



#### ■ Features :

- Wide input range 180~528VAC
- Built-in active PFC function
- High efficiency up to 91%
- 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
- Class 2 power unit
- 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.9)



IP65 IP67   (for 42V, 48V, 54V only)  (except for 42V, 48V, 54V) 

HVG-100-15[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

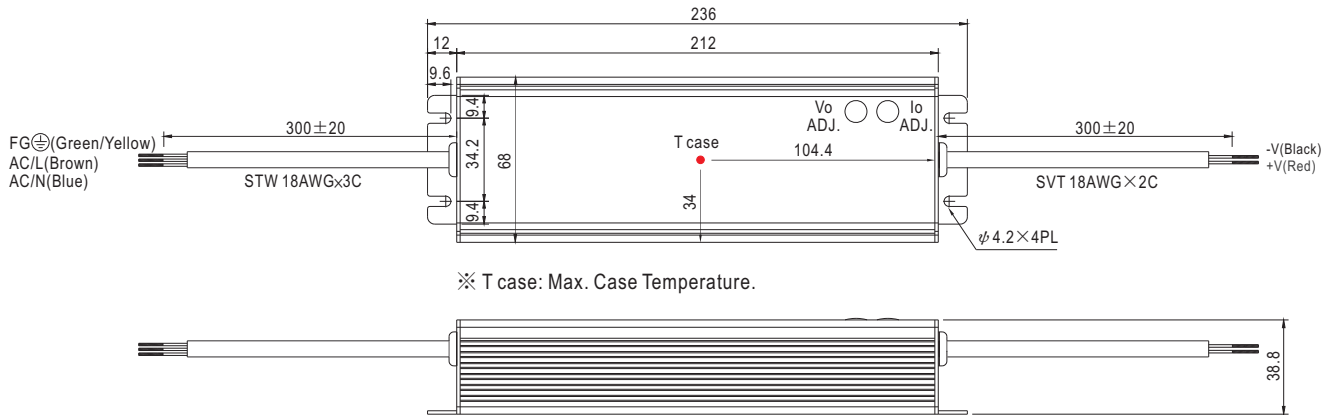
| DECLARATION         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                 |             |                 |             |                                      |              |            |              |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------------|-------------|--------------------------------------|--------------|------------|--------------|
| MODEL               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | HVG-100-15                                                                                                                                      | HVG-100-20  | HVG-100-24      | HVG-100-30  | HVG-100-36                           | HVG-100-42   | HVG-100-48 | HVG-100-54   |
| OUTPUT              | DC VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 15V                                                                                                                                             | 20V         | 24V             | 30V         | 36V                                  | 42V          | 48V        | 54V          |
|                     | CONSTANT CURRENT REGION <small>Note.4</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 9~15V                                                                                                                                           | 10~20V      | 12~24V          | 15~30V      | 18~36V                               | 21~42V       | 24~48V     | 27~54V       |
|                     | RATED CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 5A                                                                                                                                              | 4.8A        | 4A              | 3.2A        | 2.65A                                | 2.28A        | 2A         | 1.77A        |
|                     | RATED POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 75W                                                                                                                                             | 96W         | 96W             | 96W         | 95.4W                                | 95.76W       | 96W        | 95.58W       |
|                     | RIPPLE & NOISE (max.) <small>Note.2</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 150mVp-p                                                                                                                                        | 150mVp-p    | 150mVp-p        | 200mVp-p    | 200mVp-p                             | 200mVp-p     | 200mVp-p   | 200mVp-p     |
|                     | VOLTAGE ADJ. RANGE <small>Note.6</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 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                                                                                           |             |                 |             |                                      |              |            |              |
|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 2.75 ~ 5A                                                                                                                                       | 2.64 ~ 4.8A | 2.2 ~ 4A        | 1.76 ~ 3.2A | 1.45 ~ 2.65A                         | 1.25 ~ 2.28A | 1.1 ~ 2A   | 0.97 ~ 1.77A |
|                     | VOLTAGE TOLERANCE <small>Note.3</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ±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%        |
| LOAD REGULATION     | ±1.5%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ±0.5%                                                                                                                                           | ±0.5%       | ±0.5%           | ±0.5%       | ±0.5%                                | ±0.5%        | ±0.5%      |              |
| SETUP, RISE TIME    | 500ms, 80ms                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 230VAC / 347VAC / 480VAC at full load ; B type 500ms, 280ms                                                                                     |             |                 |             | 230VAC / 347VAC / 480VAC at 95% load |              |            |              |
| HOLD UP TIME (Typ.) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 30ms at full load      480VAC / 347VAC                                                                                                          |             |                 |             |                                      |              |            |              |
| INPUT               | VOLTAGE RANGE <small>Note.5</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 180 ~ 528VAC                                                                                                                                    |             | 254VDC ~ 747VDC |             |                                      |              |            |              |
|                     | FREQUENCY RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 47 ~ 63Hz                                                                                                                                       |             |                 |             |                                      |              |            |              |
|                     | POWER FACTOR (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | PF≥0.98/230VAC, PF≥0.98/277VAC, PF≥0.97/347VAC, PF≥0.93/480VAC<br>at full load (Please refer to "Power Factor Characteristic" curve)            |             |                 |             |                                      |              |            |              |
