



## Features

- Constant Current mode output
- Metal housing with Class I design
- Built-in active PFC function
- IP67 / IP65 design for indoor or outdoor installations
- Function options: output adjustable via potentiometer; 3 in 1 dimming; Timer dimming
- Typical lifetime>62000 hours
- 7 years warranty

## Applications

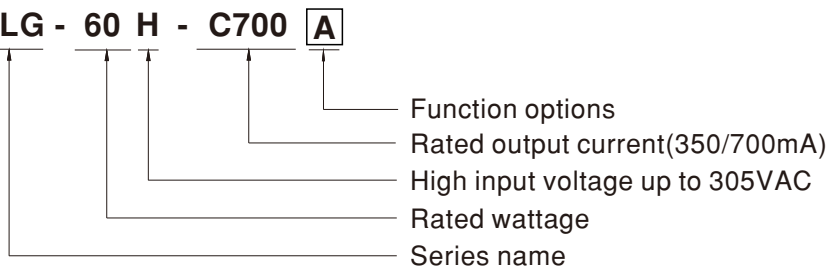
- LED street lighting
- LED fishing lamp
- LED harbor lighting
- LED building architectural lighting
- LED greenhouse lighting
- LED bay lighting

## Description

HLG-60H-C series is a 70W AC/DC LED driver featuring the constant current mode and high voltage output. HLG-60H-C operates from 90~305VAC and offers models with different rated current ranging between 350mA and 700mA. Thanks to the high efficiency up to 91%, with the fanless design, the entire series is able to operate for -40°C ~ +80°C case temperature under free air convection. The design of metal housing and IP67/IP65 ingress protection level allows this series to fit both indoor and outdoor applications. HLG-60H-C is equipped with various function options, such as dimming methodologies, so as to provide the optimal design flexibility for LED lighting system.

## Model Encoding

**HLG - 60 H - C700 A**

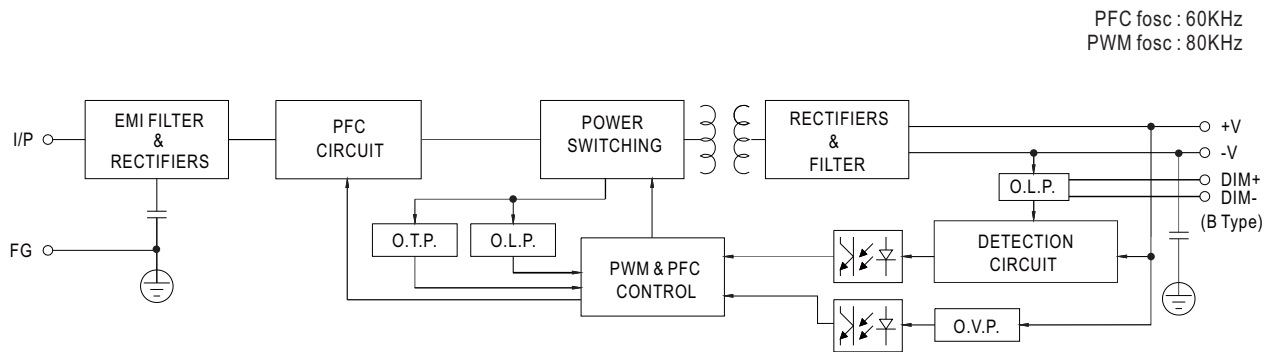


| Type | IP Level | Function                                                                                                        | Note       |
|------|----------|-----------------------------------------------------------------------------------------------------------------|------------|
| A    | IP65     | Io adjustable through built-in potentiometer.                                                                   | In Stock   |
| B    | IP67     | 3 in 1 dimming function (1~10Vdc, 10V PWM signal and resistance)                                                | In Stock   |
| AB   | IP65     | Io adjustable through built-in potentiometer & 3 in 1 dimming function (1~10Vdc, 10V PWM signal and resistance) | In Stock   |
| D    | IP67     | Timer dimming function, contact MEAN WELL for details(safety pending).                                          | By request |

