 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.</li> <li>10. Refer to warranty statement.</li> </ol>										

**Mechanical Specification**

Case No.997A Unit:mm

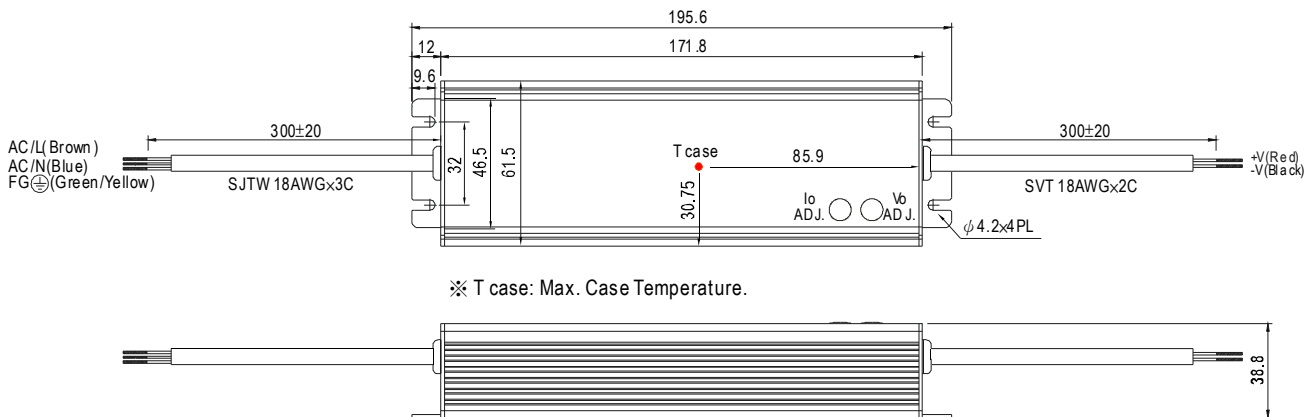
**Blank:(HLG-80H)**



※ T case: Max. Case Temperature.

※IP67 rated. Cable for I/O connection.

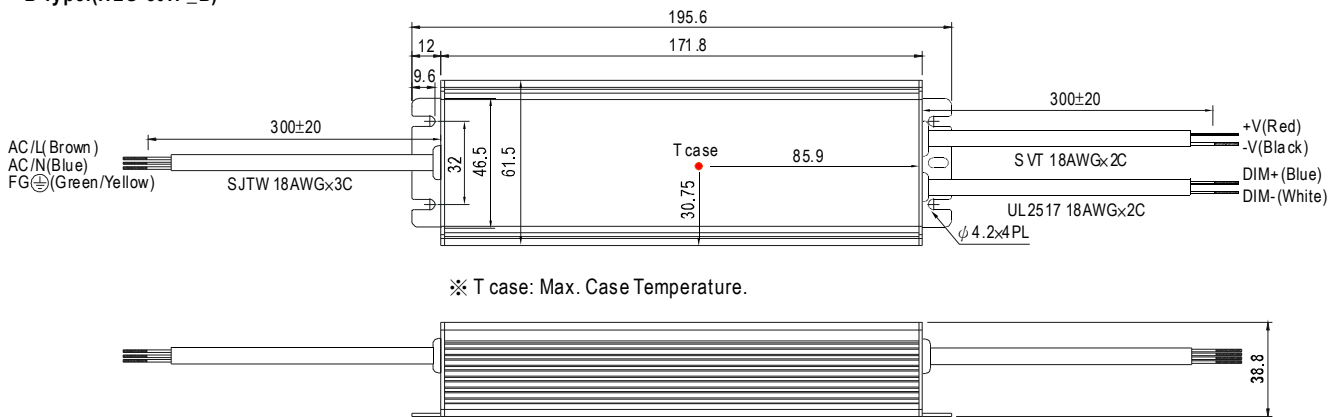
**A Type:(HLG-80H- \_A)**



※ T case: Max. Case Temperature.

