



#### ■ Features :

- Wide input range 180~528VAC
- Built-in active PFC function
- High efficiency up to 91.5%
- 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 (0~10Vdc or 10V 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.8)

IP65 IP67   

HVG-150-12[A] 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 0~10Vdc or 10V PWM signal or resistance.  
D (option) : IP67 rated. Timer dimming function, contact MEAN WELL for details.

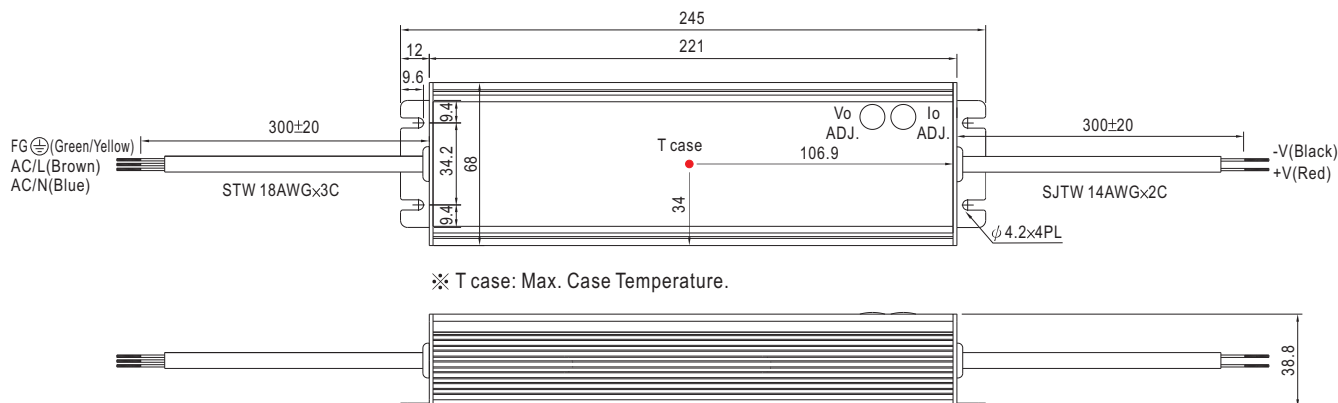
#### SPECIFICATION

| MODEL        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | HVG-150-12                                                                                                                                | HVG-150-15 | HVG-150-20                                         | HVG-150-24   | HVG-150-30      | HVG-150-36   | HVG-150-42   | HVG-150-48   | HVG-150-54   |  |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|------------|----------------------------------------------------|--------------|-----------------|--------------|--------------|--------------|--------------|--|
| OUTPUT       | DC VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 12V                                                                                                                                       | 15V        | 20V                                                | 24V          | 30V             | 36V          | 42V          | 48V          | 54V          |  |
|              | RATED CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 10A                                                                                                                                       | 10A        | 7.5A                                               | 6.25A        | 5A              | 4.17A        | 3.58A        | 3.13A        | 2.78A        |  |
|              | RATED POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 120W                                                                                                                                      | 150W       | 150W                                               | 150W         | 150W            | 150.12W      | 150.36W      | 150.24W      | 150.12W      |  |
|              | RIPPLE & NOISE (max.) <small>Note.2</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 150mVp-p                                                                                                                                  | 150mVp-p   | 150mVp-p                                           | 150mVp-p     | 200mVp-p        | 200mVp-p     | 200mVp-p     | 200mVp-p     | 200mVp-p     |  |
|              | VOLTAGE ADJ. RANGE <small>Note.5</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 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                                                                                     |            |                                                    |              |                 |              |              |              |              |  |
|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 6 ~ 10A                                                                                                                                   | 5.5 ~ 10A  | 4.13 ~ 7.5A                                        | 3.44 ~ 6.25A | 2.75 ~ 5A       | 2.29 ~ 4.17A | 1.97 ~ 3.58A | 1.72 ~ 3.13A | 1.53 ~ 2.78A |  |
|              | VOLTAGE TOLERANCE <small>Note.3</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ±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%        |  |
| INPUT        | SETUP, RISE TIME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2700ms, 80ms at full load                                                                                                                 |            | 480VAC / 347VAC ; B type 3000ms, 280ms at 95% load |              | 480VAC / 347VAC |              |              |              |              |  |
|              | HOLD UP TIME (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 18ms at full load                                                                                                                         |            | 480VAC / 347VAC                                    |              |                 |              |              |              |              |  |
|              | VOLTAGE RANGE <small>Note.4</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 180 ~ 528VAC                                                                                                                              |            | 254VDC ~ 747VDC                                    |              |                 |              |              |              |              |  |
|              | FREQUENCY RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 47 ~ 63Hz                                                                                                                                 |            |                                                    |              |                 |              |              |              |              |  |
|              | POWER FACTOR (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | PF ≥ 0.98/230VAC, PF ≥ 0.97/277VAC, PF ≥ 0.95/347VAC, PF ≥ 0.93/480VAC at full load (Please refer to "Power Factor Characteristic" curve) |            |                                                    |              |                 |              |              |              |              |  |
|              | EFFICIENCY (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 87%                                                                                                                                       | 89%        | 90.5%                                              | 91%          | 91%             | 91%          | 91%          | 91.5%        | 91.5%        |  |
|              | AC CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 347VAC                                                                                                                                    | 0.45A      | 0.5A                                               |              |                 |              |              |              |              |  |
|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 480VAC                                                                                                                                    | 0.35A      | 0.38A                                              |              |                 |              |              |              |              |  |
| PROTECTION   | INRUSH CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | COLD START 35A(twidth=790μs measured at 50% Ipeak) at 480VAC                                                                              |            |                                                    |              |                 |              |              |              |              |  |