**SPECIFICATION**

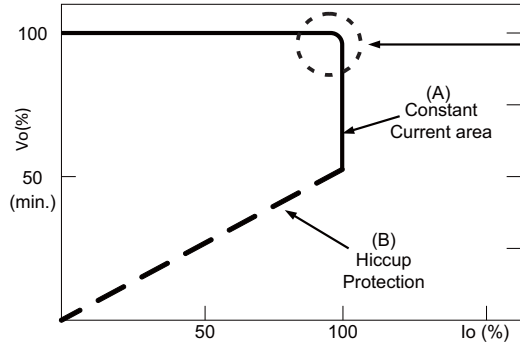
| MODEL                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | HLG-60H-C350                                                                                                                                     |  | HLG-60H-C700 |  |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------|--|
| OUTPUT                            | RATED CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 350mA                                                                                                                                            |  | 700mA        |  |
|                                   | RATED POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 70W                                                                                                                                              |  | 70W          |  |
|                                   | CONSTANT CURRENT REGION <small>Note.2</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 100 ~ 200V                                                                                                                                       |  | 50 ~ 100V    |  |
|                                   | CURRENT ADJ. RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Adjustable for A/AB-Type only (via built-in potentiometer)                                                                                       |  |              |  |
|                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 210 ~ 350mA                                                                                                                                      |  | 420 ~ 700mA  |  |
|                                   | CURRENT RIPPLE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 5.0% max. @rated current                                                                                                                         |  |              |  |
|                                   | CURRENT TOLERANCE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ±5%                                                                                                                                              |  |              |  |
| SET UP TIME <small>Note.4</small> | 750ms/115VAC, 500ms/230VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                  |  |              |  |
| INPUT                             | VOLTAGE RANGE <small>Note.3</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 90 ~ 305VAC      127 ~ 431VDC<br>(Please refer to "STATIC CHARACTERISTIC" section)                                                               |  |              |  |
|                                   | FREQUENCY RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 47 ~ 63Hz                                                                                                                                        |  |              |  |
|                                   | POWER FACTOR (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | PF ≥ 0.98/115VAC, PF ≥ 0.96/230VAC, PF ≥ 0.94/277VAC @full load<br>(Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)                  |  |              |  |
|                                   | TOTAL HARMONIC DISTORTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | THD< 20% (@ load ≥ 60% /115VAC, 230VAC; @ load ≥ 75%/277VAC)<br>(Please refer to "TOTAL HARMONIC DISTORTION (THD)" section)                      |  |              |  |
|                                   | EFFICIENCY (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 91%                                                                                                                                              |  | 90.5%        |  |
|                                   | AC CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0.69A / 115VAC      0.35A / 230VAC      0.29A / 277VAC                                                                                           |  |              |  |
|                                   | INRUSH CURRENT(Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | COLD START 60A(twidth=275μs measured at 50% Ipeak) at 230VAC; Per NEMA 410                                                                       |  |              |  |
|                                   | MAX. No. of PSUs on 16A CIRCUIT BREAKER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 8 units (circuit breaker of type B) / 13 units (circuit breaker of type C) at 230VAC                                                             |  |              |  |
|                                   | LEAKAGE CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <0.75mA / 277VAC                                                                                                                                 |  |              |  |
| PROTECTION                        | SHORT CIRCUIT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Hiccup mode, recovers automatically after fault condition is removed                                                                             |  |              |  |
|                                   | OVER VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 230 ~ 250V                                                                                                                                       |  | 120 ~ 140V   |  |