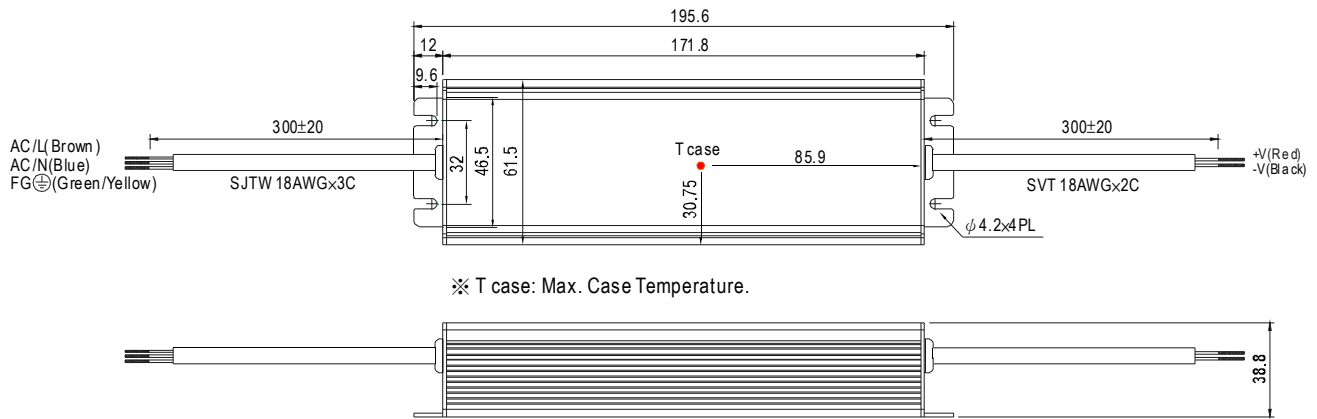
※ IP65 rated. Output voltage and constant current level can be adjusted through internal potentiometer.  
(Can access by removing the rubber stopper on the case.)

**B Type:(HLG-80H- \_B)**



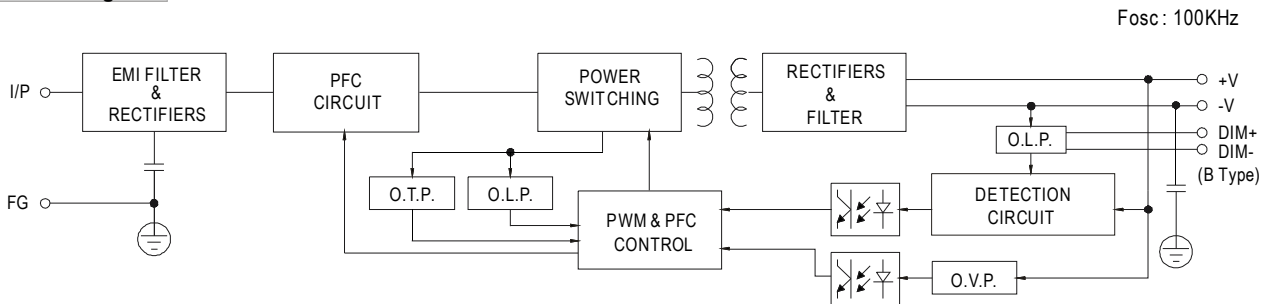
※ T case: Max. Case Temperature.

**D Type(option):(HLG-80H-D)**

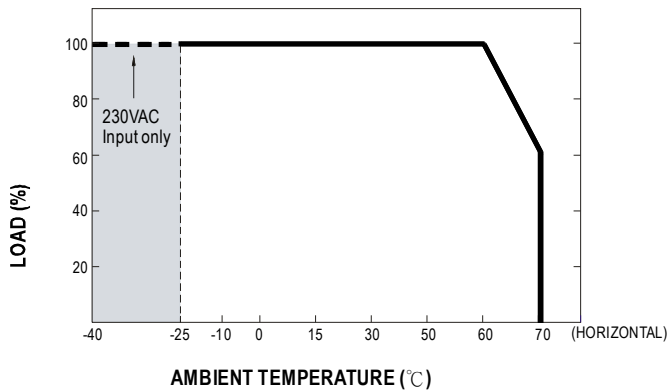


※ IP67 rated. Timer dimming function, contact MEAN WELL for details.

