



120W Constant Voltage PWM Output LED Driver

**PWM-120** series

User's Manual



Click Me

AC Input: 100-240Vac  
(for DA2-Type only)

IS 15885

(for 12,24 Blank  
and DA2 Type)

## Features

- Constant voltage PWM style output
- Emergency lighting application is available according to IEC61347-2-13
- Built-in active PFC function and class II design
- No load power consumption <0.5W/ standby power consumption <0.5W(DA2-type)
- Fully encapsulated with IP67 level
- Function options: 3 in 1 dimming (dim-to-off); DALI-2
- Minimum dimming level 0.2% for DALI-2 type
- Typical lifetime>50000 hours and 5 years warranty

## Applications

- LED strip lighting
- Indoor LED lighting
- LED decorative lighting
- LED architecture lighting
- Industrial lighting
- Type "HL" for use in class I, division 2 hazardous (classified) location.

## GTIN CODE

MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

## Description

PWM-120 series is a 120W AC/DC LED driver featuring the constant voltage mode with PWM style output, which is able to maintain the color temperature and the brightness homogeneity when driving all kinds of LED strips. PWM-120 operates from 90~305VAC and offers models with different rated voltage ranging between 12V and 48V. Thanks to the high efficiency up to 90.5%, with the fanless design, the entire series is able to operate for -40℃ ~ +90℃ case temperature under free air convection. The entire series is rated with IP67 ingress protection level and is suitable to work for dry, damp or wet locations. PWM-120 is equipped with dimming function that varies the duty cycle of the output, providing great flexibility for LED strips applications.

## Model Encoding

PWM - 120 - 36 □

Function options

Rated output voltage(12/24/36/48V)

Rated wattage

Series name

| Type  | IP Level | Function                                                         | Note     |
|-------|----------|------------------------------------------------------------------|----------|
| Blank | IP67     | 3 in 1 dimming function (0~10Vdc, 10V PWM signal and resistance) | In stock |
| DA2   | IP67     | DALI-2 control technology.(for 12V/24V with DA2 Type only )      | In stock |

