



Наличие и актуальные цены на

**HLG-185-48**

<https://www.mean-well.ru/store/HLG-185-48/>



## Features :

- Universal AC input / Full range
- Built-in active PFC function
- High efficiency up to 94%
- Protections: Short circuit / Over current / Over voltage / Over temperature
- Cooling by free air convection
- OCP point adjustable through output cable or internal potentiometer
- IP67 / IP65 design for indoor or outdoor installations
- Three in one dimming function (1~10Vdc or PWM signal or resistance)
- Suitable for LED lighting and street lighting applications
- Compliance to worldwide safety regulations for lighting
- Suitable for dry / damp / wet locations
- Type "HL" for use in class I , Division 2 hazardous(Classified) location luminaires
- 7 years warranty (Note.10)



HLG-185-12 [A] Blank : IP67 rated. Cable for I/O connection.

A : IP65 rated. Output voltage and constant current level can be adjusted through internal potentiometer.

B : IP67 rated. Constant current level adjustable through output cable with 1~10Vdc or 10V PWM signal or resistance.

D (option, safety pending) : IP67 rated. Timer dimming function, contact MEAN WELL for details.

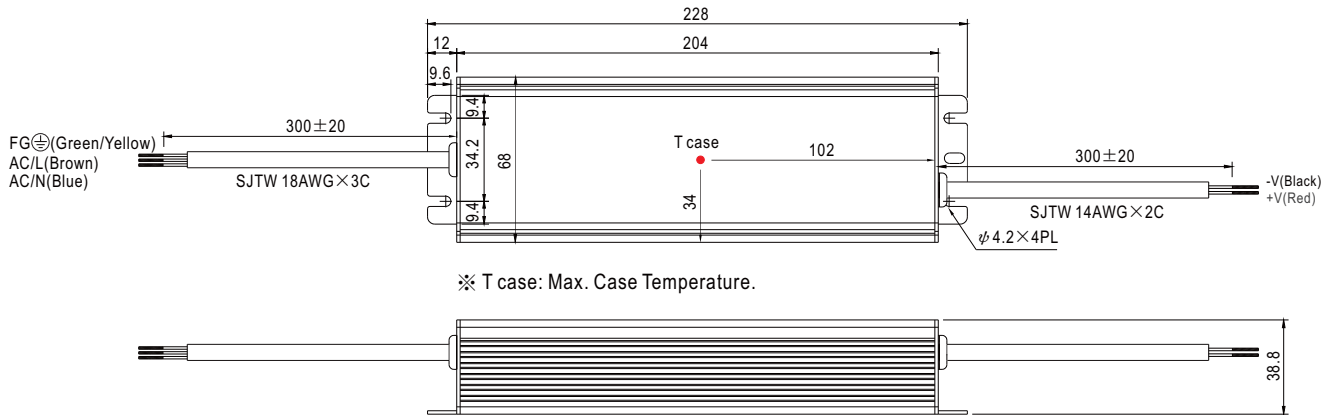
## SPECIFICATION

| MODEL                                  | HLG-185-12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | HLG-185-15                                                                                                                                                  | HLG-185-20                     | HLG-185-24  | HLG-185-30 | HLG-185-36 | HLG-185-42 | HLG-185-48 | HLG-185-54  |              |
|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-------------|------------|------------|------------|------------|-------------|--------------|
| OUTPUT                                 | DC VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 12V                                                                                                                                                         | 15V                            | 20V         | 24V        | 30V        | 36V        | 42V        | 48V         | 54V          |
|                                        | CONSTANT CURRENT REGION <small>Note.4</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 6 ~ 12V                                                                                                                                                     | 7.5 ~ 15V                      | 10 ~ 20V    | 12 ~ 24V   | 15 ~ 30V   | 18 ~ 36V   | 21 ~ 42V   | 24 ~ 48V    | 27 ~ 54V     |
|                                        | RATED CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 13A                                                                                                                                                         | 11.5A                          | 9.3A        | 7.8A       | 6.2A       | 5.2A       | 4.4A       | 3.9A        | 3.45A        |
|                                        | RATED POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 156W                                                                                                                                                        | 172.5W                         | 186W        | 187.2W     | 186W       | 187.2W     | 184.8W     | 187.2W      | 186.3W       |
|                                        | 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.6</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                                                                                                       |                                |             |            |            |            |            |             |              |
|                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 6.5 ~ 13A                                                                                                                                                   | 5.75 ~ 11.5A                   | 4.65 ~ 9.3A | 3.9 ~ 7.8A | 3.1 ~ 6.2A | 2.6 ~ 5.2A | 2.2 ~ 4.4A | 1.95 ~ 3.9A | 1.72 ~ 3.45A |
|                                        | 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%       |              |
| SETUP, RISE TIME <small>Note.8</small> | 1000ms,50ms/115VAC    500ms,50ms/230VAC at full load ; B type 1000ms,200ms/115VAC    500ms,200ms/230VAC at 95% load                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                             |                                |             |            |            |            |            |             |              |
| HOLD UP TIME (Typ.)                    | 16ms at full load    230VAC / 115VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                             |                                |             |            |            |            |            |             |              |
| INPUT                                  | VOLTAGE RANGE <small>Note.5</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 90 ~ 264VAC    127 ~ 370VDC                                                                                                                                 |                                |             |            |            |            |            |             |              |
|                                        | FREQUENCY RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 47 ~ 63Hz                                                                                                                                                   |                                |             |            |            |            |            |             |              |
|                                        | POWER FACTOR (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | PF>0.98/115VAC, PF>0.95/230VAC (Please refer to "Power Factor Characteristic" curve)                                                                        |                                |             |            |            |            |            |             |              |
|                                        | EFFICIENCY (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 92%                                                                                                                                                         | 93%                            | 93.5%       | 94%        | 94%        | 94%        | 94%        | 94%         | 94%          |
|                                        | AC CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 12V                                                                                                                                                         | 1.8A / 115VAC    0.8A / 230VAC |             |            |            |            |            |             |              |
|                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 15V ~ 54V                                                                                                                                                   | 2.1A / 115VAC    0.9A / 230VAC |             |            |            |            |            |             |              |
