# 200W Single Output LED Power Supply HLG-185H-C series

■ Features :

- Constant current design
- Universal AC input / Full range (up to 305VAC)
- Built-in active PFC function
- High efficiency up to 94%
- 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-185H-C500[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-185H-C500□ | HLG-185H-C700□ | HLG-185H-C1050□ | HLG-185H-C1400□ |
|---|---|---|---|---|---|
| OUTPUT | RATED CURRENT | 500mA | 700mA | 1050mA | 1400mA |
| | CURRENT ACCURACY | ±5.0% | | | |
| | CONSTANT CURRENT REGION Note.6 | 200V ~ 400V | 143V ~ 286V | 95V ~ 190V | 71V ~ 143V |
| | RATED POWER | 200W | 200.2W | 199.5W | 200.2W |
| | RIPPLE CURRENT | ±5% | | | |
| | RIPPLE & NOISE | 2Vp-p | 1.5Vp-p | 1Vp-p | 1Vp-p |
| | CURRENT ADJ. RANGE | Can be adjusted by internal potentiometer (A type only) | | | |
| | | 250 ~ 500mA | 350 ~ 700mA | 525 ~ 1050mA | 700 ~ 1400mA |
| | LINE REGULATION | ±1% | ±1% | ±1% | ±1% |
| | SETUP, RISE TIME | 1000ms, 80ms / 115VAC at full load 500ms, 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) | | | |
| | TOTAL HARMONIC DISTORTION | THD< 20% when output loading≧50% at 115VAC/230VAC input and output loading≧75% at 277VAC input | | | |
| | EFFICIENCY (Typ.) | 94% | 94% | 94% | 94% |
| | AC CURRENT (Typ.) | 2A / 115VAC 1A / 230VAC 0.85A / 277VAC | | | |
| | INRUSH CURRENT (Typ.) | COLD START 55A($t_{width}$=900μs measured at 50% $I_{peak}$) at 230VAC | | | |
| | LEAKAGE CURRENT | <0.75mA / 277VAC | | | |
| PROTECTION | SHORT CIRCUIT | Constant current limiting, recovers automatically after fault condition is removed | | | |
| | OVER VOLTAGE | 450 ~ 470V | 320 ~ 340V | 210 ~ 225V | 160 ~ 170V |
| | | Protection type : 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. | -25 ~ +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. 250.12-13, ENEC EN61347-1, 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 | 191.9K hrs min. MIL-HDBK-217F (25℃) | | | |
| | DIMENSION | 228*68*38.8mm (L*W*H) | | | |
| | PACKING | 1.15Kg; 12pcs/14.8Kg/0.8CUFT | | | |

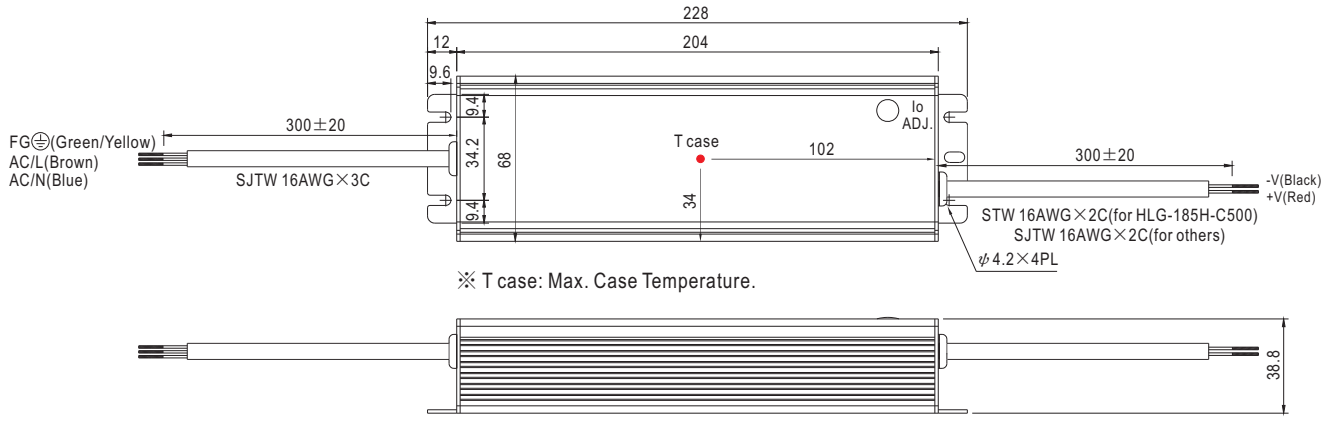
NOTE

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. Please refer to "DRIVING METHODS OF LED MODULE".
7. To fulfill requirements of the latest ErP regulation for lighting fixtures, this LED power supply can only be used behind a switch without permanently connected to the mains.