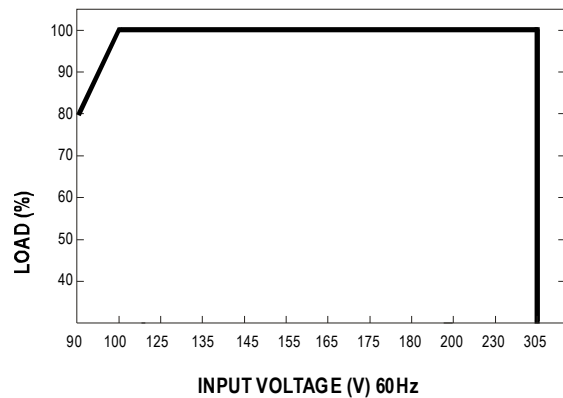
**Block Diagram**



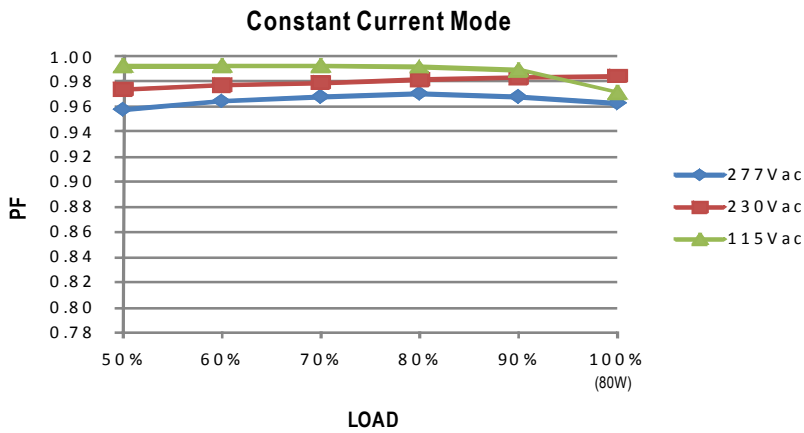
**Derating Curve**



**Static Characteristics**

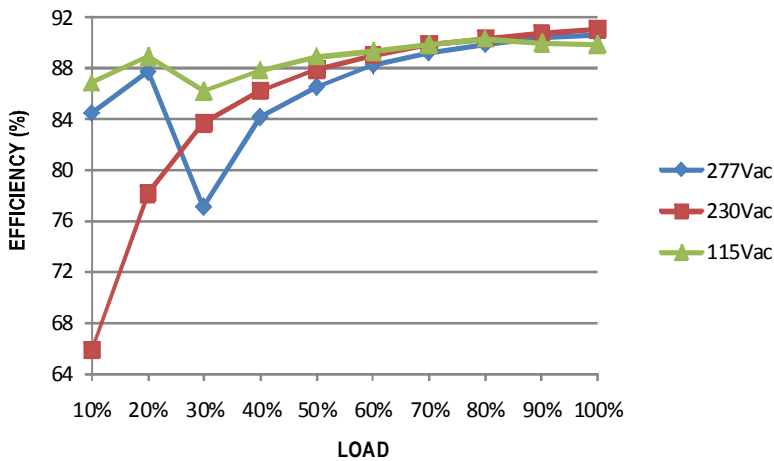


### Power Factor Characteristic



### EFFICIENCY vs LOAD (48V Model)

HLG-80H series possess superior working efficiency that up to 91% can be reached in field applications.

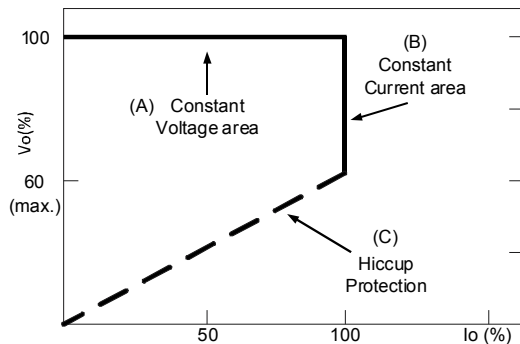


### DRIVING METHODS OF LED MODULE

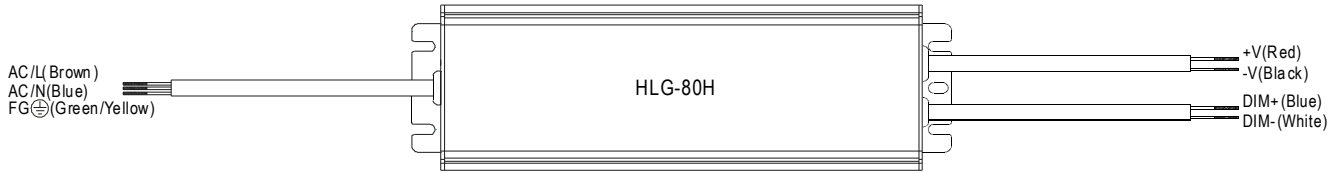
There are two major kinds of LED drive method "direct drive" and "with LED driver".