|                     | TOTAL HARMONIC DISTORTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | THD<20% when output loading ≥ 50% ( ≥ 60% only for 15V model) at 230VAC/277VAC/347VAC input<br>THD<20% when output loading ≥75% at 480VAC input |             |                 |             |                                      |              |            |              |
|                     | EFFICIENCY (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 89%                                                                                                                                             | 90%         | 91%             | 91%         | 90.5%                                | 90.5%        | 91%        | 91%          |
|                     | AC CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0.38A / 347VAC                                                                                                                                  |             | 0.28A / 480VAC  |             |                                      |              |            |              |
|                     | INRUSH CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | COLD START 25A(twidth=900μs measured at 50% Ipeak) at 480VAC                                                                                    |             |                 |             |                                      |              |            |              |
|                     | LEAKAGE CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <0.75mA / 480VAC                                                                                                                                |             |                 |             |                                      |              |            |              |
| PROTECTION          | OVER CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 95 ~ 108%<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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 18 ~ 21V                                                                                                                                        | 23 ~ 27V    | 28 ~ 34V        | 34 ~ 38V    | 41 ~ 46V                             | 47 ~ 53V     | 54 ~ 60V   | 59 ~ 65V     |
|                     | OVER TEMPERATURE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Shut down o/p voltage, recovers automatically after temperature goes down                                                                       |             |                 |             |                                      |              |            |              |
|                     | WORKING TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | -40 ~ +70℃ (Refer to "Derating Curve")                                                                                                          |             |                 |             |                                      |              |            |              |
| ENVIRONMENT         | WORKING HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 20 ~ 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 <small>Note.7</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | UL8750, CSA C22.2 No. 250.0-08(except for 42V,48V, 54V), 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, ≥60% load only for 15V model ) ; EN61000-3-3, FCC part 15 class B                       |             |                 |             |                                      |              |            |              |
|                     | EMC IMMUNITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, light industry level (surge 4KV), criteria A                                                   |             |                 |             |                                      |              |            |              |
| OTHERS              | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 174.9K hrs min.      MIL-HDBK-217F (25℃)                                                                                                        |             |                 |             |                                      |              |            |              |
|                     | DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 236*68*38.8mm (L*W*H)                                                                                                                           |             |                 |             |                                      |              |            |              |
|                     | PACKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1.18Kg; 12pcs/15.2Kg/0.74CUFT                                                                                                                   |             |                 |             |                                      |              |            |              |
| NOTE                | <div>1. All parameters NOT specially mentioned are measured at 347VAC input, rated load and 25℃ of ambient temperature.</div> <div>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.</div> <div>3. Tolerance : includes set up tolerance, line regulation and load regulation.</div> <div>4. Please refer to "DRIVING METHODS OF LED MODULE".</div> <div>5. Derating may be needed under low input voltages. Please check the static characteristics for more details.</div> <div>6. A type only.</div> <div>7. Safety and EMC design refer to EN60598-1, CNS15233, GB7000.1.</div> <div>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.</div> <div>9. Refer to warranty statement.</div> <div>10. 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.</div> |                                                                                                                                                 |             |                 |             |                                      |              |            |              |