## SPECIFICATION

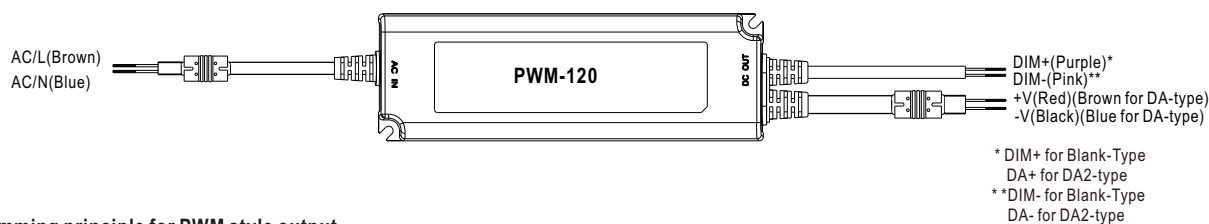
| MODEL        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | PWM-120-12                                                                                                                                                                                                                                                                                                                                                                                        | PWM-120-24 | PWM-120-36 | PWM-120-48 |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|------------|
| OUTPUT       | DC VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 12V                                                                                                                                                                                                                                                                                                                                                                                               | 24V        | 36V        | 48V        |
|              | RATED CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 10A                                                                                                                                                                                                                                                                                                                                                                                               | 5A         | 3.4A       | 2.5A       |
|              | RATED POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 120W                                                                                                                                                                                                                                                                                                                                                                                              | 120W       | 122.4W     | 120W       |
|              | DIMMING RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0 ~ 100%                                                                                                                                                                                                                                                                                                                                                                                          |            |            |            |
|              | PWM FREQUENCY (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1.47kHz for Blank-Type, 2.5kHz for DA2-Type                                                                                                                                                                                                                                                                                                                                                       |            |            |            |
|              | SETUP, RISE TIME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 500ms, 80ms/ 230VAC or 115VAC                                                                                                                                                                                                                                                                                                                                                                     |            |            |            |
|              | HOLD UP TIME (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 16ms/230VAC or 115VAC                                                                                                                                                                                                                                                                                                                                                                             |            |            |            |
| INPUT        | VOLTAGE RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 90 ~ 305VAC      127 ~ 431VDC<br>(Please refer to "STATIC CHARACTERISTIC" section)                                                                                                                                                                                                                                                                                                                |            |            |            |
|              | FREQUENCY RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 47 ~ 63Hz                                                                                                                                                                                                                                                                                                                                                                                         |            |            |            |
|              | POWER FACTOR (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | PF>0.97/115VAC, PF>0.96/230VAC, PF>0.93/277VAC @ 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" section)                                                                                                                                                                                                                                                                                     |            |            |            |
|              | EFFICIENCY (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 88.5%                                                                                                                                                                                                                                                                                                                                                                                             | 90%        | 90%        | 90.5%      |
|              | AC CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1.3A / 115VAC      0.65A / 230VAC      0.55A / 277VAC                                                                                                                                                                                                                                                                                                                                             |            |            |            |
|              | INRUSH CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | COLD START 60A(twidth=520μs measured at 50% Ipeak) at 230VAC; Per NEMA 410                                                                                                                                                                                                                                                                                                                        |            |            |            |
|              | MAX. NO. of PSUs on 16A CIRCUIT BREAKER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 4 units (circuit breaker of type B) / 6 units (circuit breaker of type C) at 230VAC                                                                                                                                                                                                                                                                                                               |            |            |            |
|              | LEAKAGE CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <0.25mA / 277VAC                                                                                                                                                                                                                                                                                                                                                                                  |            |            |            |
|              | NO LOAD/STANDBY POWER CONSUMPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No load power consumption<0.5w for blank-type;standby power consumption<0.5W for DA2-type                                                                                                                                                                                                                                                                                                         |            |            |            |
| PROTECTION   | OVERLOAD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 108 ~ 130% rated output power<br>Hiccup mode, recovers automatically after fault condition is removed                                                                                                                                                                                                                                                                                             |            |            |            |
|              | SHORT CIRCUIT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 12V/24V hiccup mode and 36V/48V shut down mode(except for DA2-type)<br>Hiccup mode,recovers automatically after fault condition is removed (only for DA2-type)                                                                                                                                                                                                                                    |            |            |            |
|              | OVER VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 15 ~ 17V                                                                                                                                                                                                                                                                                                                                                                                          | 28 ~ 34V   | 41 ~ 46V   | 54 ~ 60V   |