|                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Shut down o/p voltage with auto-recovery or re-power on to recovery                                                                              |  |              |  |
|                                   | OVER TEMPERATURE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Shut down o/p voltage, re-power on to recover                                                                                                    |  |              |  |
| ENVIRONMENT                       | WORKING TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Tcase=-40 ~ +80℃ (Please refer to "OUTPUT LOAD vs TEMPERATURE" section)                                                                          |  |              |  |
|                                   | MAX. CASE TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Tcase=+80℃                                                                                                                                       |  |              |  |
|                                   | WORKING HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 10 ~ 95% RH non-condensing                                                                                                                       |  |              |  |
|                                   | STORAGE TEMP., HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | -40 ~ +80℃, 10 ~ 95% RH                                                                                                                          |  |              |  |
|                                   | TEMP. COEFFICIENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ±0.03%/℃ (0 ~ 50℃)                                                                                                                               |  |              |  |
|                                   | VIBRATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes                                                                          |  |              |  |
| SAFETY & EMC                      | SAFETY STANDARDS <small>Note.6</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | UL8750, CSA C22.2 No. 250.0-08, EN/AS/NZS 61347-1, EN/AS/NZS 61347-2-13 independent, GB19510.1, GB19510.14, EAC TP TC 004, IP65 or IP67 approved |  |              |  |
|                                   | WITHSTAND VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | I/P-O/P:3.75KVAC    I/P-FG:2KVAC    O/P-FG:1.5KVAC                                                                                               |  |              |  |
|                                   | ISOLATION RESISTANCE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25℃ / 70% RH                                                                                        |  |              |  |
|                                   | EMC EMISSION <small>Note.6</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Compliance to EN55015, EN61000-3-2 Class C (@ load ≥ 60%) ; EN61000-3-3, GB17743 and GB17625.1, EAC TP TC 020                                    |  |              |  |
|                                   | EMC IMMUNITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, EN61547, heavy industry level (surge immunity Line-Earth 4KV, Line-Line 2KV), EAC TP TC 020        |  |              |  |
| OTHERS                            | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 878.1K hrs min.    Telcordia SR-332 (Bellcore) ;    338K hrs min.    MIL-HDBK-217F (25℃)                                                         |  |              |  |
|                                   | DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 171*61.5*36.8 mm (L*W*H)                                                                                                                         |  |              |  |
|                                   | PACKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0.73Kg; 20pcs/15.6Kg/0.9CUFT                                                                                                                     |  |              |  |
| NOTE                              | 1. All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25℃ of ambient temperature.<br>2. Please refer to "DRIVING METHODS OF LED MODULE".<br>3. De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details.<br>4. Length of set up time is measured at first cold start. Turning ON/OFF the driver may lead to increase of the set up time.<br>5. The driver 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>6. To fulfill requirements of the latest ErP regulation for lighting fixtures, this LED driver can only be used behind a switch without permanently connected to the mains.<br>7. This series meets the typical life expectancy of >62,000 hours of operation when Tcase, particularly (Tc) point (or TMP, per DLC), is about 75℃ or less.<br>8. Please refer to the warranty statement on MEAN WELL's website at <a href="http://www.meanwell.com">http://www.meanwell.com</a> .<br>9. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).<br>10. For any application note and IP water proof function installation caution, please refer our user manual before using.<br><a href="https://www.meanwell.com/Upload/PDF/LED_EN.pdf">https://www.meanwell.com/Upload/PDF/LED_EN.pdf</a> |                                                                                                                                                  |  |              |  |