|              | LEAKAGE CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <0.75mA / 480VAC                                                                                                                          |            |                                                    |              |                 |              |              |              |              |  |
|              | OVER CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 95 ~ 108%                                                                                                                                 |            |                                                    |              |                 |              |              |              |              |  |
|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 14.4 ~ 16.8V                                                                                                                              | 18 ~ 21V   | 23 ~ 27V                                           | 28 ~ 34V     | 34 ~ 38V        | 41 ~ 46V     | 47 ~ 53V     | 54 ~ 60V     | 59 ~ 65V     |  |
| ENVIRONMENT  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Protection type : Shut down o/p voltage, re-power on to recovery                                                                          |            |                                                    |              |                 |              |              |              |              |  |
|              | OVER TEMPERATURE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 100℃ ±10℃ (RTH2)                                                                                                                          |            |                                                    |              |                 |              |              |              |              |  |
|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Protection type : Shut down o/p voltage with auto-recovery or re-power on to recovery                                                     |            |                                                    |              |                 |              |              |              |              |  |
|              | WORKING TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | -40 ~ +70℃ (Refer to "Derating Curve")                                                                                                    |            |                                                    |              |                 |              |              |              |              |  |
|              | WORKING HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 20 ~ 95% RH non-condensing                                                                                                                |            |                                                    |              |                 |              |              |              |              |  |
|              | STORAGE TEMP., HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | -40 ~ +80℃, 10 ~ 95% RH                                                                                                                   |            |                                                    |              |                 |              |              |              |              |  |
| SAFETY & EMC | TEMP. COEFFICIENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ±0.03%/℃ (0 ~ 60℃)                                                                                                                        |            |                                                    |              |                 |              |              |              |              |  |
|              | VIBRATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes                                                                   |            |                                                    |              |                 |              |              |              |              |  |
|              | SAFETY STANDARDS <small>Note.6</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | UL8750, CSA C22.2 No. 250.0-08, 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 (≥55% load, ≥60% load only for 12V model) ; EN61000-3-3, FCC part 15 class B                   |            |                                                    |              |                 |              |              |              |              |  |
| OTHERS       | EMC IMMUNITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, light industry level (surge 4KV), criteria A                                             |            |                                                    |              |                 |              |              |              |              |  |
|              | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 158.6K hrs min. MIL-HDBK-217F (25℃)                                                                                                       |            |                                                    |              |                 |              |              |              |              |  |
|              | DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 245*68*38.8mm (L*W*H)                                                                                                                     |            |                                                    |              |                 |              |              |              |              |  |
|              | PACKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1.24Kg; 12pcs/15.9Kg/0.78CUFT                                                                                                             |            |                                                    |              |                 |              |              |              |              |  |
| NOTE         | 1. All parameters NOT specially mentioned are measured at 347VAC input, rated load and 25℃ of ambient temperature.<br>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.<br>3. Tolerance : includes set up tolerance, line regulation and load regulation.<br>4. Derating may be needed under low input voltages. Please check the static characteristics for more details.<br>5. A type only.<br>6. Safety and EMC design refer to EN60598-1, CNS15233, GB7000.1.<br>7. 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.<br>8. Refer to warranty statement. |                                                                                                                                           |            |                                                    |              |                 |              |              |              |              |  |