## ■ Mechanical Specification

Case No.994D Unit:mm

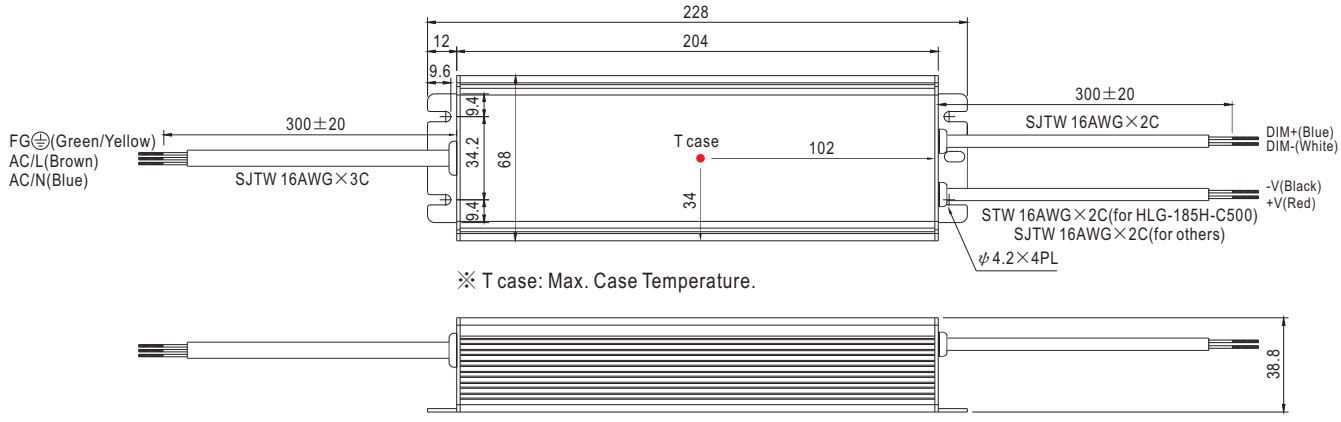
**A Type:(HLG-185H-C_A)**




※ T case: Max. Case Temperature.

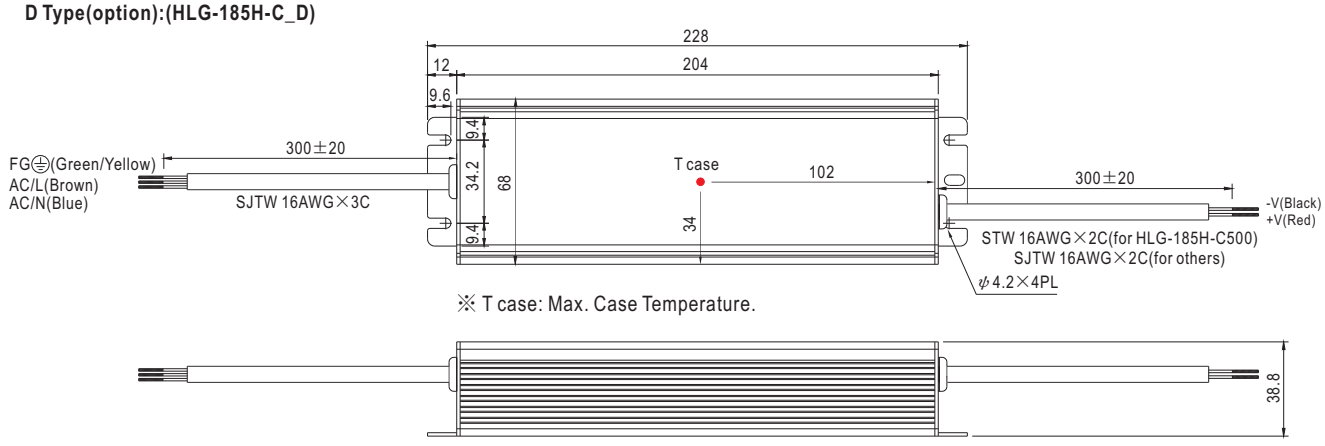
※ IP65 rated. Output voltage and constant current level can be adjusted through internal potentiometer.
(Can access by removing the rubber stopper on the case.)

