



■ Features :

- Universal AC input / Full range (up to 305VAC)
- Built-in active PFC function
- High efficiency up to 93%
- 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
- Three in one dimming function (1~10Vdc or PWM signal or resistance)
- Suitable for LED lighting and street lighting applications
- Compliance to worldwide safety regulations for lighting
- Suitable for dry / damp / wet locations
- 5 years warranty (Note.9)



HLG-100H-20 [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.  
 D (option) : IP67 rated. Timer dimming function, contact MEAN WELL for details.

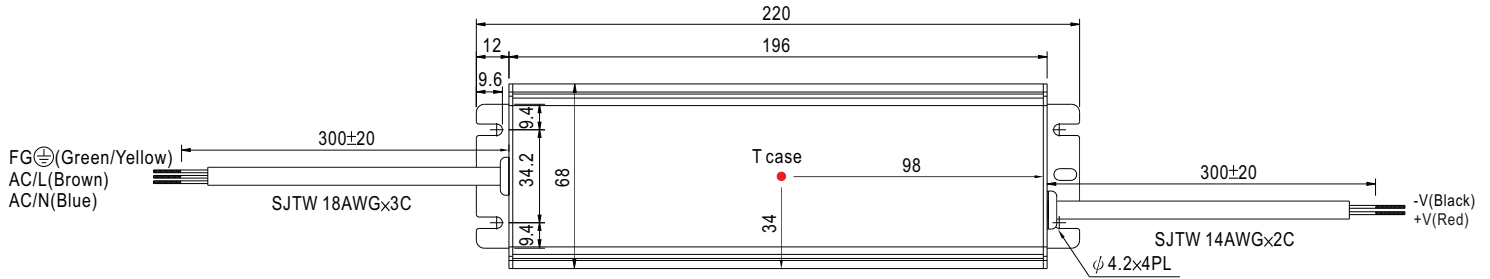
**SPECIFICATION**

| MODEL                   | HLG-100H-20  | HLG-100H-24  | HLG-100H-30 | HLG-100H-36     | HLG-100H-42  | HLG-100H-48    | HLG-100H-54 |             |
|-------------------------|--|--|-------------|-----------------|--------------|----------------|-------------|-------------|
| OUTPUT                  | DC VOLTAGE   | 20V  | 24V         | 30V             | 36V          | 42V            | 48V         | 54V         |
|                         | RATED CURRENT  | 4.8A   | 4A          | 3.2A            | 2.65A        | 2.28A          | 2A          | 1.77A       |
|                         | RATED POWER  | 96W  | 96W         | 96W             | 95.4W        | 95.76W         | 96W         | 95.58W      |
|                         | RIPPLE & NOISE (max.) Note.2   | 150mVp-p   | 150mVp-p    | 200mVp-p        | 200mVp-p     | 200mVp-p       | 200mVp-p    | 200mVp-p    |
|                         | VOLTAGE ADJ. RANGE Note.5  | 17 ~ 22V   | 22 ~ 27V    | 27 ~ 33V        | 33 ~ 40V     | 38 ~ 46V       | 43 ~ 53V    | 49 ~ 58V    |
|                         | CURRENT ADJ. RANGE   | Can be adjusted by internal potentiometer or through output cable  |             |                 |              |                |             |             |
|                         |  | 3 ~ 4.8A   | 2.5 ~ 4A    | 2 ~ 3.2A        | 1.65 ~ 2.65A | 1.4 ~ 2.28A    | 1.25 ~ 2A   | 1.1 ~ 1.77A |
|                         | VOLTAGE TOLERANCE Note.3   | ±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%       |
|                         | LOAD REGULATION  | ±0.5%  | ±0.5%       | ±0.5%           | ±0.5%        | ±0.5%          | ±0.5%       | ±0.5%       |
| SETUP, RISE TIME Note.7 | 2500ms, 50ms at full load 230VAC / 115VAC ; B type 2500ms, 200ms at 95% load 230VAC / 115VAC   |  |             |                 |              |                |             |             |
| HOLD UP TIME (Typ.)     | 16ms at full load 230VAC / 115VAC  |  |             |                 |              |                |             |             |
| INPUT                   | VOLTAGE RANGE Note.4   | 90 ~ 305VAC  |             | 127 ~ 431VDC    |              |                |             |             |
|                         | FREQUENCY RANGE  | 47 ~ 63Hz  |             |                 |              |                |             |             |
|                         | POWER FACTOR (Typ.)  | PF>0.98/115VAC, PF>0.95/230VAC, PF>0.93/277VAC at full load (Please refer to "Power Factor Characteristic" curve)                    |             |                 |              |                |             |             |
|                         | EFFICIENCY (Typ.)  | 93%  | 93%         | 93%             | 93%          | 93%            | 93%         | 93%         |