Case No.994 Unit:mm

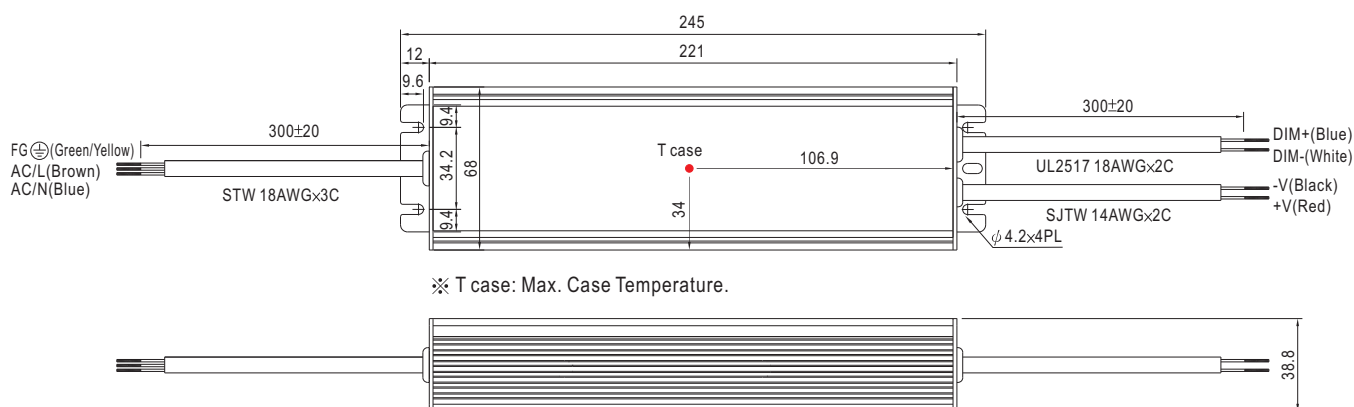
# Mechanical Specification

## A Type:(HVG-150- \_A)

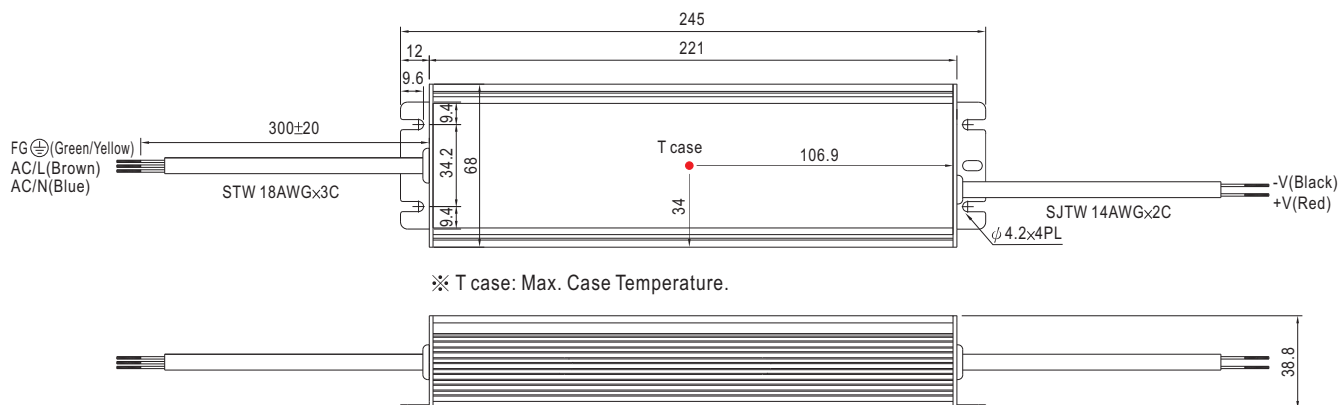


※ IP65 rated. Output voltage and constant current level can be adjusted through internal potentiometer.  