**B Type:(HLG-185H-C_B)**




※ T case: Max. Case Temperature.

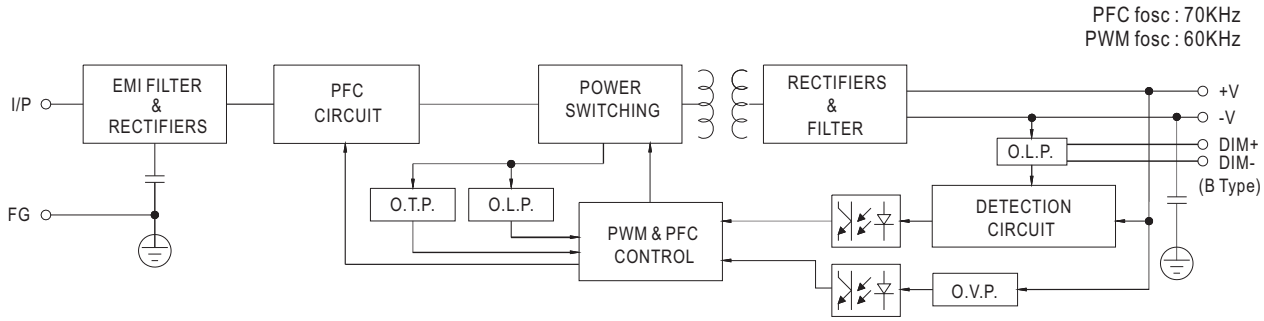
**D Type(option):(HLG-185H-C_D)**



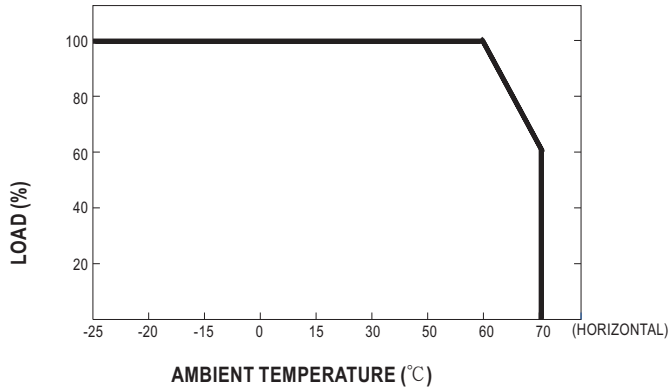

※ T case: Max. Case Temperature.