|                                        | INRUSH CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | COLD START 65A(twidth=445μs measured at 50% Ipeak) at 230VAC                                                                                                |                                |             |            |            |            |            |             |              |
| LEAKAGE CURRENT                        | <0.75mA / 240VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                             |                                |             |            |            |            |            |             |              |
| PROTECTION                             | 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 ~ 17V                                                                                                                                                    | 18 ~ 21V                       | 23 ~ 27V    | 28 ~ 34V   | 34 ~ 38V   | 41 ~ 46V   | 47 ~ 53V   | 54 ~ 63V    | 59 ~ 65V     |
| OVER TEMPERATURE                       | Protection type : Shut down o/p voltage with auto-recovery or re-power on to recovery                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                             |                                |             |            |            |            |            |             |              |
| ENVIRONMENT                            | WORKING TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Shut down o/p voltage, recovers automatically after temperature goes down                                                                                   |                                |             |            |            |            |            |             |              |
|                                        | WORKING HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | -40 ~ +70℃ (Refer to "Derating Curve")                                                                                                                      |                                |             |            |            |            |            |             |              |
|                                        | STORAGE TEMP., HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 20 ~ 95% RH non-condensing                                                                                                                                  |                                |             |            |            |            |            |             |              |
|                                        | TEMP. COEFFICIENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | -40 ~ +80℃, 10 ~ 95% RH                                                                                                                                     |                                |             |            |            |            |            |             |              |
|                                        | VIBRATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ±0.03%/℃ (0 ~ 50℃)                                                                                                                                          |                                |             |            |            |            |            |             |              |
| SAFETY & EMC                           | SAFETY STANDARDS <small>Note.7</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes                                                                                     |                                |             |            |            |            |            |             |              |
|                                        | WITHSTAND VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | UL8750, CSA C22.2 No. 250.0-08, EN61347-1, EN61347-2-13 independent IP65 or IP67, J61347-1, J61347-2-13 approved ; design refer to UL60950-1, TUV EN60950-1 |                                |             |            |            |            |            |             |              |
|                                        | ISOLATION RESISTANCE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | I/P-O/P:3.75KVAC    I/P-FG:2KVAC    O/P-FG:1.5KVAC                                                                                                          |                                |             |            |            |            |            |             |              |
|                                        | EMC EMISSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25℃/ 70% RH                                                                                                    |                                |             |            |            |            |            |             |              |
| OTHERS                                 | EMC IMMUNITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Compliance to EN55015, EN55022 (CISPR22) Class B, EN61000-3-2 Class C (≥50% load) ; EN61000-3-3                                                             |                                |             |            |            |            |            |             |              |
|                                        | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, EN55024, light industry level (surge 4KV), criteria A                                                      |                                |             |            |            |            |            |             |              |
|                                        | DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 192.2K hrs min.    MIL-HDBK-217F (25℃)                                                                                                                      |                                |             |            |            |            |            |             |              |
|                                        | PACKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 228*68*38.8mm (L*W*H)                                                                                                                                       |                                |             |            |            |            |            |             |              |
| NOTE                                   | 1. All parameters NOT specially mentioned are measured at 230VAC 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. Please refer to "DRIVING METHODS OF LED MODULE".<br>5. Derating may be needed under low input voltages. Please check the static characteristics for more details.<br>6. A type only.<br>7. Safety and EMC design refer to EN60598-1, CNS15233, GB7000.1, FCC part18.<br>8. Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time.<br>9. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.<br>10. Refer to warranty statement.<br>11. To fulfill requirements of the latest ErP regulation for lighting fixtures, this LED power supply can only be used behind a switch without permanently connected to the mains. |                                                                                                                                                             |                                |             |            |            |            |            |             |              |