(Can access by removing the rubber stopper on the case.)

## B Type:(HVG-150- \_B)

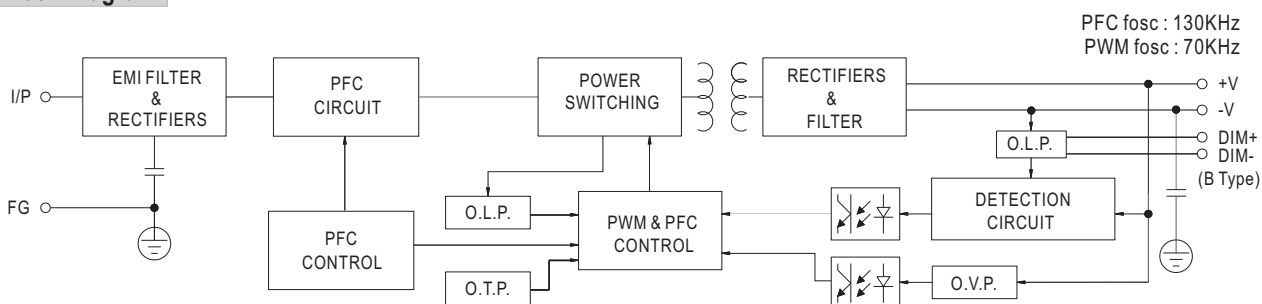


## D Type(option):(HVG-150- \_D)

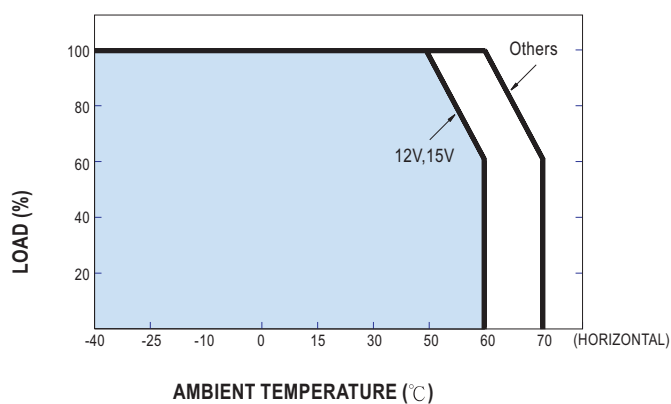


※ IP67 rated. Timer dimming function, contact MEAN WELL for details.