## Mechanical Specification

Case No.994

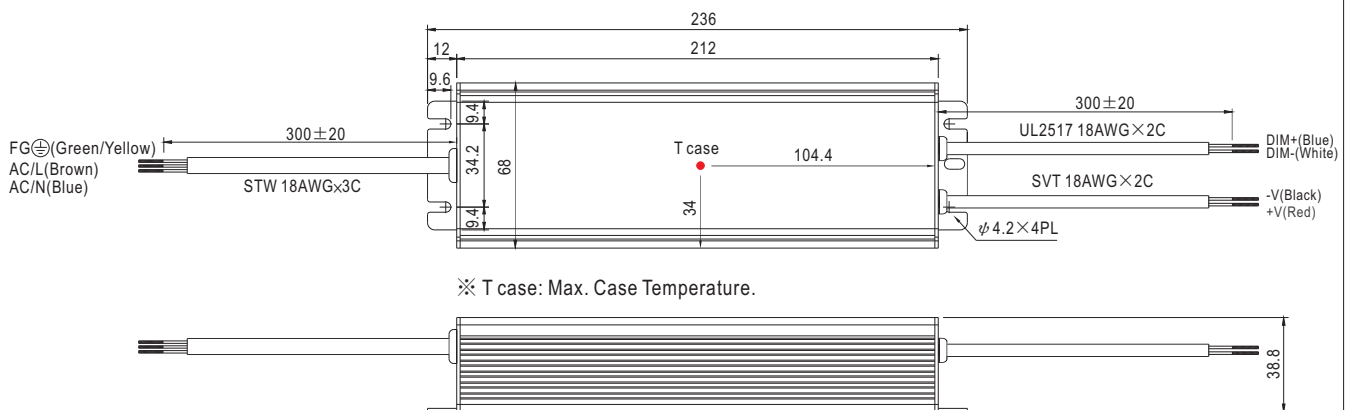
Unit:mm

### A Type:(HVG-100-\_A)

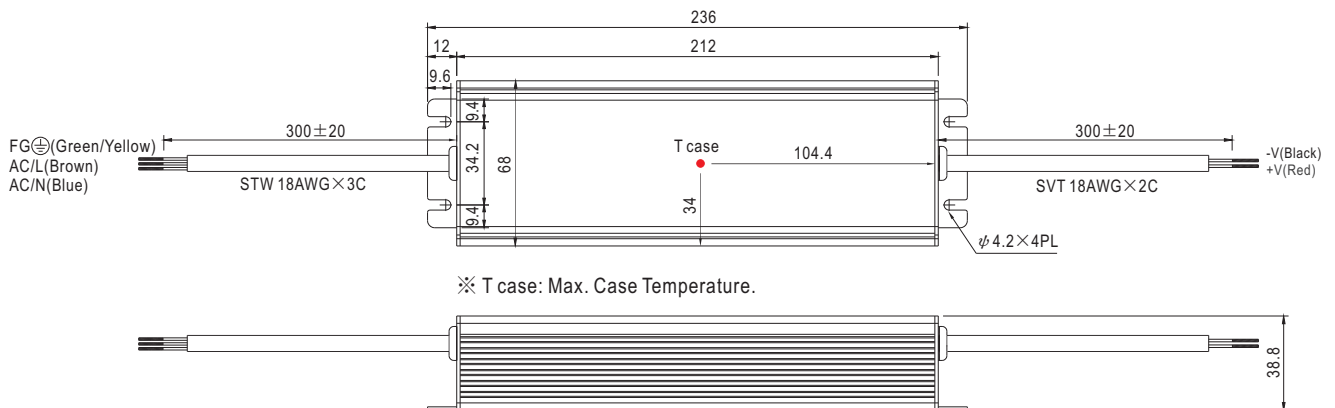


※ IP65 rated. Output voltage and constant current level can be adjusted through internal potentiometer.  
(Can access by removing the rubber stopper on the case.)