# Mechanical Specification

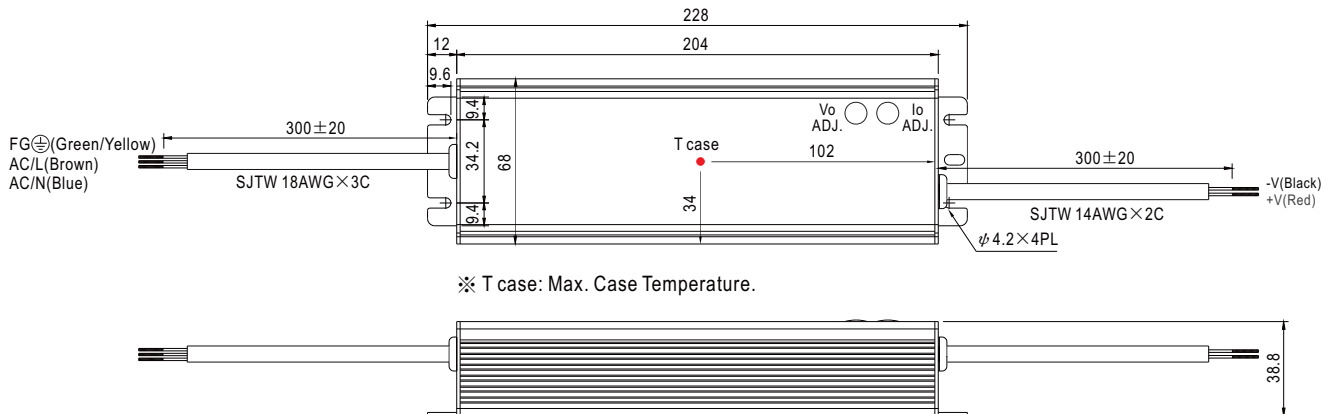
Case No.994D Unit:mm

## Blank:(HLG-185)



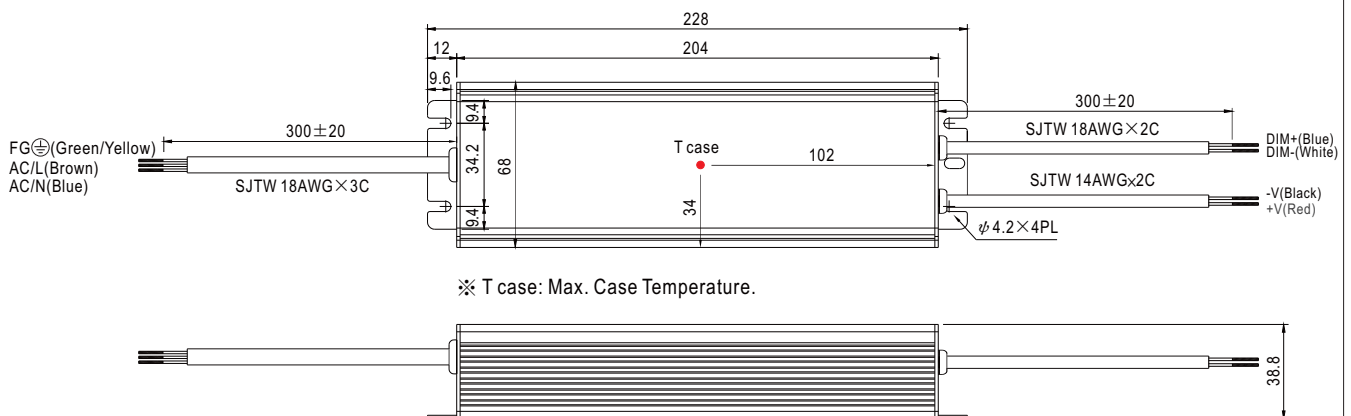
※IP67 rated. Cable for I/O connection.