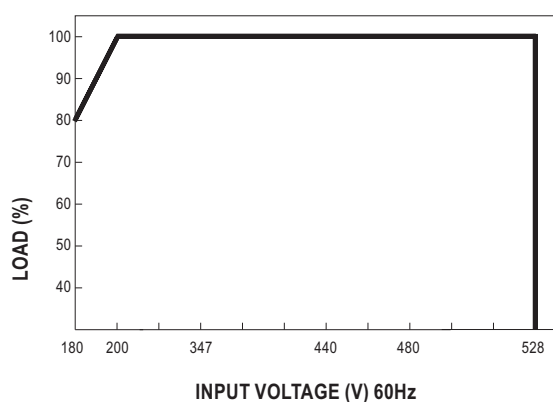
### ■ Block Diagram



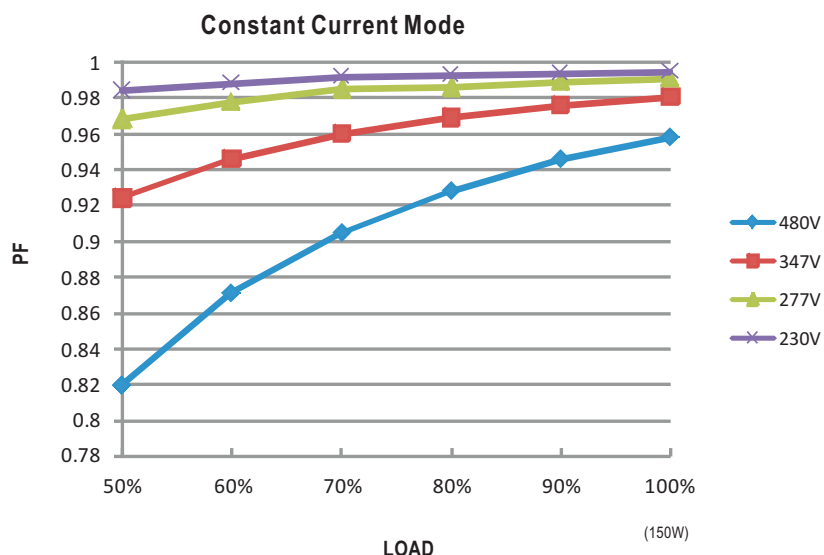
### Derating Curve



## ■ Static Characteristics

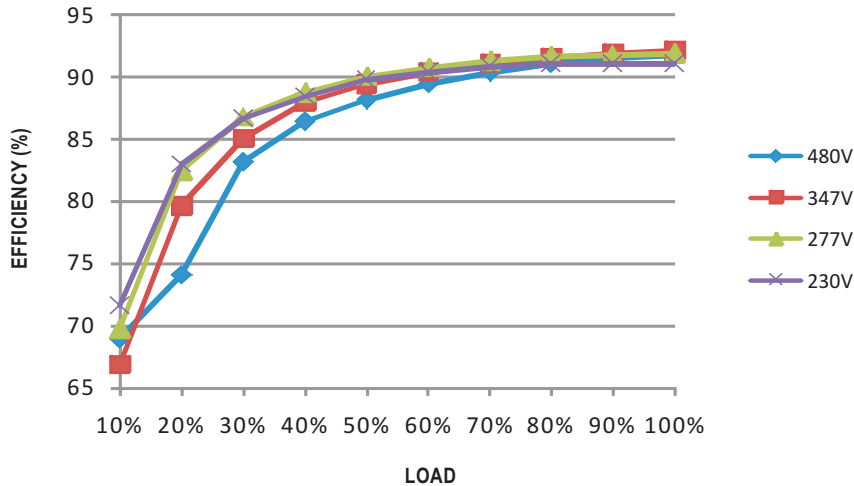


### ■ Power Factor Characteristic



### ■ EFFICIENCY vs LOAD (48V Model)

HVG-150 series possess superior working efficiency that up to 91.5% can be reached in field applications.