|                         | AC CURRENT (Typ.)  | 1.2A / 115VAC  |             | 0.55A / 230VAC  |              | 0.5A / 277VAC  |             |             |
|                         | INRUSH CURRENT (Typ.)  | COLD START 75A/230VAC  |             |                 |              |                |             |             |
| LEAKAGE CURRENT         | <0.75mA / 277VAC   |  |             |                 |              |                |             |             |
| PROTECTION              | OVER CURRENT   | 95 ~ 106%<br>Protection type : Constant current limiting, recovers automatically after fault condition is removed                    |             |                 |              |                |             |             |
|                         | SHORT CIRCUIT  | Constant current limiting, recovers automatically after fault condition is removed   |             |                 |              |                |             |             |
|                         | OVER VOLTAGE   | 23 ~ 27V   | 28 ~ 34V    | 34 ~ 38V        | 41 ~ 46V     | 47 ~ 53V       | 54 ~ 60V    | 59 ~ 65V    |
|                         |  | Protection type : Shut down o/p voltage with auto-recovery or re-power on to recovery  |             |                 |              |                |             |             |
|                         | OVER TEMPERATURE   | 100°C ±10°C (RTH2)<br>Protection type : Shut down o/p voltage, recovers automatically after temperature goes down                    |             |                 |              |                |             |             |
| 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 ~ 50°C)   |             |                 |              |                |             |             |
|                         | VIBRATION  | 10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes  |             |                 |              |                |             |             |
| SAFETY & EMC            | SAFETY STANDARDS Note.6  | UL8750, 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:1.88KVAC |              | O/P-FG: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, EN55022 (CISPR22) Class B, 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, heavy industry level (surge 4KV), criteria A                               |             |                 |              |                |             |             |
| OTHERS                  | MTBF   | 192.2Khrs min. MIL-HDBK-217F (25°C)  |             |                 |              |                |             |             |
|                         | DIMENSION  | 220*68*38.8mm (L*W*H)  |             |                 |              |                |             |             |
|                         | PACKING  | 1.12Kg; 12pcs/14.4Kg/0.74CUFT  |             |                 |              |                |             |             |
| 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. Derating may be needed under low input voltages. Please check the static characteristics for more details.</li> <li>5. Type A only.</li> <li>6. Safety and EMC design refer to EN60598-1, CNS15233, GB7000.1, FCC part18.</li> <li>7. 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>8. 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>9. Refer to warranty statement.</li> </ol> |  |             |                 |              |                |             |             |