|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Shut down o/p voltage, re-power on to recover                                                                                                                                                                                                                                                                                                                                                     |            |            |            |
|              | OVER TEMPERATURE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Shut down o/p voltage, re-power on to recover                                                                                                                                                                                                                                                                                                                                                     |            |            |            |
| ENVIRONMENT  | WORKING TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Tcase=-40 ~ +90℃ (Please refer to " OUTPUT LOAD vs TEMPERATURE" section)                                                                                                                                                                                                                                                                                                                          |            |            |            |
|              | MAX. CASE TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Tcase=+90℃                                                                                                                                                                                                                                                                                                                                                                                        |            |            |            |
|              | WORKING HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 20 ~ 95% RH non-condensing                                                                                                                                                                                                                                                                                                                                                                        |            |            |            |
|              | STORAGE TEMP., HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | -40 ~ +80℃, 10 ~ 95% RH                                                                                                                                                                                                                                                                                                                                                                           |            |            |            |
|              | TEMP. COEFFICIENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | ±0.03%/℃ (0 ~ 45℃,except 0 ~ 40℃ for 12V)                                                                                                                                                                                                                                                                                                                                                         |            |            |            |
|              | VIBRATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes                                                                                                                                                                                                                                                                                                                           |            |            |            |
| SAFETY & EMC | SAFETY STANDARDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | UL8750( type "HL" ), CSA C22.2 No. 250.13-12; ENEC BS EN/EN61347-1, BS EN/EN61347-2-13, BS EN/EN62384 independent, IP67,BIS IS 15885(Part2/Sec13)(for 12,24 Blank and DA2 Type), EAC TP TC 004, GB/T19510.1,GB/T19510.213 approved; Design refer to BS EN/EN60335-1; According to BS EN/EN61347-2-13 appendix J suitable for emergency installations(EL)(AC Input: 100-240Vac)(for DA2-Type only) |            |            |            |
|              | DALI STANDARDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | IEC62386-101, 102, 207,251 for DA2-Type only, Device type 6(DT6)                                                                                                                                                                                                                                                                                                                                  |            |            |            |
|              | WITHSTAND VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | I/P-O/P:3.75KVAC; I/P-DA:1.5KVAC; O/P-DA:1.5KVAC                                                                                                                                                                                                                                                                                                                                                  |            |            |            |
|              | ISOLATION RESISTANCE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | I/P-O/P:100M Ohms / 500VDC / 25℃ / 70% RH                                                                                                                                                                                                                                                                                                                                                         |            |            |            |
|              | EMC EMISSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Compliance to BS EN/EN55015, BS EN/EN61000-3-2 Class C (@load ≥ 60%) ; BS EN/EN61000-3-3,GB/T 17743, GB17625.1;EAC TP TC 020                                                                                                                                                                                                                                                                      |            |            |            |
|              | EMC IMMUNITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11; BS EN/EN61547, light industry level (surge immunity Line-Line 2KV), EAC TP TC 020                                                                                                                                                                                                                                                                   |            |            |            |
| OTHERS       | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 2243.7K hrs min.      Telcordia SR-332 (Bellcore) ;      228.7K hrs min.      MIL-HDBK-217F (25℃)                                                                                                                                                                                                                                                                                                 |            |            |            |
|              | DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 191*63*37.5mm (L*W*H)                                                                                                                                                                                                                                                                                                                                                                             |            |            |            |
|              | PACKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0.97Kg; 15pcs/15.6Kg/0.87CUFT                                                                                                                                                                                                                                                                                                                                                                     |            |            |            |
| NOTE         | 1. All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25℃ of ambient temperature.<br>2. De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details.<br>3. 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>4. 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>(as available on <a href="https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf">https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf</a> )<br>5. This series meets the typical life expectancy of >50,000 hours of operation when Tcase, particularly Ⓢ point (or TMP, per DLC), is about 75℃or less.<br>6. Please refer to the warranty statement on MEAN WELL's website at <a href="http://www.meanwell.com">http://www.meanwell.com</a><br>7. 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>8. 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><br>9. Based on IEC 62386-101/102 DALI power on timing and interruption regulations, the set up time needs to test with a DALI controller which can support for DALI power on function, otherwise the set up time will be higher than 0.5 second for DA type.<br>※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a> |                                                                                                                                                                                                                                                                                                                                                                                                   |            |            |            |