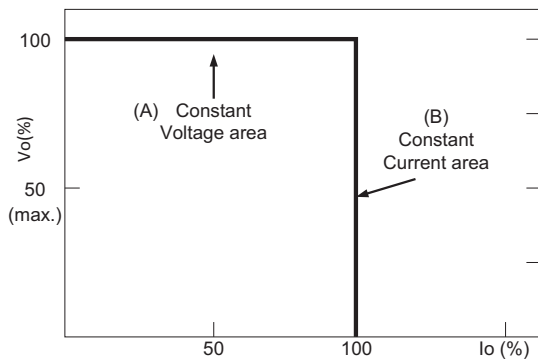


### ■ DRIVING METHODS OF LED MODULE

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

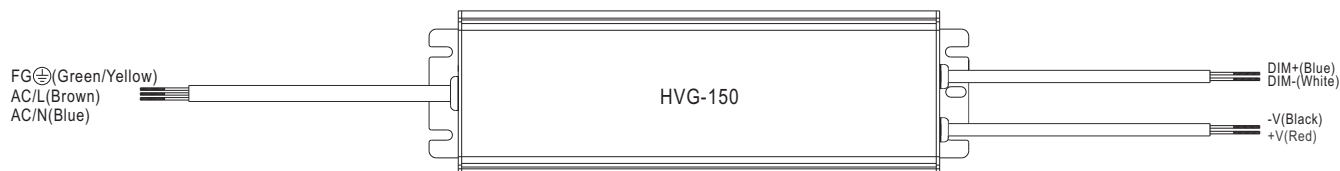
A typical LED power supply may either work in "constant voltage mode (CV) or constant current mode (CC)" to drive the LEDs.

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 0 ~ 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                                                              | 10K $\Omega$    | 20K $\Omega$    | 30K $\Omega$    | 40K $\Omega$    | 50K $\Omega$    | 60K $\Omega$    | 70K $\Omega$    | 80K $\Omega$    | 90K $\Omega$    | 100K $\Omega$    | OPEN     |
|-----------------------------|----------------------------------------------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|----------|
|                             | Multiple drivers<br>(N=driver quantity for synchronized dimming operation) | 10K $\Omega$ /N | 20K $\Omega$ /N | 30K $\Omega$ /N | 40K $\Omega$ /N | 50K $\Omega$ /N | 60K $\Omega$ /N | 70K $\Omega$ /N | 80K $\Omega$ /N | 90K $\Omega$ /N | 100K $\Omega$ /N | -----    |
| Percentage of rated current |                                                                            | 10%             | 20%             | 30%             | 40%             | 50%             | 60%             | 70%             | 80%             | 90%             | 100%             | 95%~108% |

※ 0 ~ 10V dimming function for output current adjustment (Typical)

| Dimming value               | 0V | 1V  | 2V  | 3V  | 4V  | 5V  | 6V  | 7V  | 8V  | 9V  | 10V  | OPEN     |
|-----------------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|----------|
| Percentage of rated current | 0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | 95%~108% |

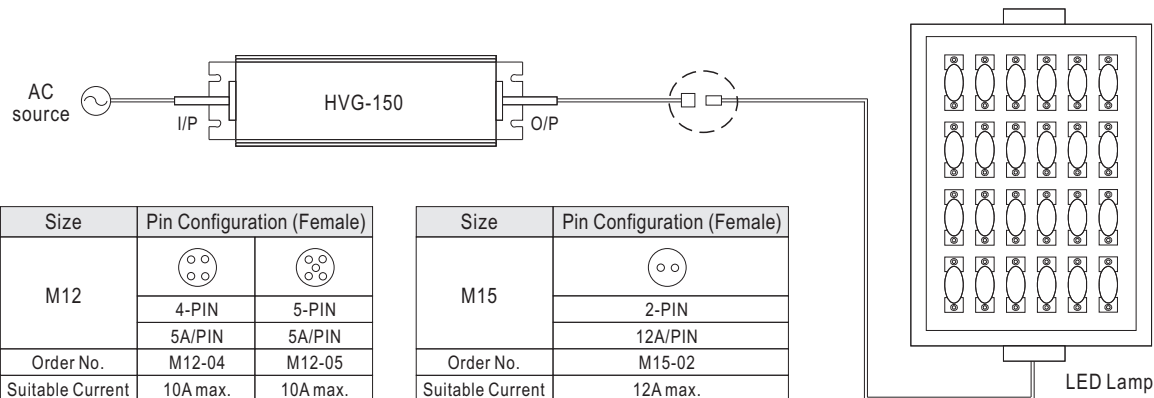
※ 10V PWM signal for output current adjustment (Typical): Frequency range :100Hz ~ 3KHz

| 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% | 95%~108% |

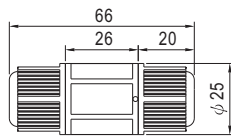
## WATERPROOF CONNECTION

◎ Waterproof connector

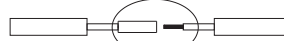
Waterproof connector can be assembled on the output cable of HVG-150 to operate in dry/wet/damp or outdoor environment.