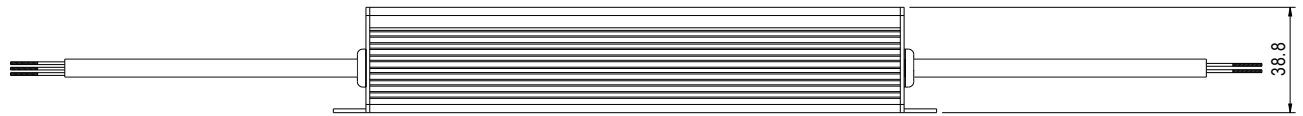
## Mechanical Specification

Case No.994A Unit:mm

### Blank:(HLG-100H)

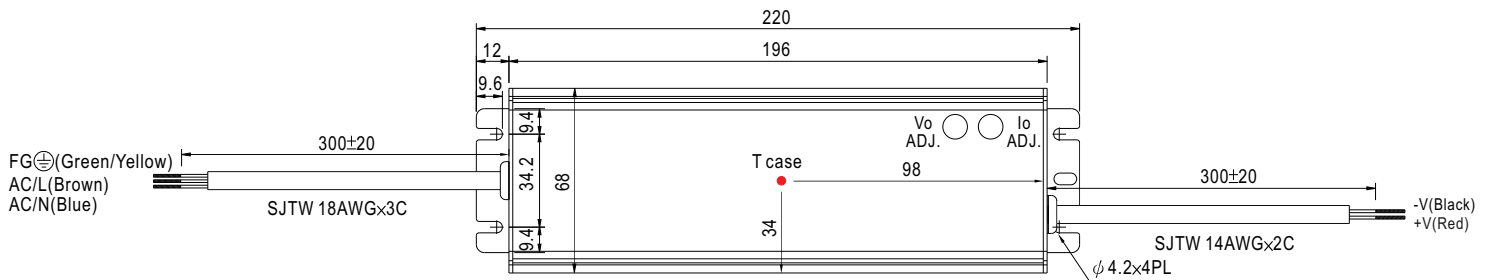


※ T case: Max. Case Temperature.



※IP67 rated. Cable for I/O connection.

### A Type:(HLG-100H- \_A)

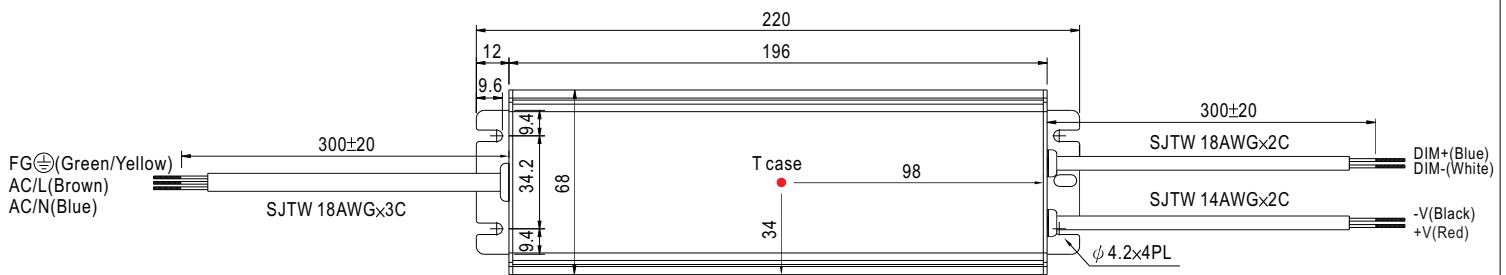


※ T case: Max. Case Temperature.