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

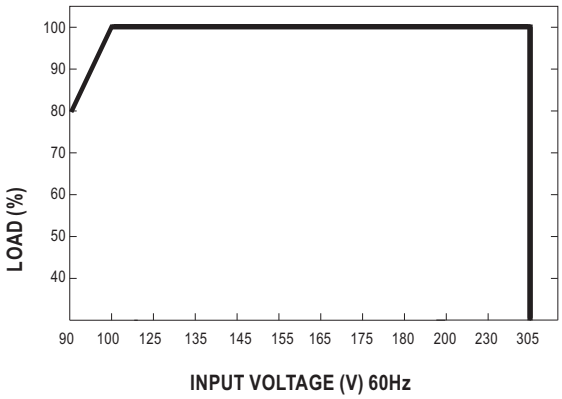
## Block Diagram



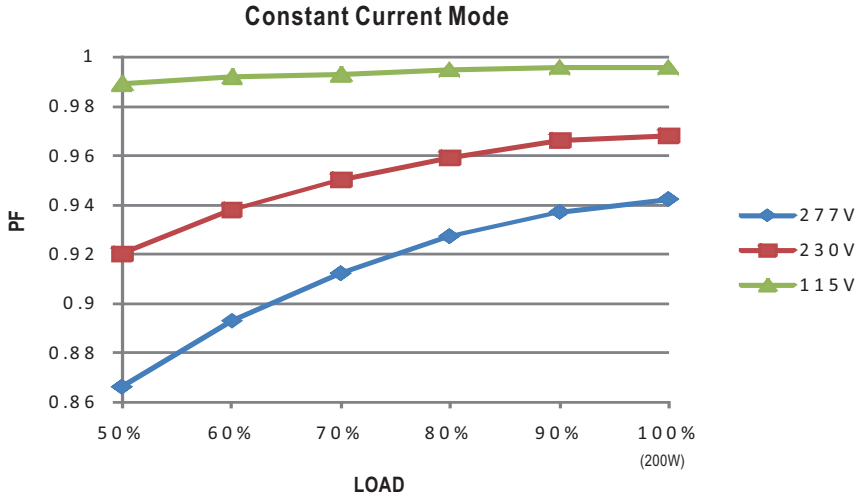

## Derating Curve




## Static Characteristics

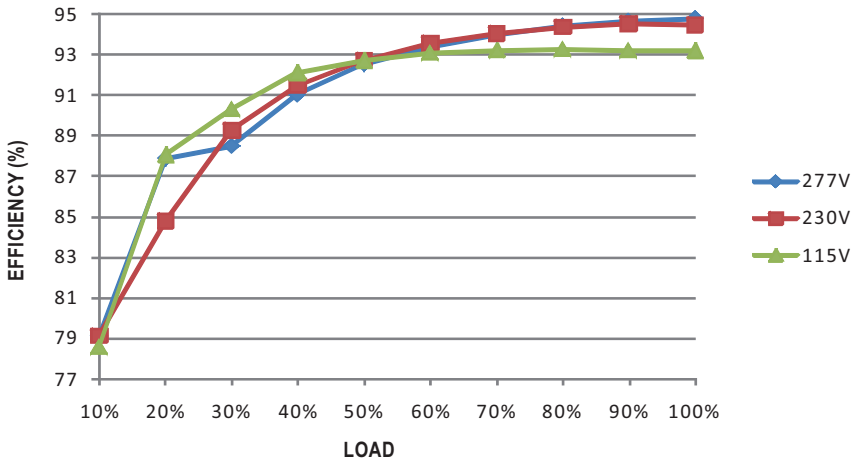



## Power Factor Characteristic



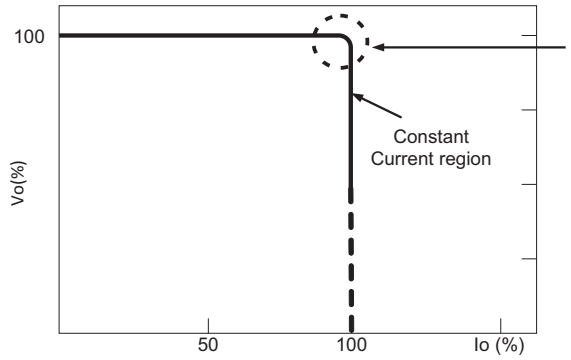
## ■ EFFICIENCY vs LOAD (HLG-185H-C700A Model)

HLG-185H-C series possess superior working efficiency that up to 94% 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).



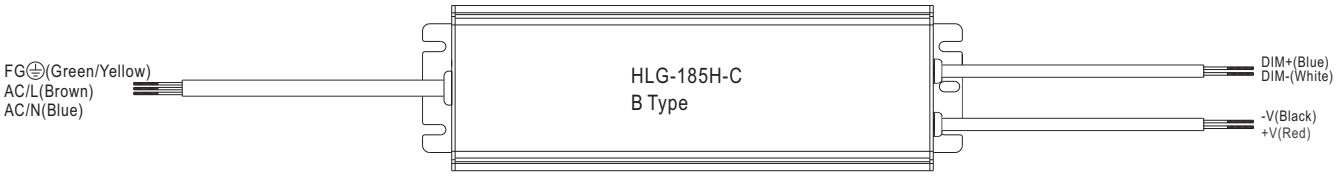

Typical LED power supply I-V curve

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.

Original :Constant Current area

Original :Solid line

## ■ 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% |

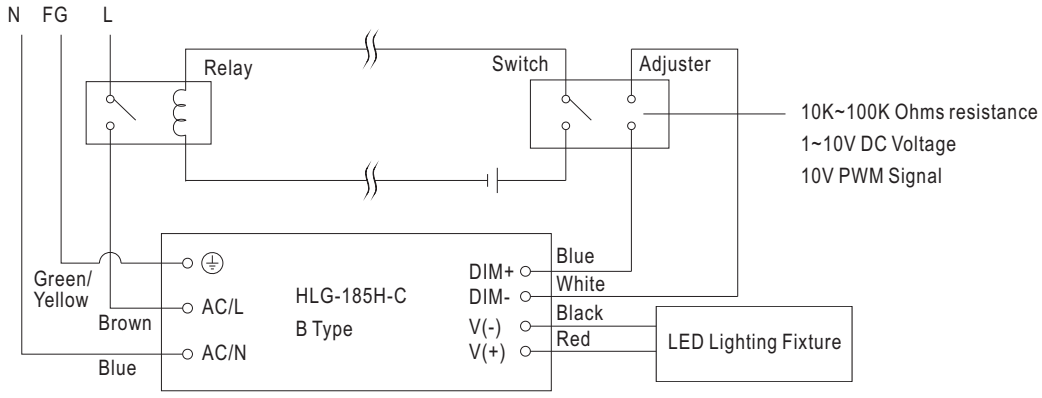
※ 10V PWM signal for output current adjustment (Typical): Frequency range :100Hz ~ 3KHz

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 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.