### B Type:(HVG-100-\_B)

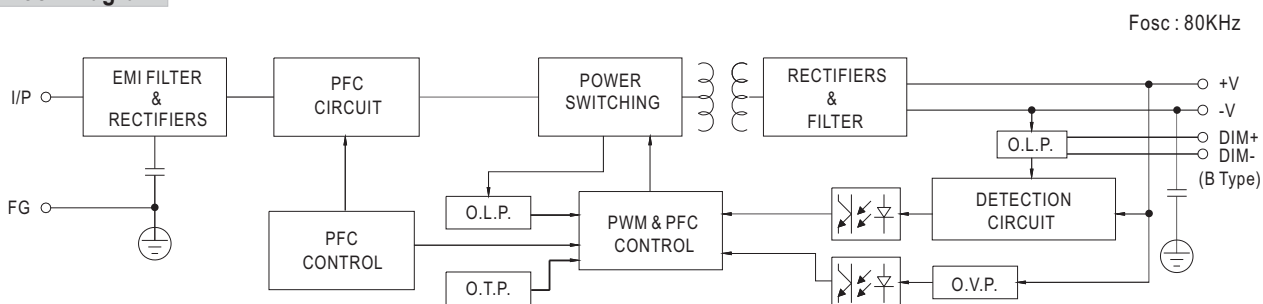


### D Type(option):(HVG-100-\_D)

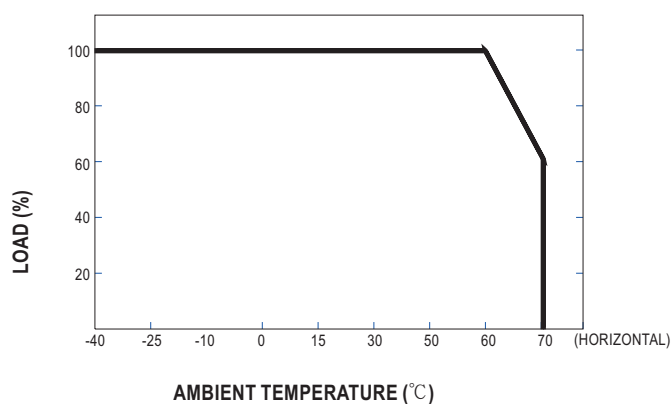


※ IP67 rated. Timer dimming function, contact MEAN WELL for details.