A typical LED power supply may either work in "constant voltage mode (CV) or constant current mode (CC)" to drive the LEDs.

Mean Well's LED power supply with CV+ CC characteristic can be operated at both CV mode [with LED driver, at area (A)] and CC mode [direct drive, at area (B)].



## 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	Single driver	10KΩ	20KΩ	30KΩ	40KΩ	50KΩ	60KΩ	70KΩ	80KΩ	90KΩ	100KΩ	OPEN
	Multiple drivers (N=driver quantity for synchronized dimming operation)	10KΩ/N	20KΩ/N	30KΩ/N	40KΩ/N	50KΩ/N	60KΩ/N	70KΩ/N	80KΩ/N	90KΩ/N	100KΩ/N	-----
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%

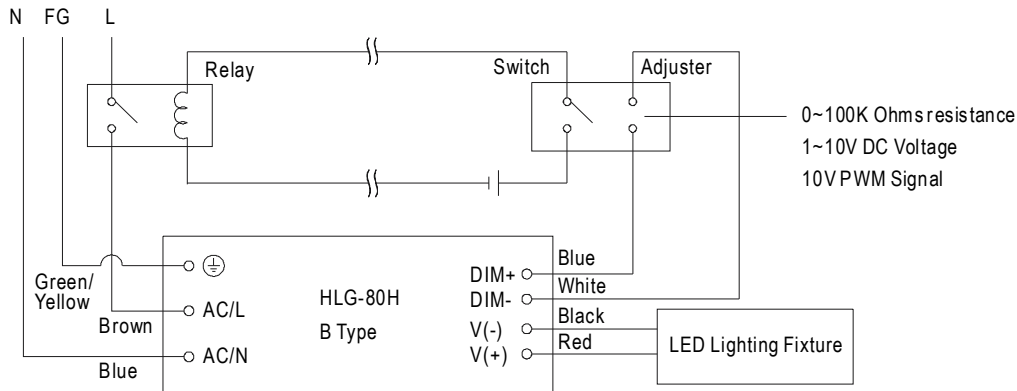
※ 10V PWM signal for output current adjustment (Typical): Frequency range :100Hz ~ 3KHz

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 :



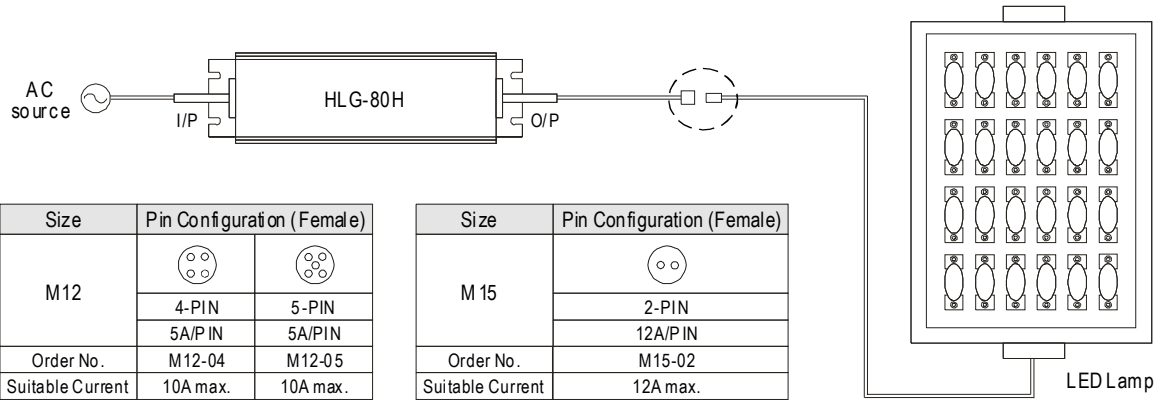
Using a switch and relay can turn ON/OFF the lighting fixture.

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.