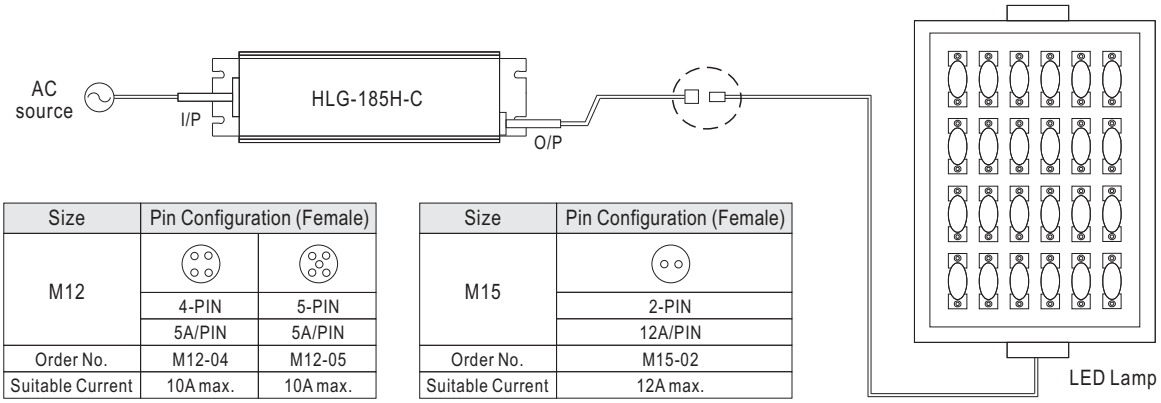
1.Output constant current level can be adjusted through output cable by connecting a resistance or 1~10Vdc or 10V PWM signal between DIM+ and DIM-.

2.The LED lighting fixture can be turned ON/OFF by the switch.

## ■ WATERPROOF CONNECTION

◎ Waterproof connector

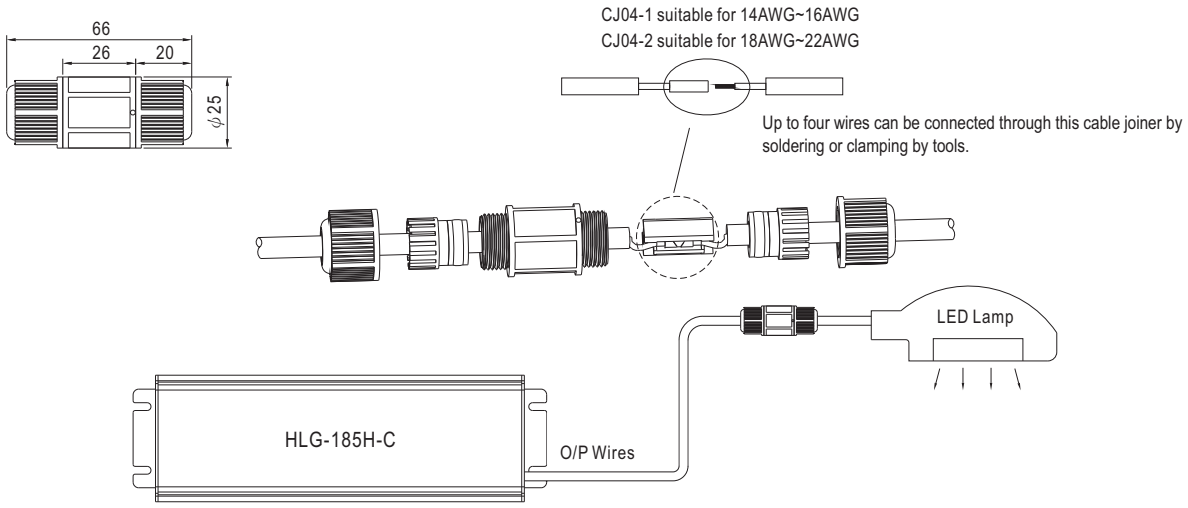
Waterproof connector can be assembled on the output cable of HLG-185H-C to operate in dry/wet/damp or outdoor environment.




| 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.