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

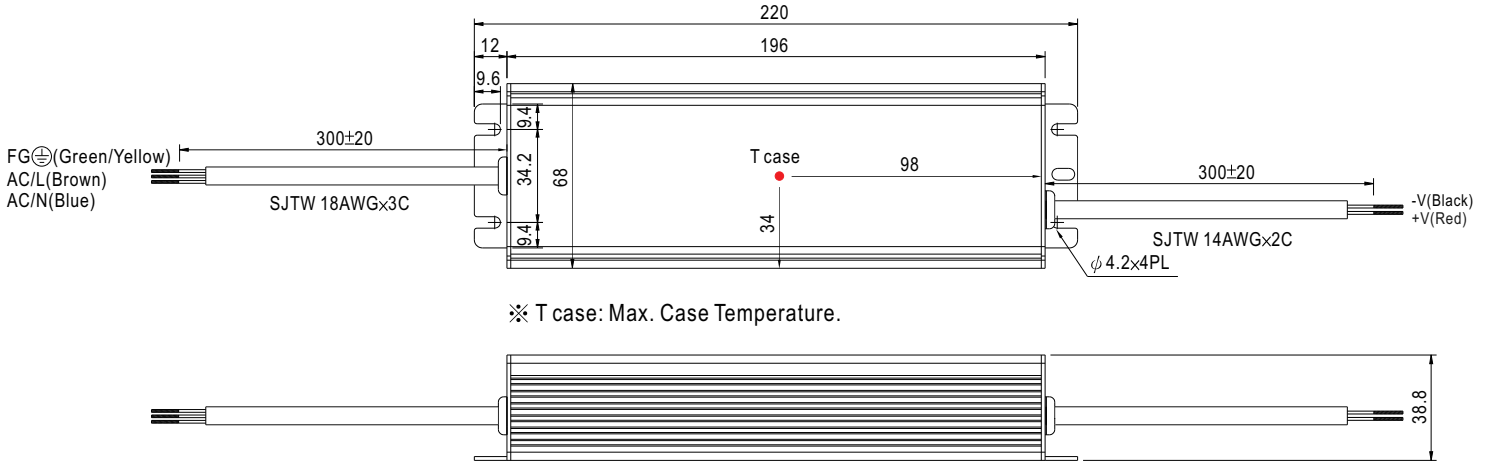
### B Type:(HLG-100H- \_B)



※ T case: Max. Case Temperature.



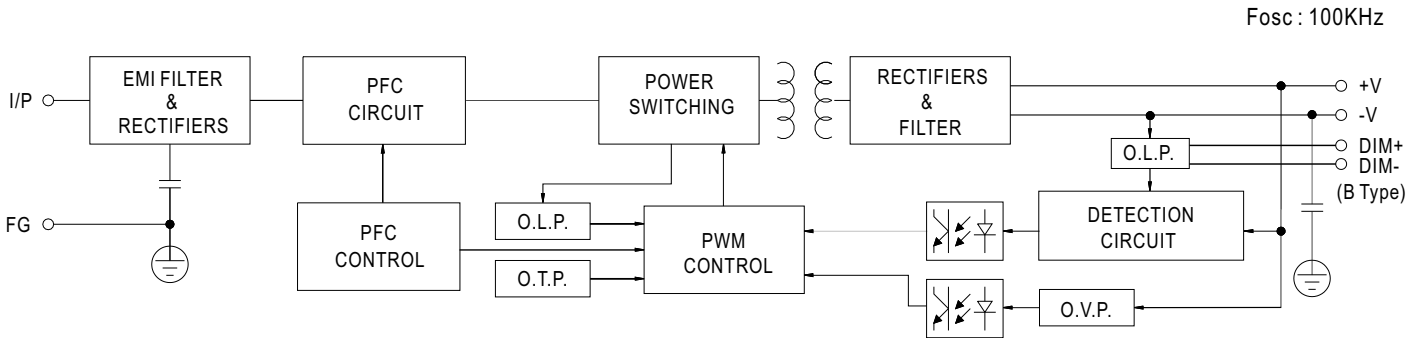
D Type(option):(HLG-100H-\_D)



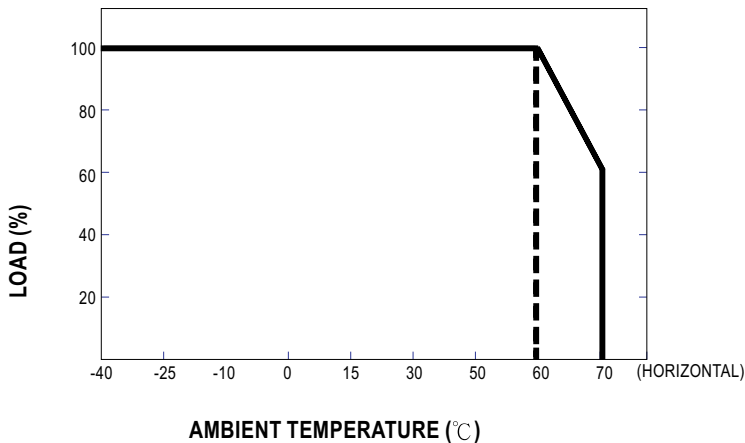
※ T case: Max. Case Temperature.