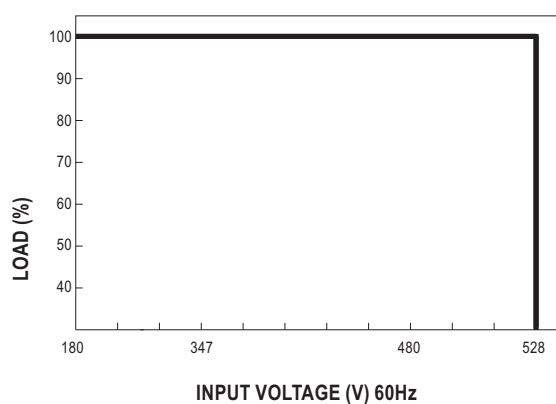
### Block Diagram



### Derating Curve

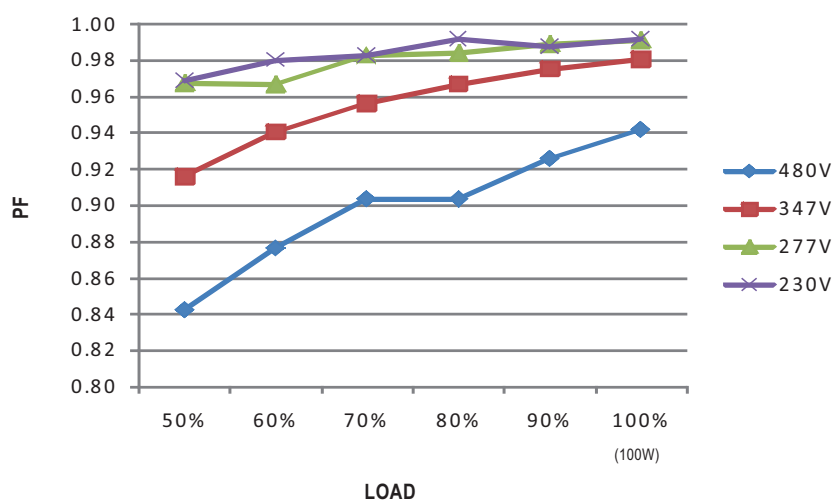


### Static Characteristics



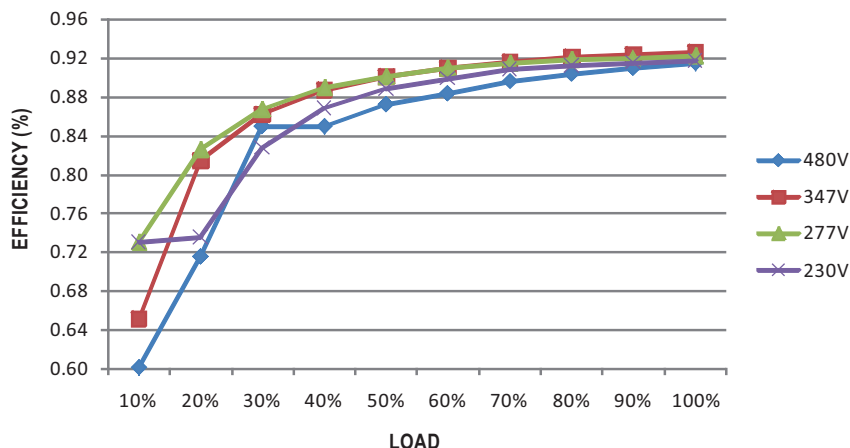
### Power Factor Characteristic

#### Constant Current Mode



### ■ EFFICIENCY vs LOAD (48V Model)

HVG-100 series possess superior working efficiency that up to 91% can be reached in field applications.

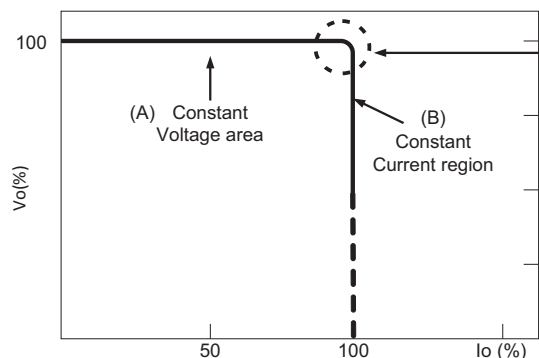


### ■ DRIVING METHODS OF LED MODULE

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)).



Typical LED power supply I-V curve

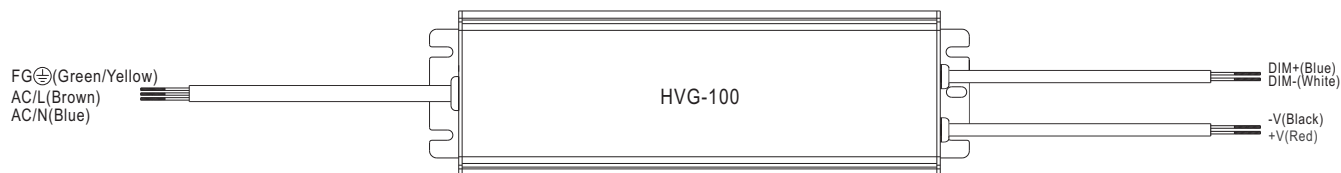
In the constant current region, the highest voltage at the output of the driver depends on the configuration of the end systems.

Should there be any compatibility issues, please contact MEAN WELL.

Original :Constant Current area

Original :Solid line

## DIMMING OPERATION (for B-type only)



※ 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                                                              | Short | 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) | Short | 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 |                                                                            | 0%    | 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% |

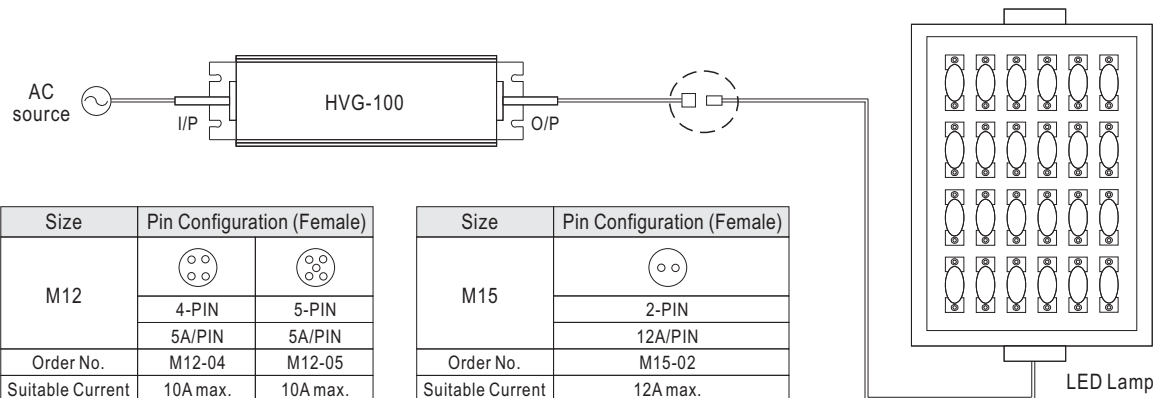
※ 10V PWM signal for output current adjustment (Typical): Frequency range :100Hz ~ 3KHz