## BLOCK DIAGRAM



## DRIVING METHODS OF LED MODULE

※ This series works in constant current mode to directly drive the LEDs.

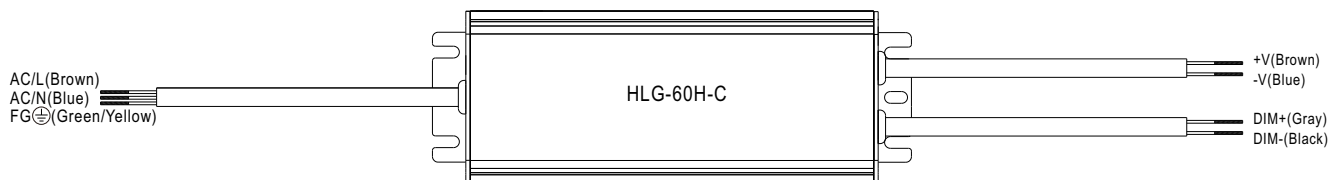


Typical output current normalized by rated current (%)

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.

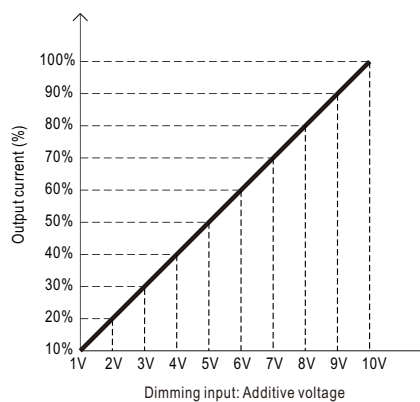
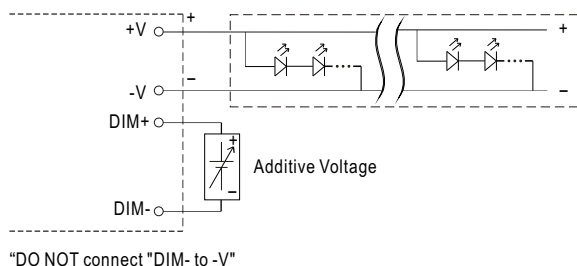
## DIMMING OPERATION



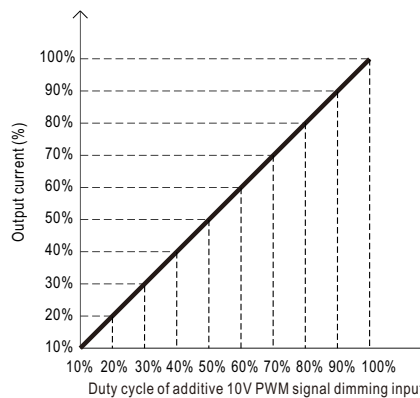
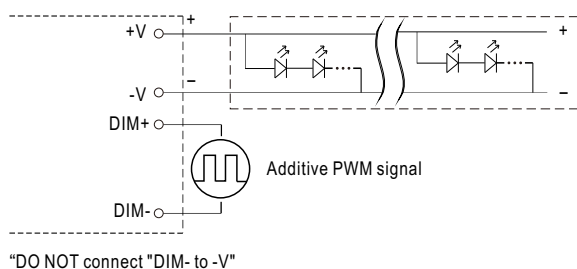
### ※ 3 in 1 dimming function (for B/AB-Type)

- Output constant current level can be adjusted by applying one of the three methodologies between DIM+ and DIM-:  
1 ~ 10VDC, or 10V PWM signal or resistance.
- Direct connecting to LEDs is suggested. It is not suitable to be used with additional drivers.
- Dimming source current from power supply: 100 $\mu$ A (typ.)

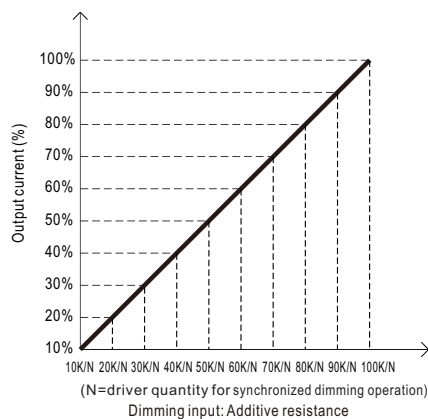
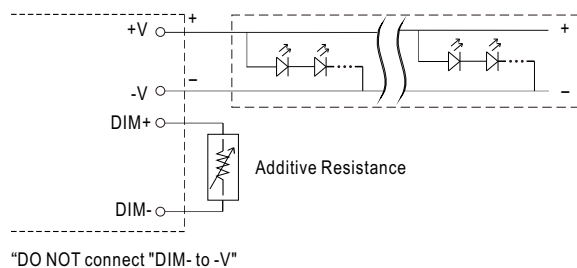
#### ◎ Applying additive 1 ~ 10VDC