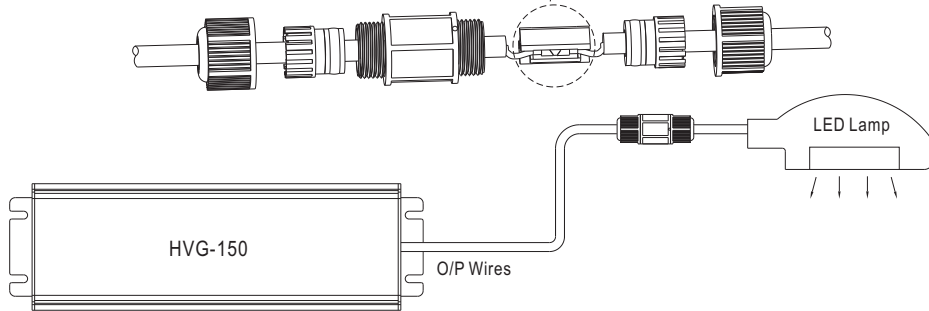
### ◎ Cable Joiner



CJ04-1 suitable for 14AWG~16AWG  
CJ04-2 suitable for 18AWG~22AWG

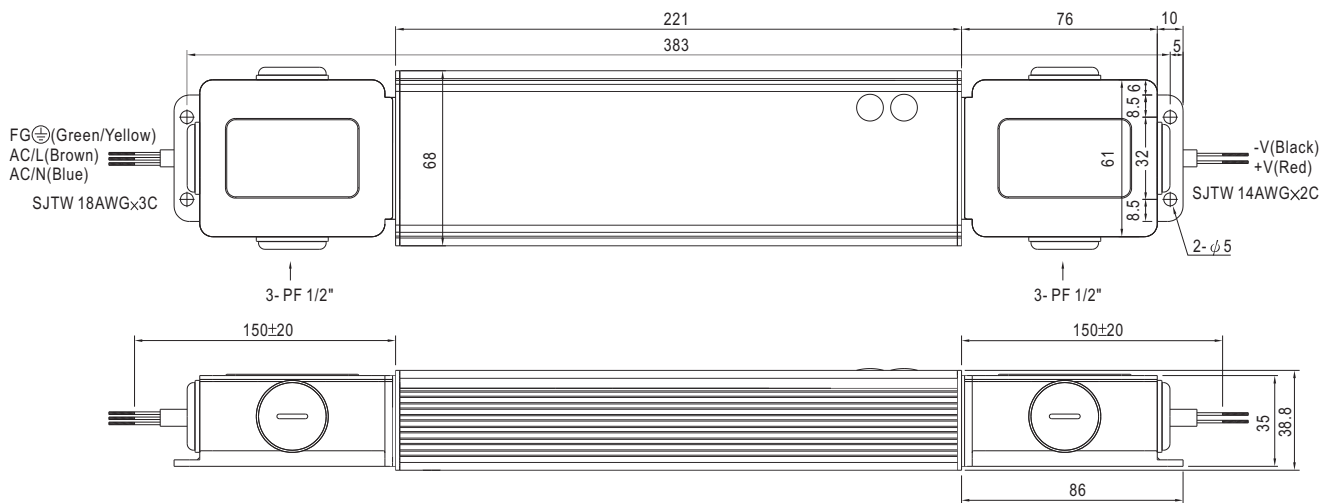


Up to four wires can be connected through this cable joiner by soldering or clamping by tools.



※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 - type, please contact MEAN WELL for details.