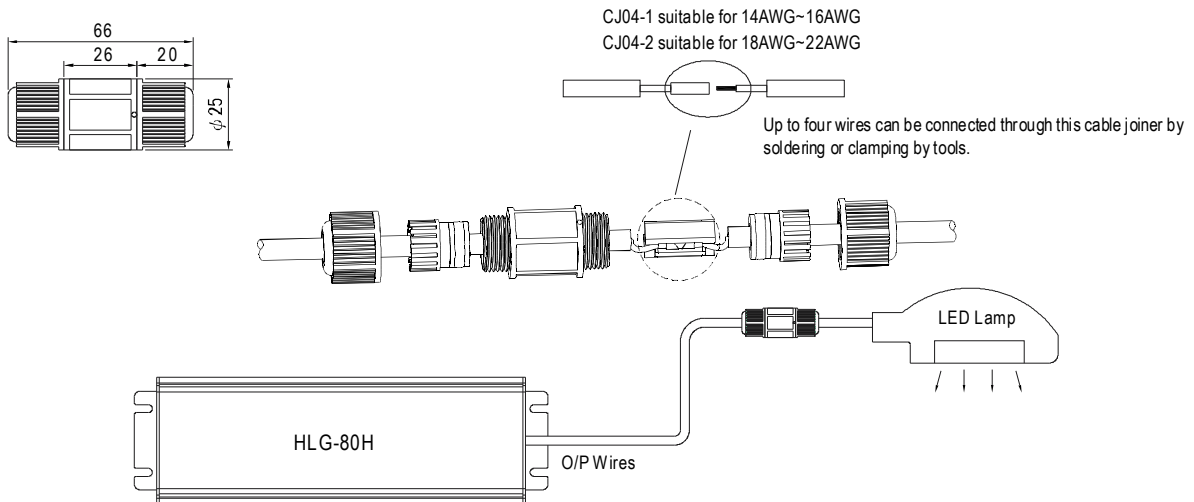
## WATERPROOF CONNECTION

### Waterproof connector

Waterproof connector can be assembled on the output cable of HLG-80H to operate in dry/wet/damp or outdoor environment.

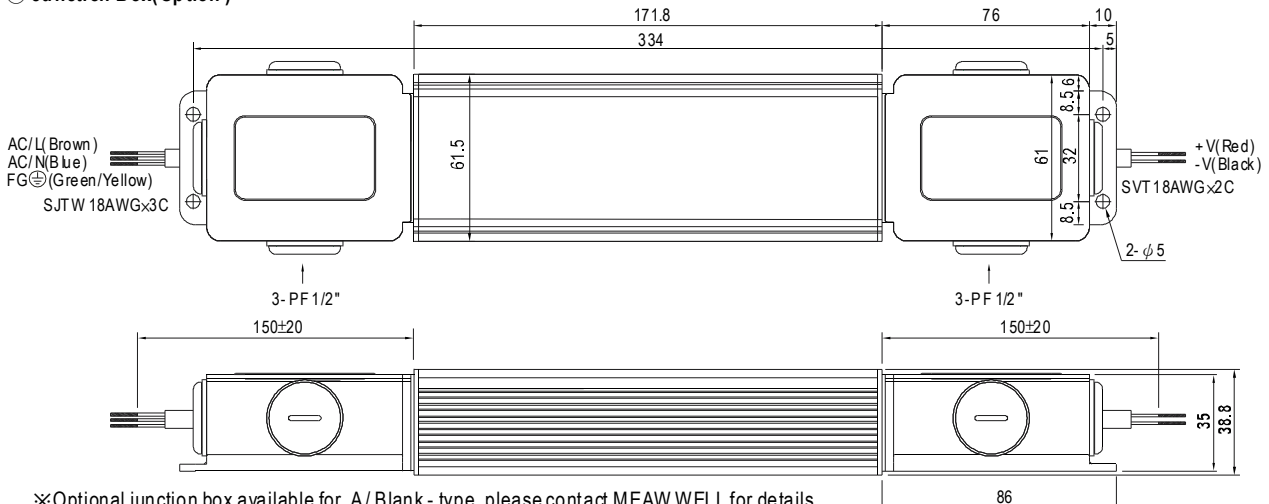


### Cable Joiner



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

### Junction Box (Option)



※Optional junction box available for A/Blank - type, please contact MEAN WELL for details.

※HLG-80H-□BL models with junction box at both input and output side are listed (modified by B type only).