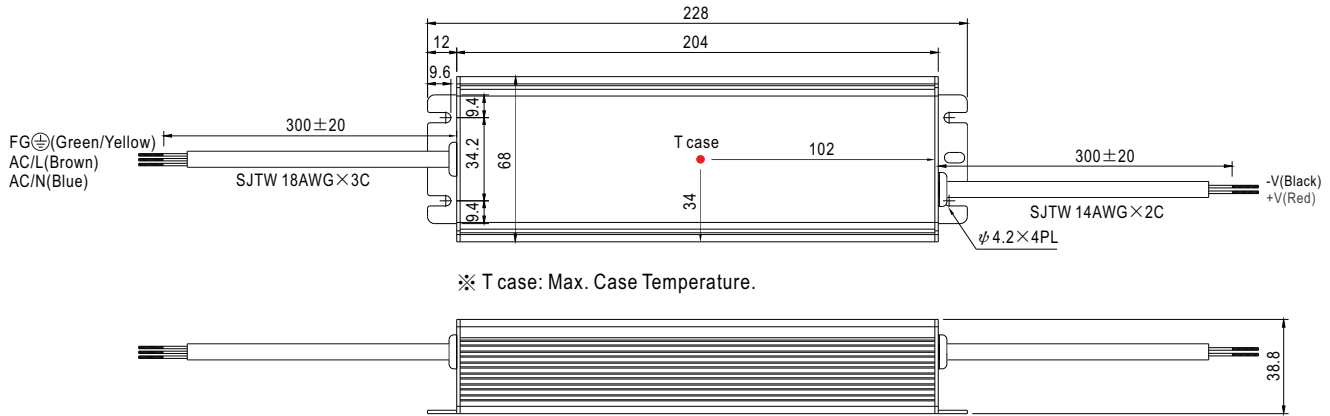
## A Type:(HLG-185-\_A)



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

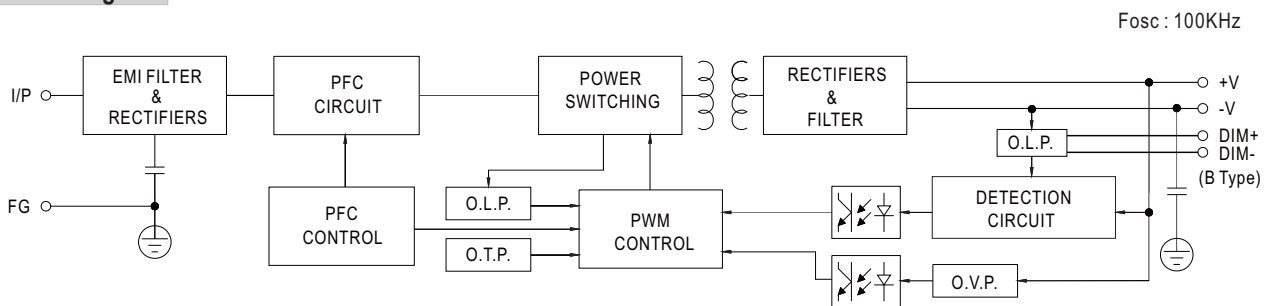
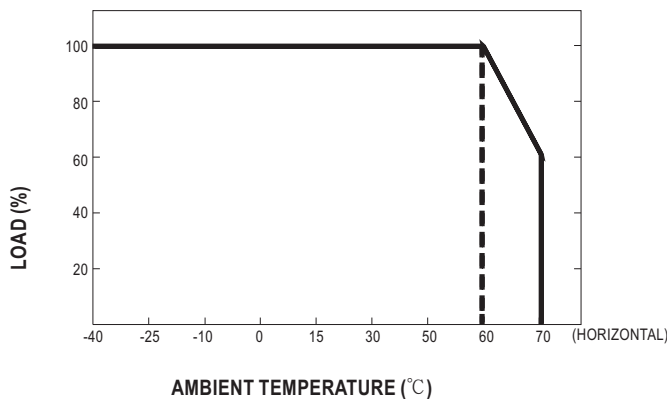
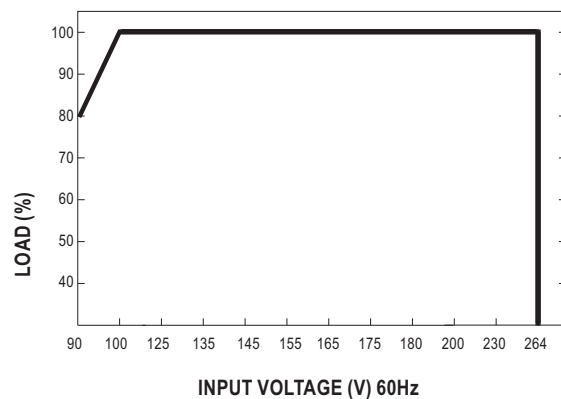
## B Type:(HLG-185-\_B)