## 120W PWM Output LED Driver

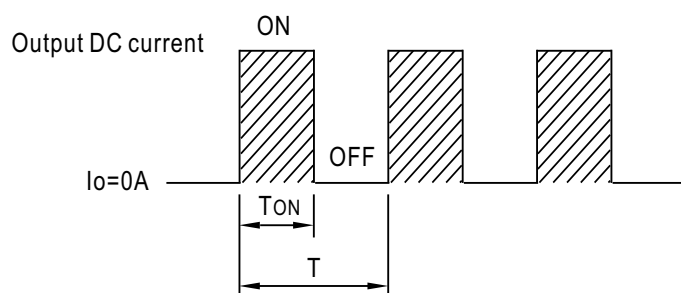
## PWM-120 series

### DIMMING OPERATION



#### ※ Dimming principle for PWM style output

- Dimming is achieved by varying the duty cycle of the output current.



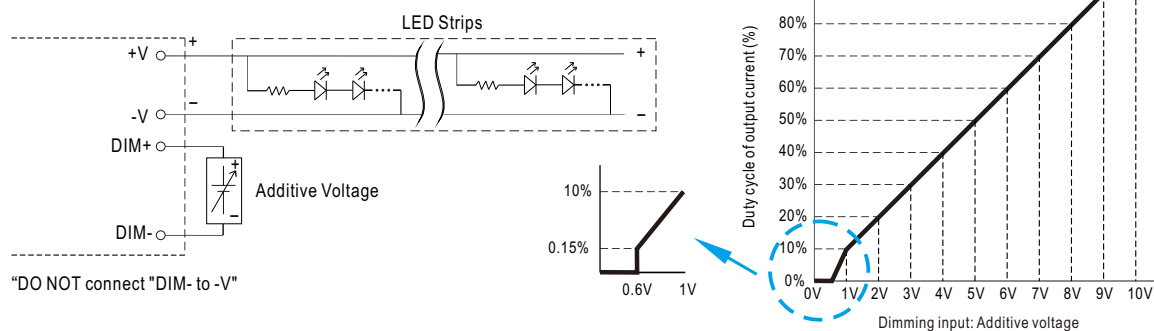
$$\text{Duty cycle(\%)} = \frac{T_{ON}}{T} \times 100\%$$

Output PWM frequency : 1.47kHz for Blank-Type  
2.5kHz for DA2-Type

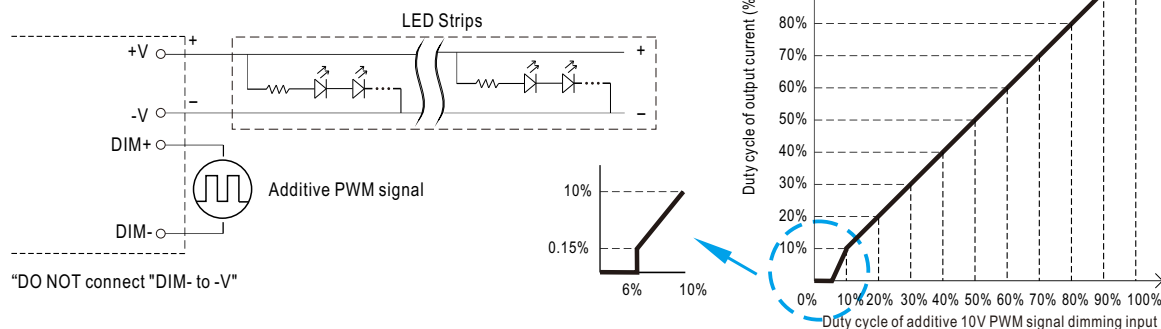
#### ※ 3 in 1 dimming function (for Blank-Type)

- Apply one of the three methodologies between DIM+ and DIM-: 0 ~ 10VDC, or 10V PWM signal or resistance.
- Dimming source current from power supply: 100μA (typ.)

#### ◎ Applying additive 0 ~ 10VDC



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

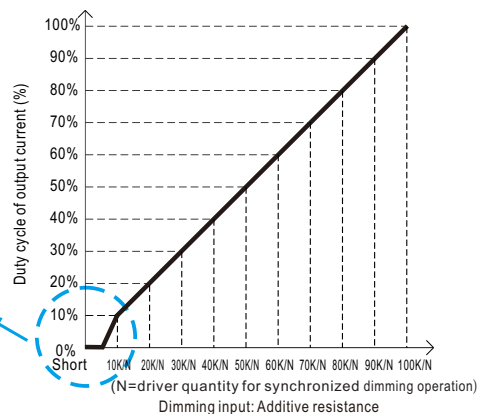
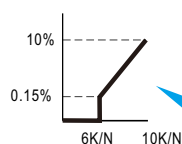
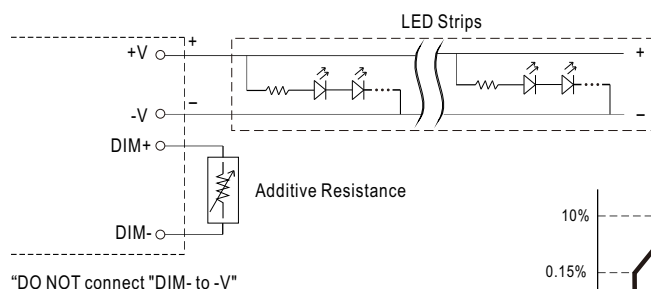