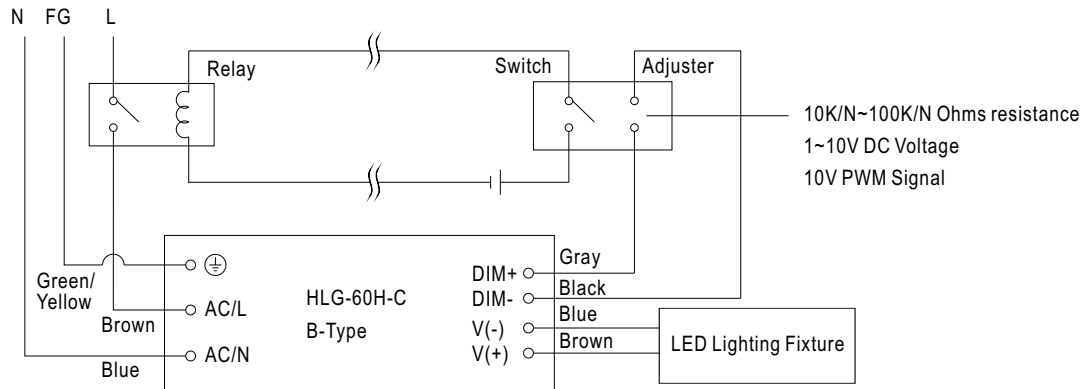
#### ◎ Applying additive 10V PWM signal (frequency range 100Hz ~ 3KHz):



#### ◎ Applying additive resistance:

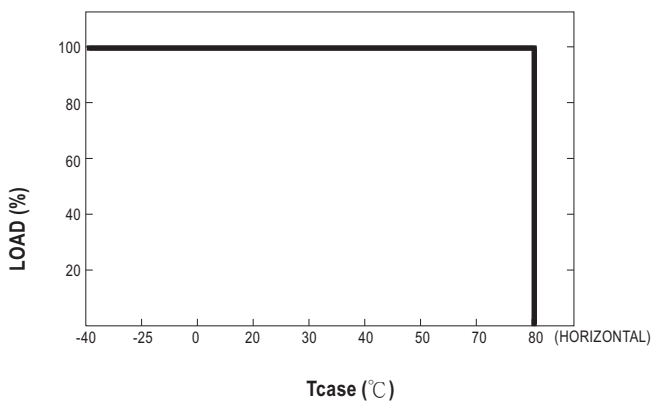
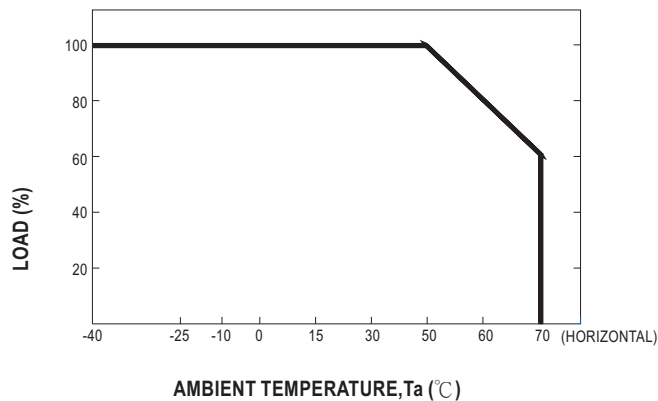


Note: In the case of turning the lighting fixture down to 0% brightness, please refer to the configuration as follow, or please contact MEAN WELL for other options.

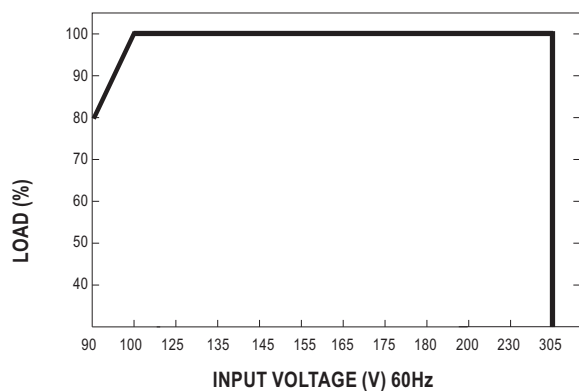


Using a switch and relay can turn ON/OFF the lighting fixture.