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

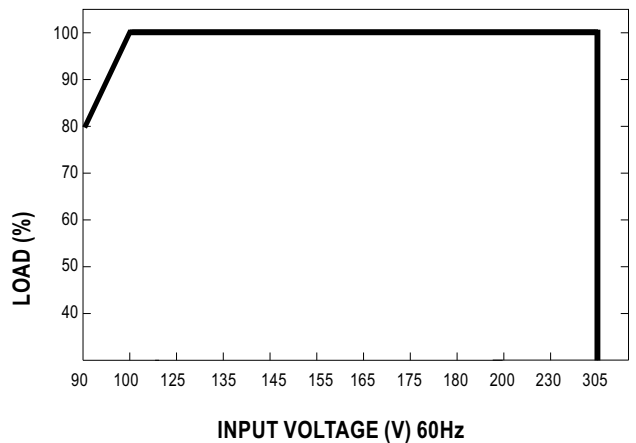
■ Block Diagram



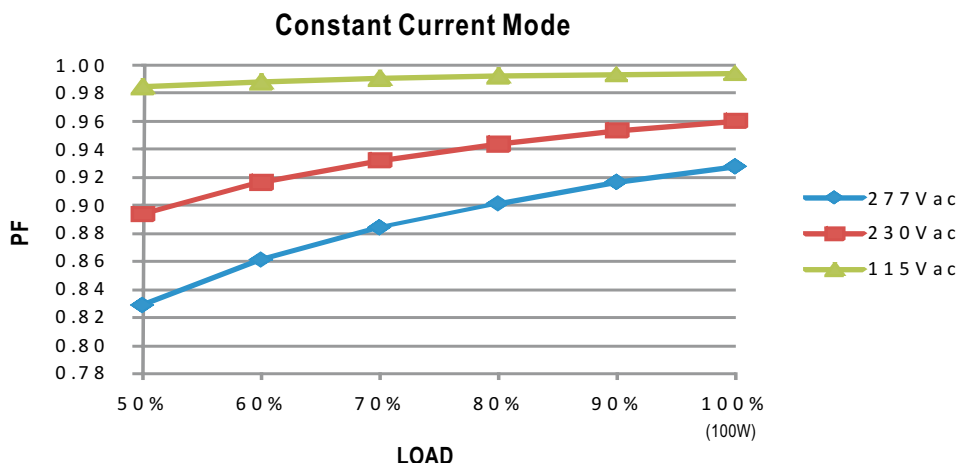
■ Derating Curve



■ Static Characteristics

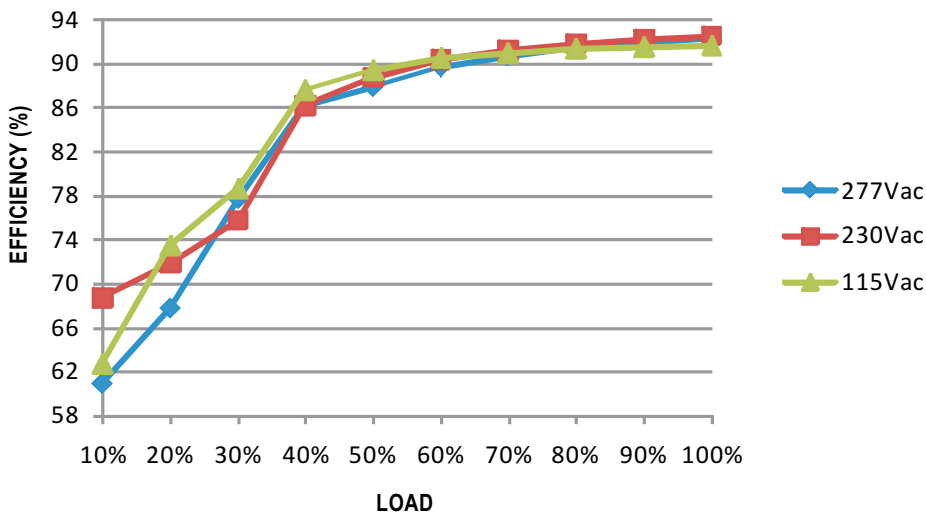


### Power Factor Characteristic



### EFFICIENCY vs LOAD (48V Model)

HLG-100H series possess superior working efficiency that up to 93% can be reached in field applications.