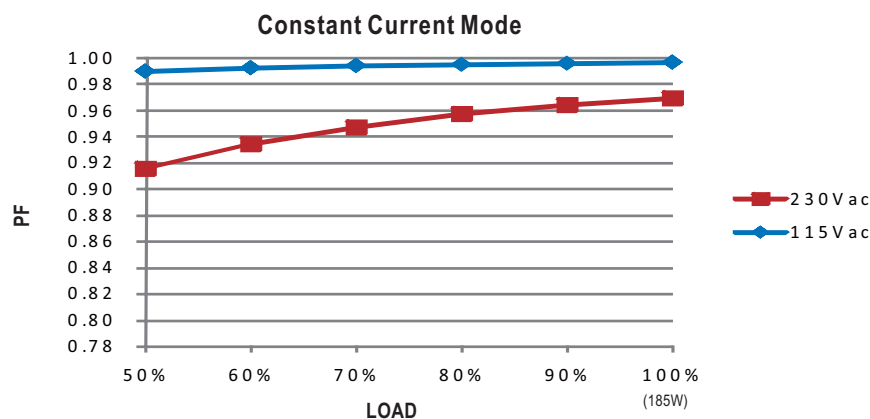
**D Type(option):(HLG-185-\_D)**


※ T case: Max. Case Temperature.

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

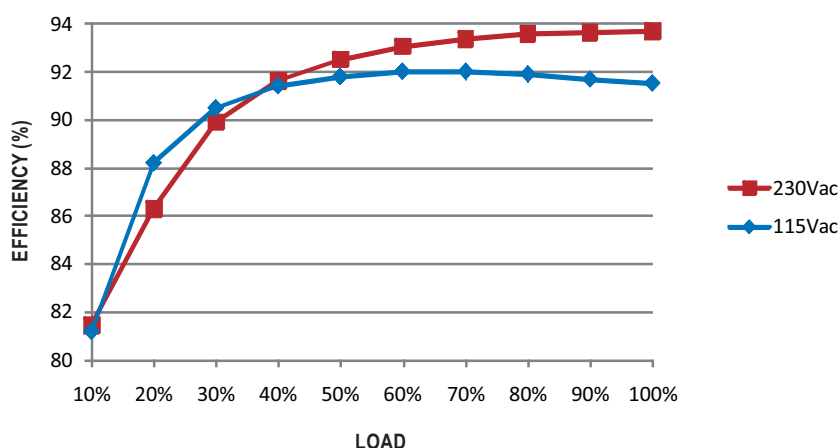
**Block Diagram**

**Derating Curve**

**Static Characteristics**


## Power Factor Characteristic



## EFFICIENCY vs LOAD (48V Model)

HLG-185 series possess superior working efficiency that up to 94% can be reached in field applications.

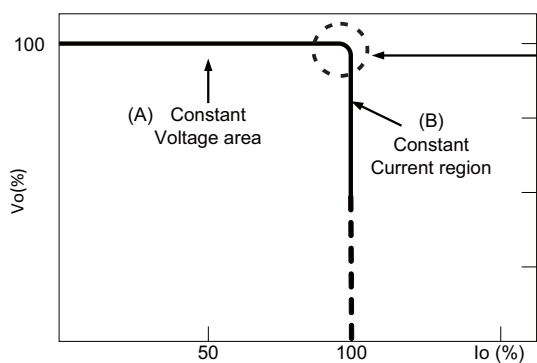


## DRIVING METHODS OF LED MODULE

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.