### ■ OUTPUT LOAD vs TEMPERATURE(Note.8)

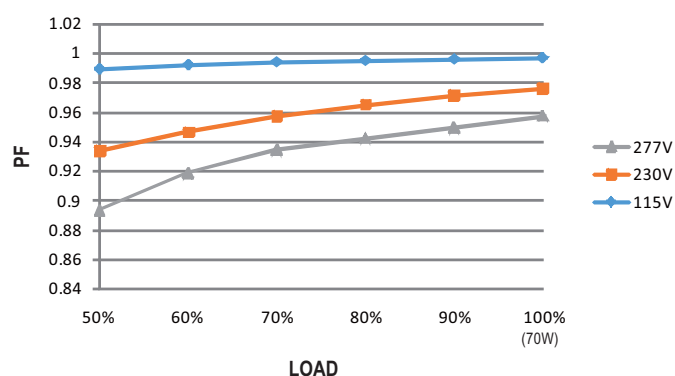


### ■ STATIC CHARACTERISTIC



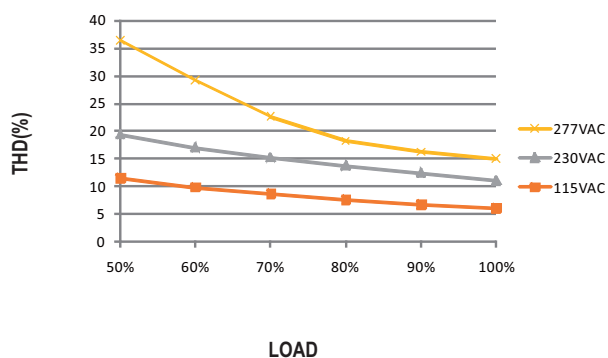
### ■ POWER FACTOR (PF) CHARACTERISTIC

※  $T_{case}$  at 70°C



### ■ TOTAL HARMONIC DISTORTION (THD)

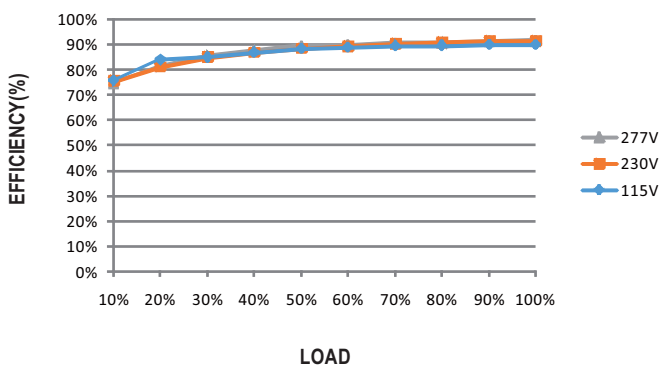
※ 350mA Model,  $T_{case}$  at 70°C



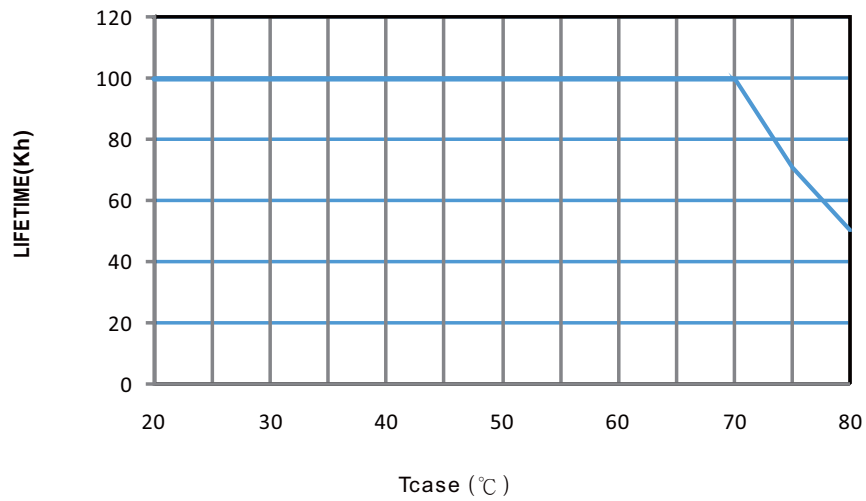
### ■ EFFICIENCY vs LOAD

HLG-60H-C series possess superior working efficiency that up to 91% can be reached in field applications.