## 120W PWM Output LED Driver

## PWM-120 series

◎ Applying additive resistance:



Note : 1. Min. duty cycle of output current is about 0.15%, and the dimming input is about  $6K\Omega$  or 0.6VDC, or 10V PWM signal with 6% duty cycle.  
2. The duty cycle of output current could drop down to 0% when dimming input is less than  $6K\Omega$  or less than 0.6VDC, or 10V PWM signal with duty cycle less than 6%.

※ DALI Interface (primary side; for DA2-Type)

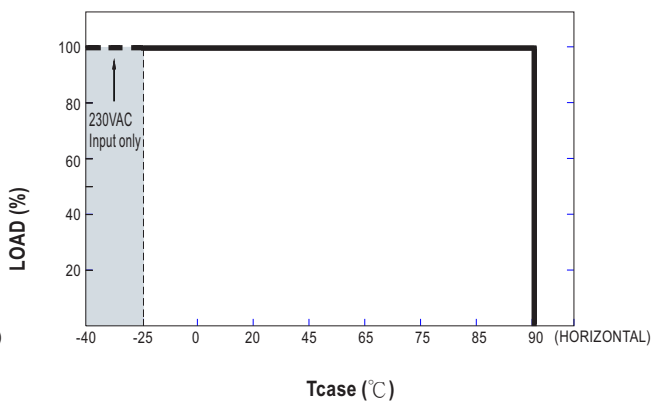
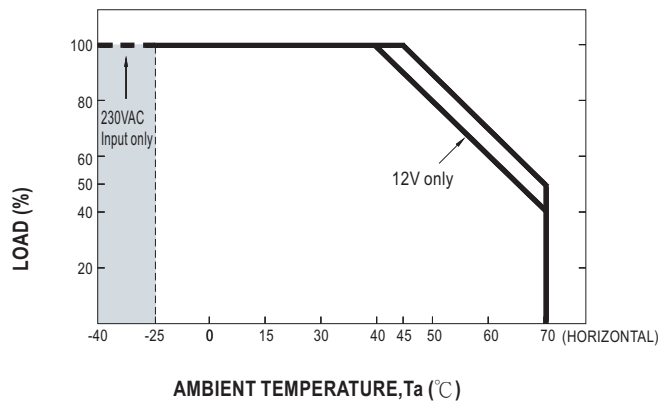
- Apply DALI signal between DA+ and DA-.
- DALI protocol comprises 16 groups and 64 addresses.
- First step is fixed at 0.2% of output