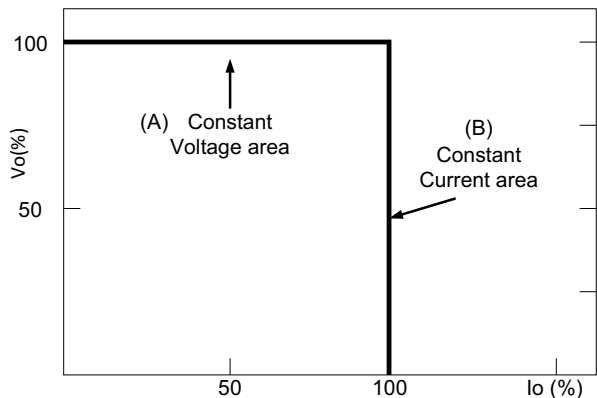


### DRIVING METHODS OF LED MODULE

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

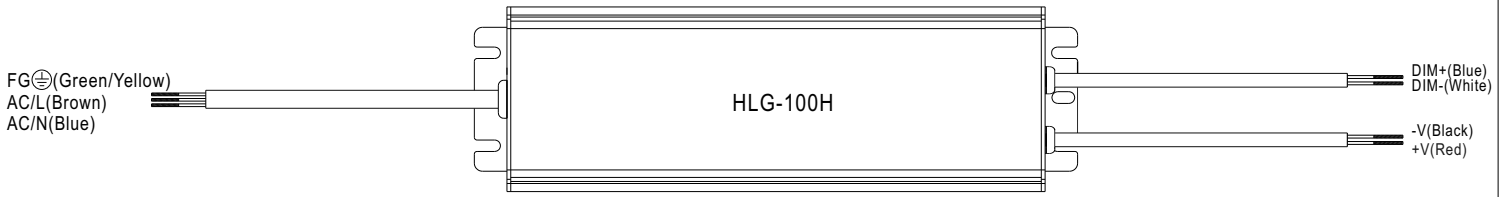
A typical LED power supply may either work in "constant voltage mode (CV) or constant current mode (CC)" to drive the LEDs.

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)).



Typical LED power supply I-V curve

**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)

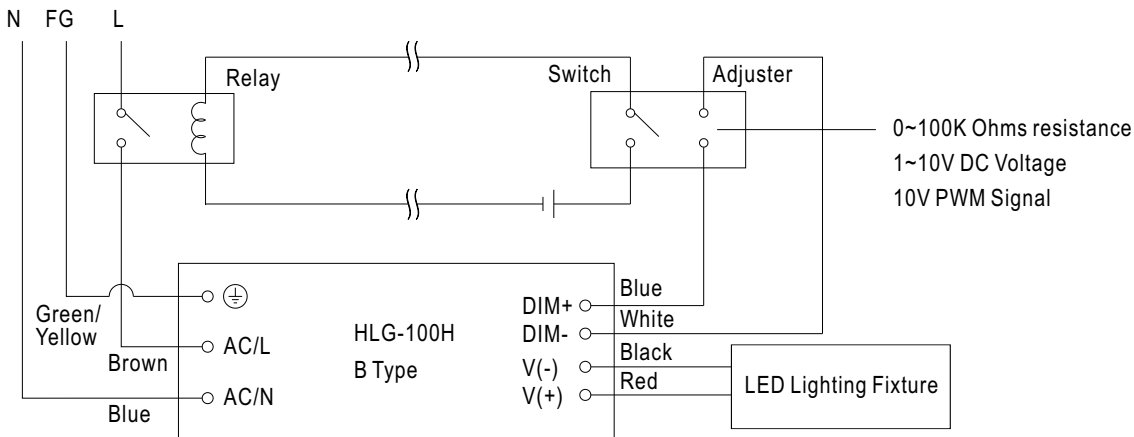
|                             |     |     |     |     |     |     |     |     |     |      |           |
|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----------|
| Dimming value               | 1V  | 2V  | 3V  | 4V  | 5V  | 6V  | 7V  | 8V  | 9V  | 10V  | 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.