※ 350mA Model,  $T_{case}$  at 70°C



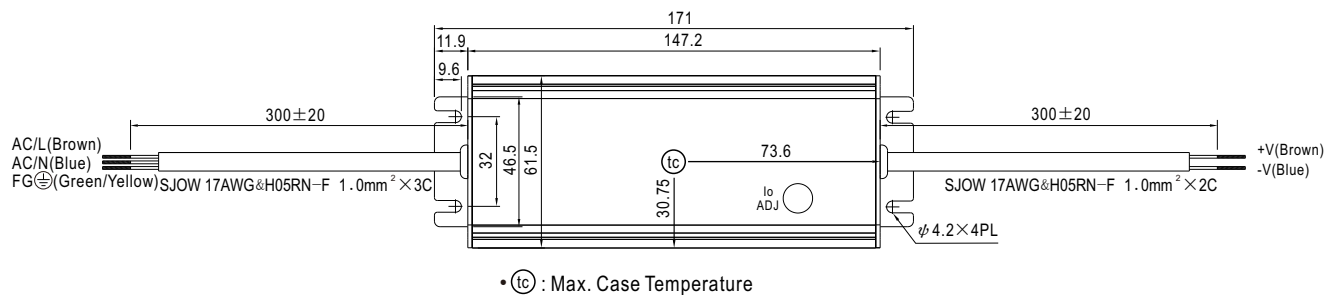
■ LIFE TIME



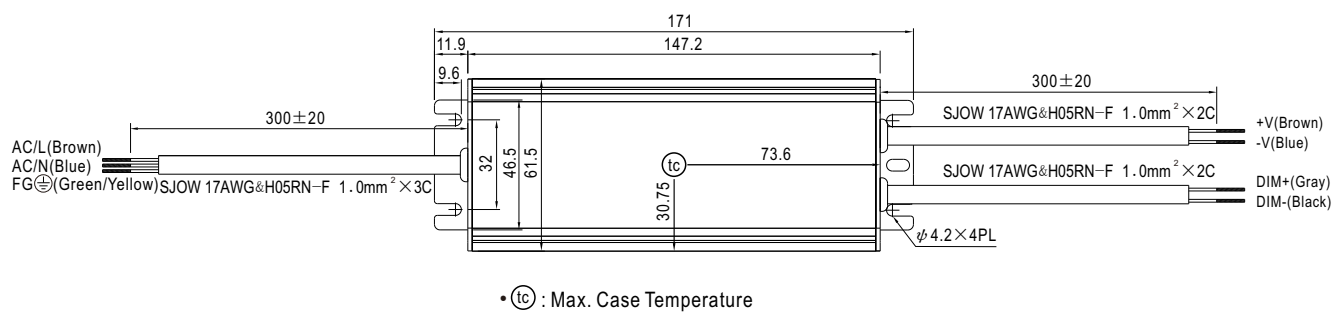
## MECHANICAL SPECIFICATION

Case No.957 Unit:mm

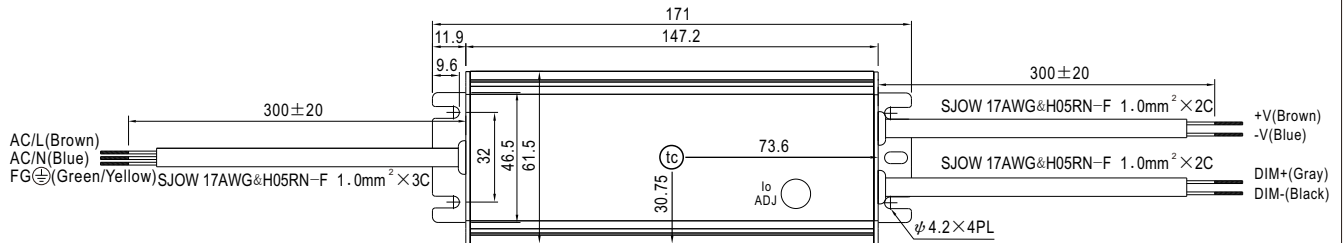
### ※ A-Type



### ※ B-Type



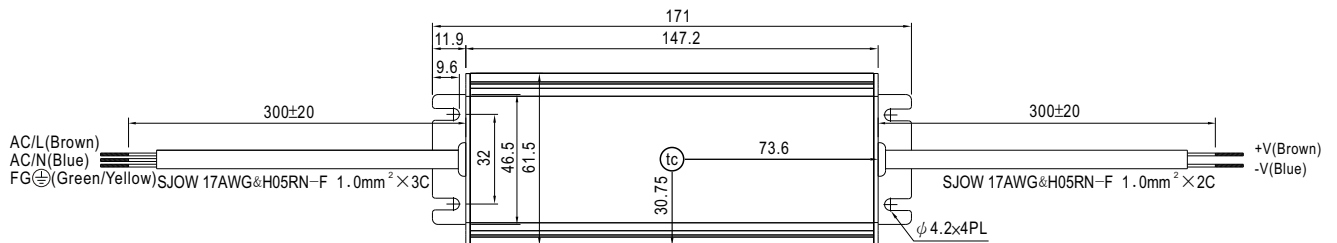
※ AB-Type



•  $t_c$  : Max. Case Temperature



※ D-Type



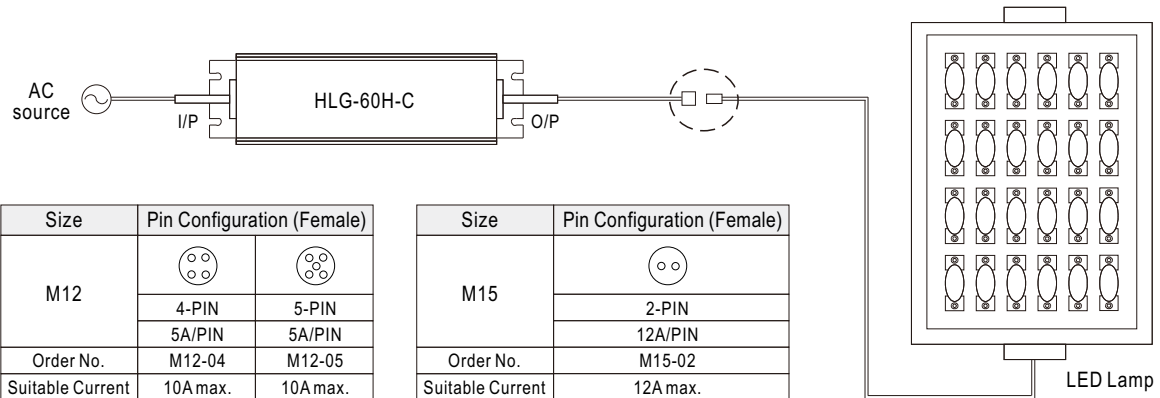
•  $t_c$  : Max. Case Temperature