| Duty value                  | 0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | OPEN     |
|-----------------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|----------|
| Percentage of rated current | 0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | 95%~108% |

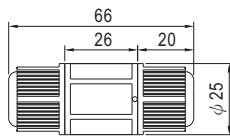
## WATERPROOF CONNECTION

◎ Waterproof connector

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



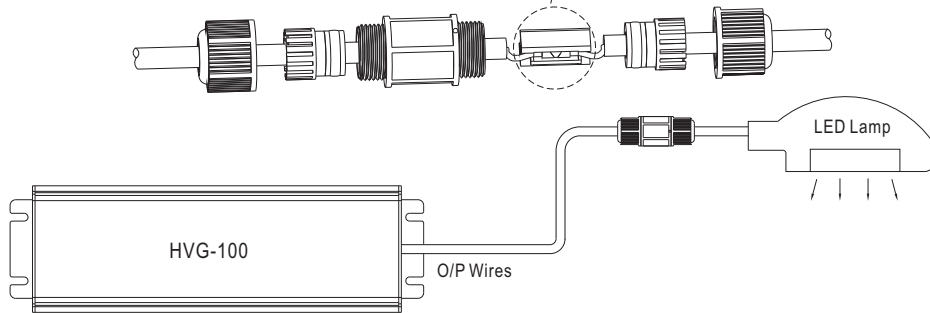
## ◎ Cable Joiner



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

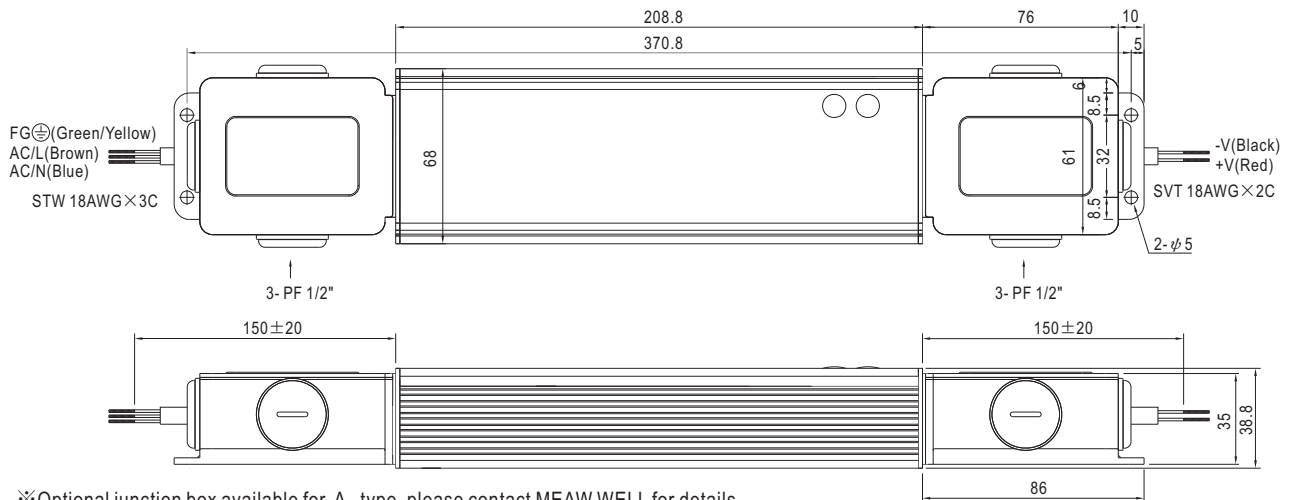


Up to four wires can be connected through this cable joiner by soldering or clamping by tools.



※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 MEAW WELL for details.