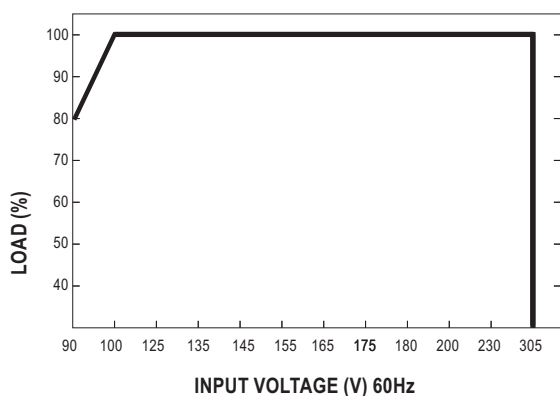
# 120W PWM Output LED Driver

# PWM-120 series

## OUTPUT LOAD vs TEMPERATURE



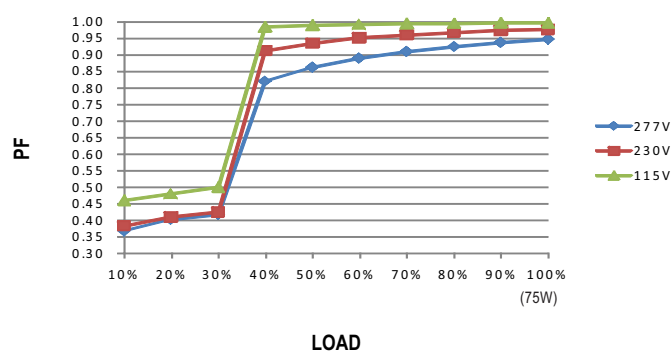
## STATIC CHARACTERISTIC



※ De-rating is needed under low input voltage.

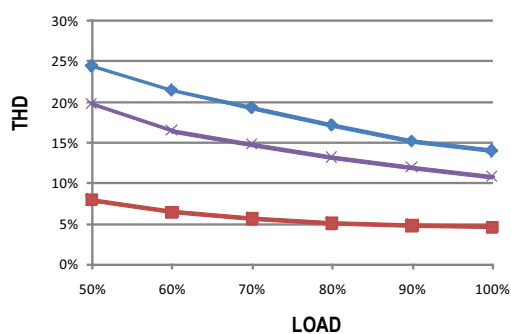
## POWER FACTOR (PF) CHARACTERISTIC

※  $T_{case}$  at 80°C



## TOTAL HARMONIC DISTORTION (THD)

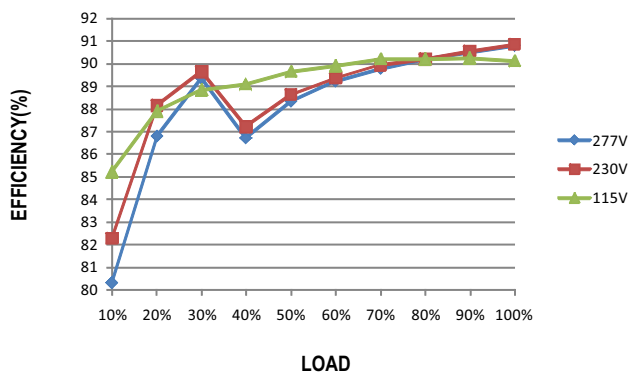
※ 48V Model,  $T_{case}$  at 80°C



## EFFICIENCY vs LOAD

PWM-120 series possess superior working efficiency that up to 90.5% can be reached in field applications.