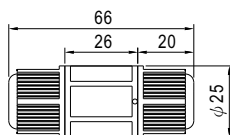
## WATERPROOF CONNECTION

### Waterproof connector

Waterproof connector can be assembled on the output cable of HLG-60H-C to operate in dry/wet/damp or outdoor environment.



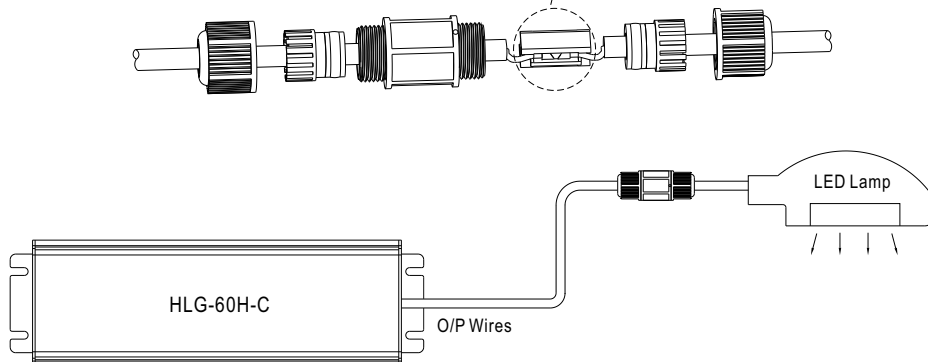
### Cable Joiner



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.

## INSTALLATION MANUAL

Please refer to : <http://www.meanwell.com/manual.html>