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



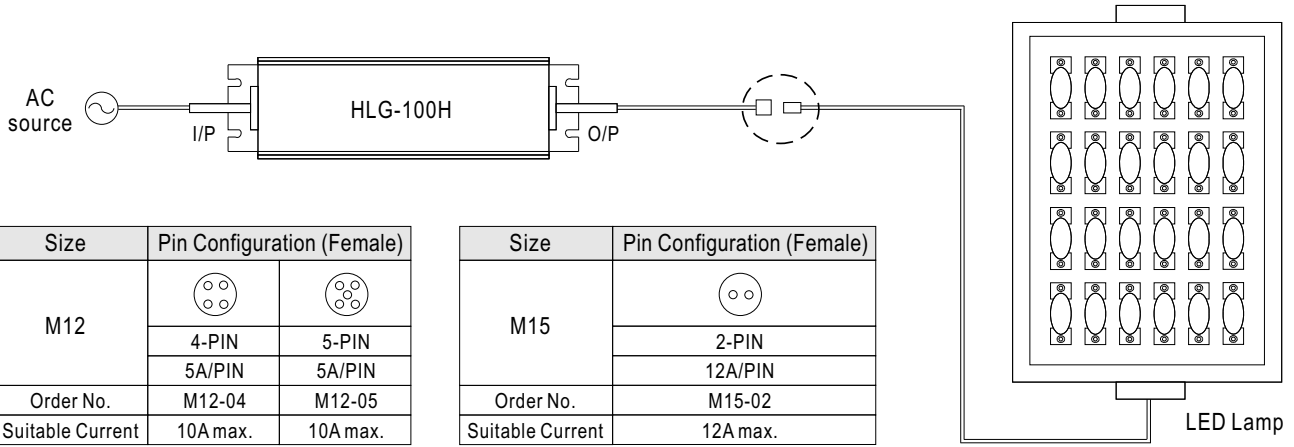
Using a switch and relay can turn ON/OFF the lighting fixture.

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.