※ 48V Model,  $T_{case}$  at 80°C

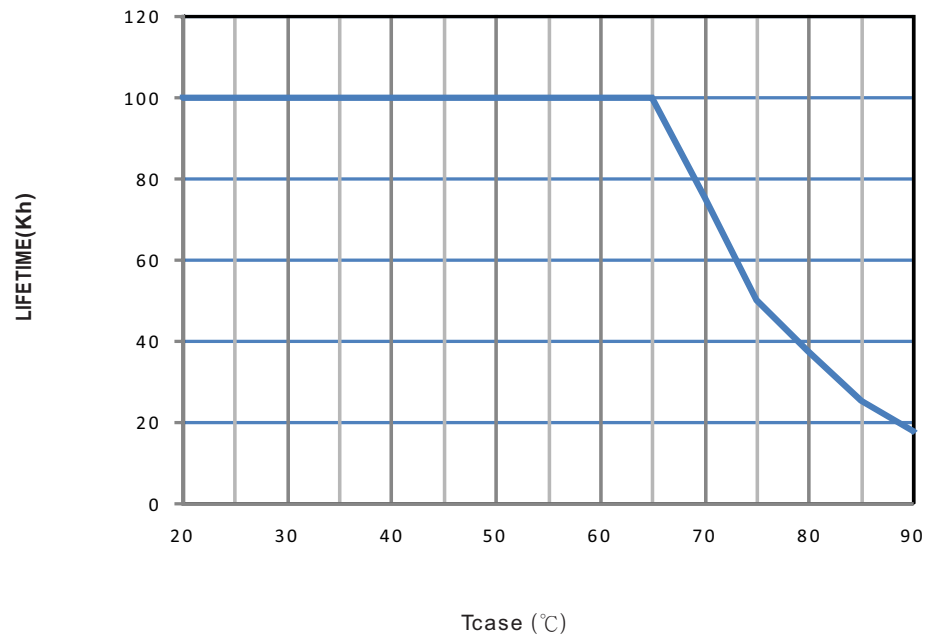




120W PWM Output LED Driver

**PWM-120** series

■ LIFE TIME

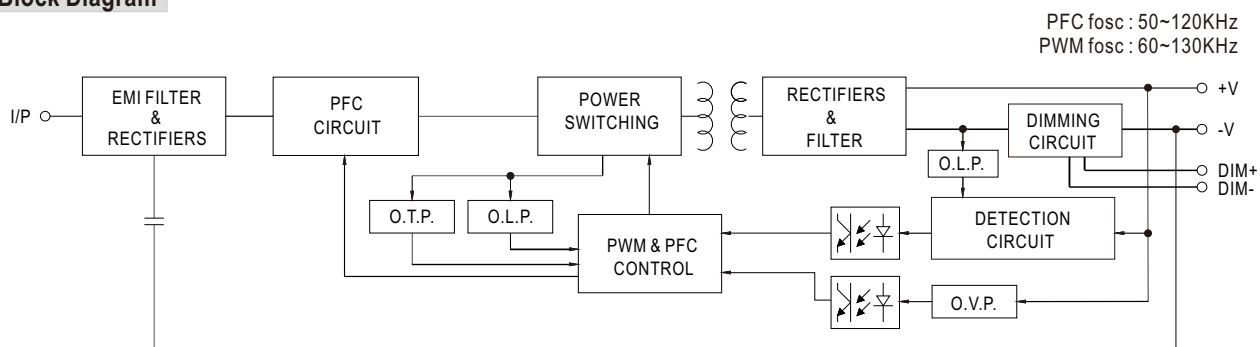




# 120W PWM Output LED Driver

# PWM-120 series

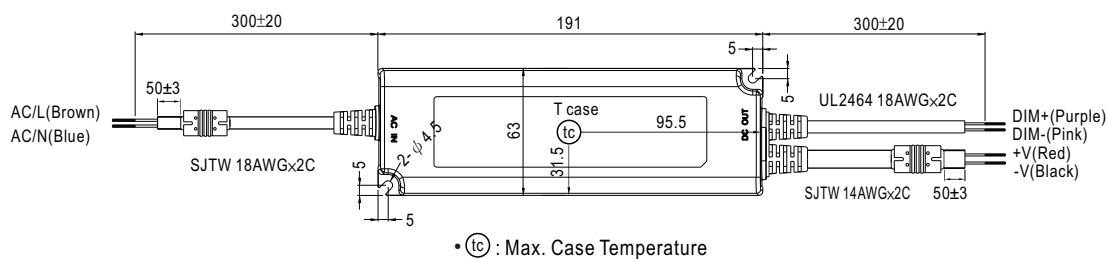
## Block Diagram



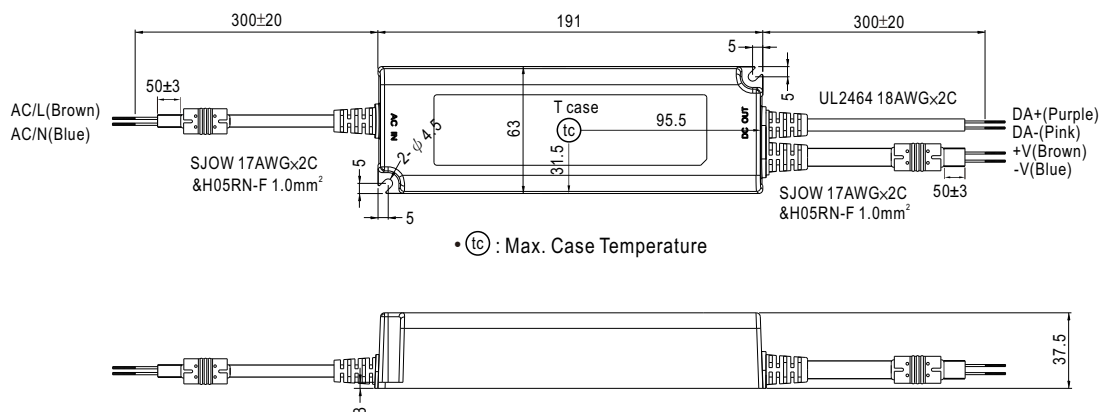
## Mechanical Specification

Case No. PWM-120 Unit:mm Tolerance:±1

### Blank-Type



### DA2-Type





120W PWM Output LED Driver

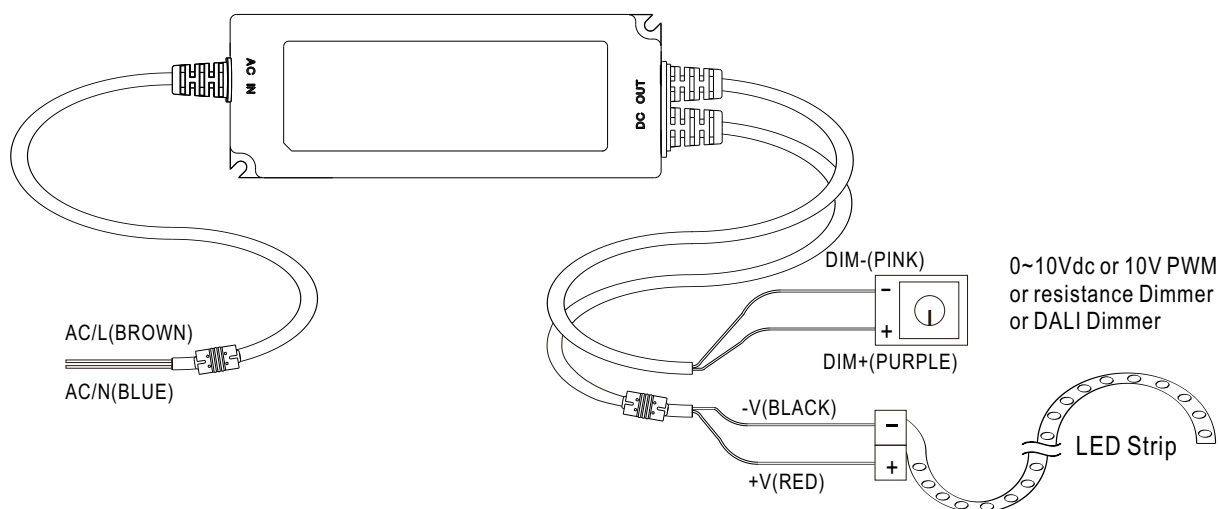
**PWM-120** series

### ■ Recommend Mounting Direction



### ■ Installation Manual

#### ◎ Connection for Blank-type



#### ◎ Cautions

- Before commencing any installation or maintenance work, please disconnect the power supply from the utility. Ensure that it cannot be re-connected inadvertently!
- Keep proper ventilation around the unit and do not stack any object on it. Also a 10-15 cm clearance must be kept when the adjacent device is a heat source.
- Mounting orientations other than standard orientation or operate under high ambient temperature may increase the internal component temperature and will require a de-rating in output current.
- Current rating of an approved primary /secondary cable should be greater than or equal to that of the unit. Please refer to its specification.
- For LED drivers with waterproof connectors, verify that the linkage between the unit and the lighting fixture is tight so that water cannot intrude into the system.
- For dimmable LED drivers, make sure that your dimming controller is capable of driving these units. PWM series require 0.15mA each unit.
- Tc max. is identified on the product label. Please make sure that temperature of Tc point will not exceed limit.
- DO NOT connect "DIM- to -V".
- Suitable for indoor use or outdoor use without direct sunlight exposure. Please avoid immerse in the water over 30 minutes.
- 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.