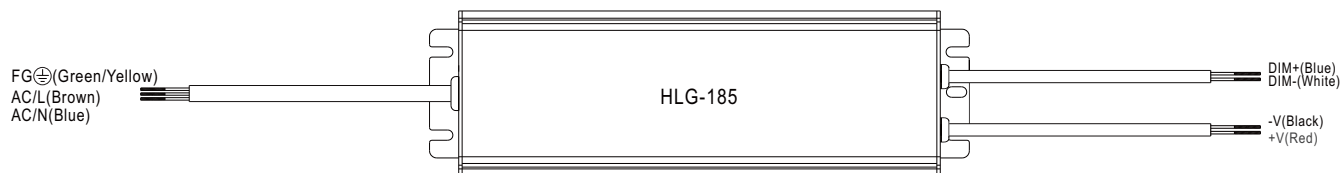
Mean Well's LED power supply with CV+ CC characteristic can be operated at both CV mode (with LED driver, at area (A) and CC mode (direct drive, at area (B)).



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.

### ■ 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 1 ~ 10Vdc or 10V PWM signal between DIM+ and DIM-.

※ Please DO NOT connect "DIM-" to "-V".

※ Reference resistance value for output current adjustment (Typical)

| Resistance value            | Single driver                                                              | 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% |

※ 1 ~ 10V dimming function for output current adjustment (Typical)

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

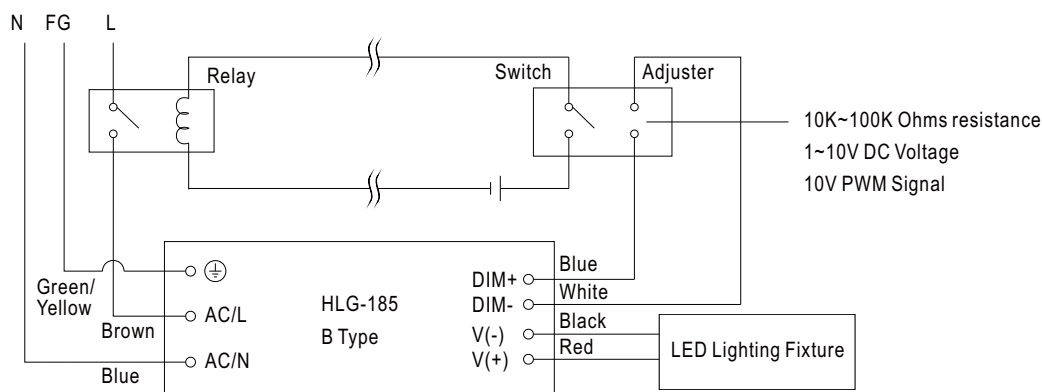
※ 10V PWM signal for output current adjustment (Typical): Frequency range :100Hz ~ 3KHz

| 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% |

※ Using the built-in dimming function on B-type model can't turn the lighting fixture totally dark. Please refer to the connection method below to achieve 0% brightness of the lighting fixture connecting to the LED power supply unit.

※ Direct connecting to LEDs is suggested, but is not suitable for using additional drivers.

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



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

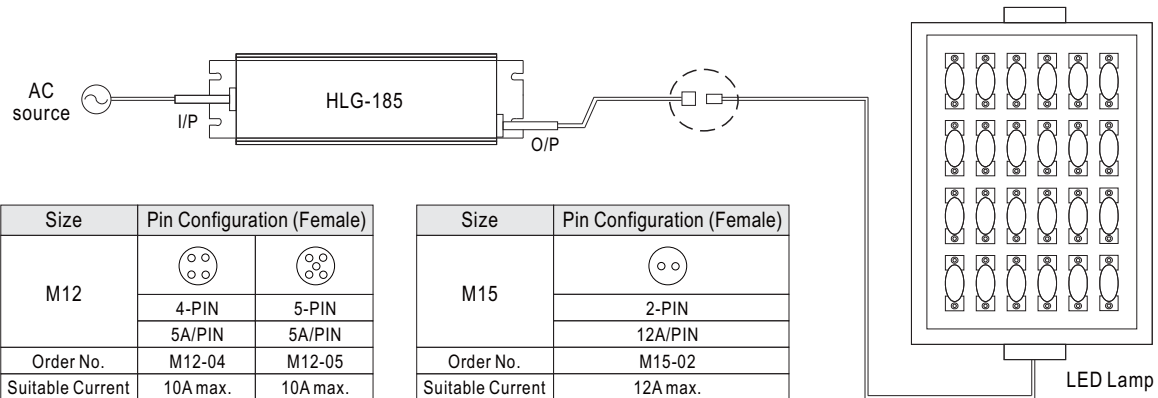
1. Output constant current level can be adjusted through output cable by connecting a resistance or 1~10Vdc or 10V PWM signal between DIM+ and DIM-.