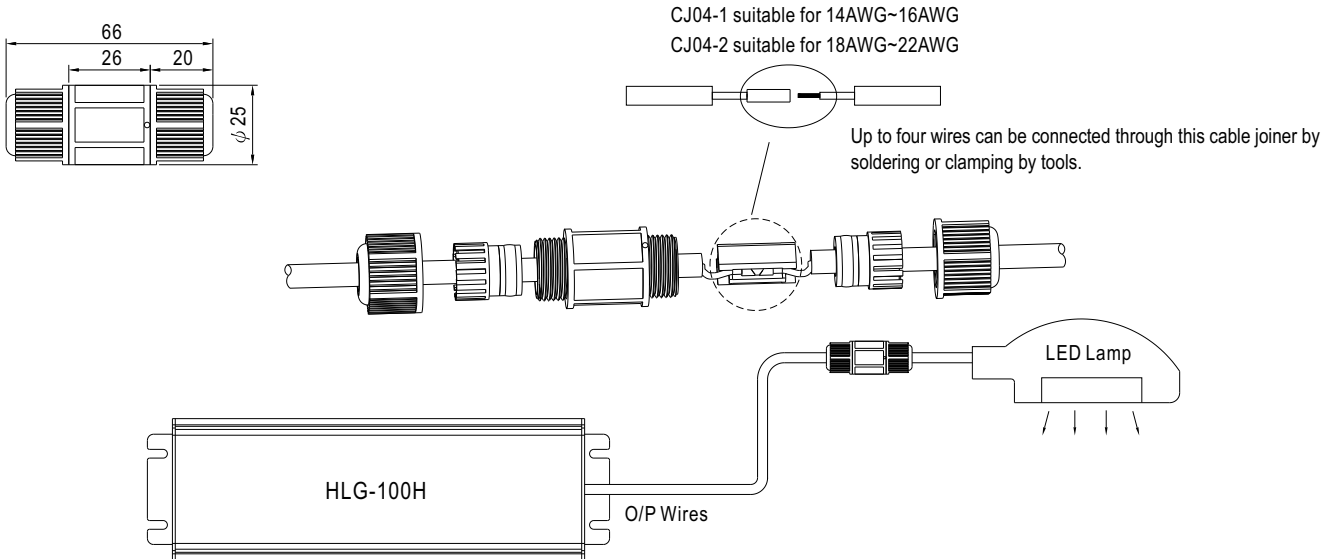
## WATERPROOF CONNECTION

### Waterproof connector

Waterproof connector can be assembled on the output cable of HLG-100H to operate in dry/wet/damp or outdoor environment.



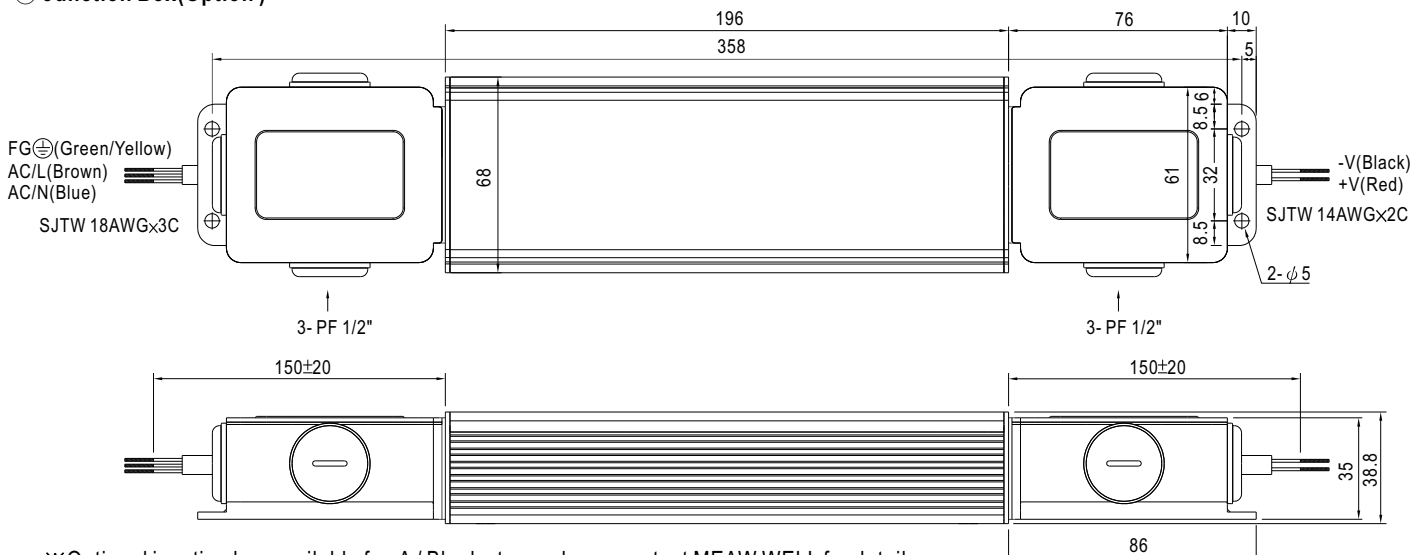
### Cable Joiner



※CJ04 cable joiner can be purchased independently for user's own assembly.

MEAN WELL order No. : CJ04-1, CJ04-2.

### Junction Box(Optional)



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