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

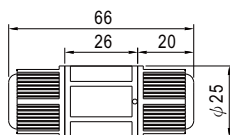
## WATERPROOF CONNECTION

### Waterproof connector

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



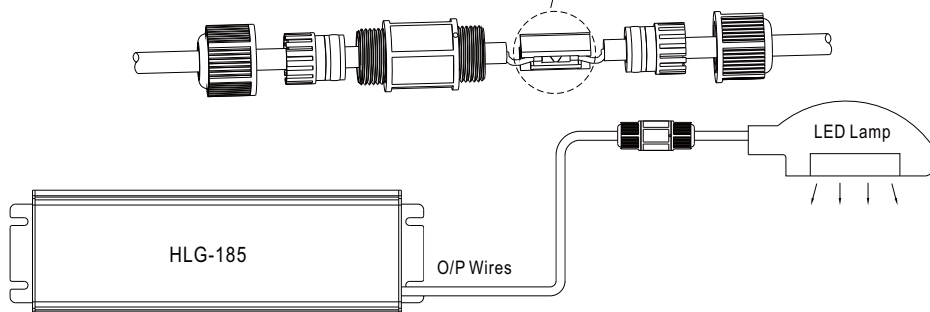
### Cable Joiner



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



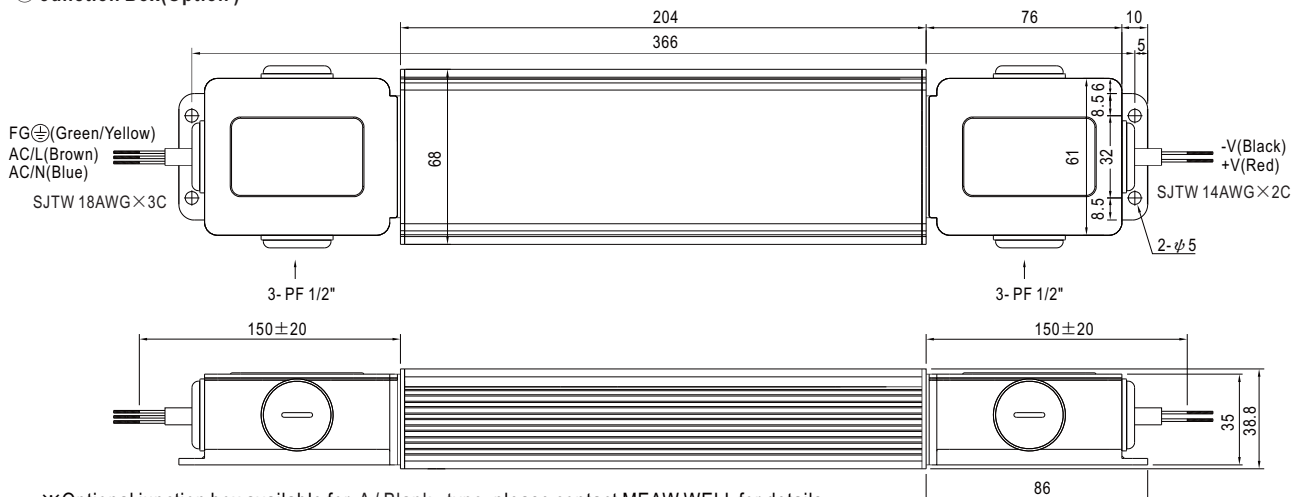
Up to four wires can be connected through this cable joiner by soldering or clamping by tools.



※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 / Blank - type, please contact MEAN WELL for details.