



User's Manual



CASAMBI



■ Features

- Bluetooth wireless LED driver
- Constant voltage PWM style output with frequency up to 4kHz compliant IEEE1789-2015
- Plastic housing with class II design
- Built-in active PFC function
- Typical lifetime >50000 hrs and 5 years warranty

■ Applications

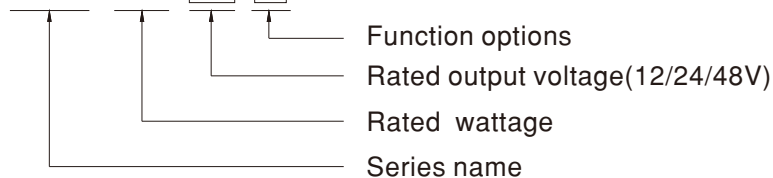
- LED strip lighting
- Indoor LED lighting
- LED decorative lighting
- LED architecture lighting
- Cove lighting
- Type “HL” for use in class I, division 2 hazardous (classified) location.

■ GTIN CODE

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

■ Model Encoding

PWM - 200 - 48



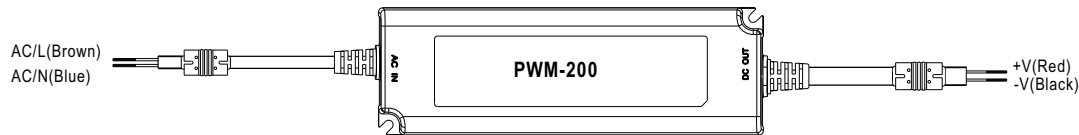
IoT wireless lighting brand and solution

| Type | Solution | Wireless standard | Note |
|------|----------|---|------------|
| BLE2 | Casambi | Bluetooth Mesh low energy 2.4GHz protocol | By request |

SPECIFICATION

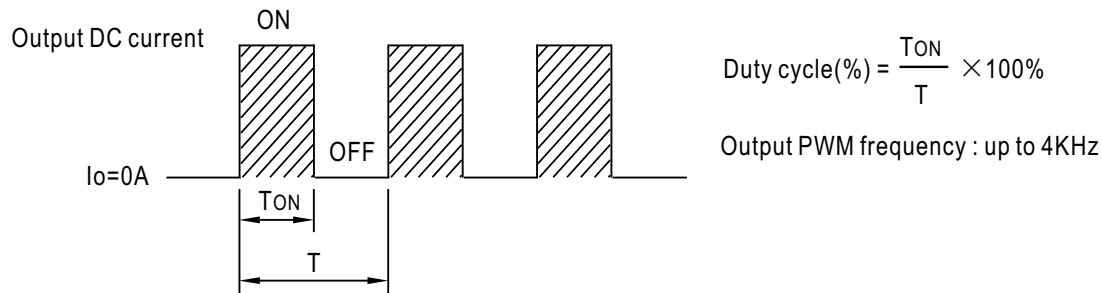
| ORDER NO | | PWM-200-12BLE2 | PWM-200-24BLE2 | PWM-200-48BLE2 |
|------------------|---|---|--|----------------|
| MODEL | | PWM-200-12 | PWM-200-24 | PWM-200-48 |
| OUTPUT | DC VOLTAGE | 12V | 24V | 48V |
| | RATED CURRENT | 15A | 8.3A | 4.17A |
| | RATED POWER | 180W | 199.2W | 200.2W |
| | DIMMING RANGE | 0 ~ 100% | | |
| | PWM FREQUENCY (Typ.) | 4kHz | | |
| | SETUP, RISE TIME Note.2 | 1000ms, 80ms/115VAC or 230VAC | | |
| | HOLD UP TIME (Typ.) | 10ms/230VAC or 115VAC | | |
| INPUT | VOLTAGE RANGE Note.3 | 100 ~ 305VAC 142 ~ 431VDC (Please refer to "STATIC CHARACTERISTIC" section) | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | |
| | POWER FACTOR (Typ.) | PF>0.97/115VAC, PF>0.96/230VAC, PF>0.94/277VAC @ full load (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section) | | |
| | TOTAL HARMONIC DISTORTION | THD<20%(@load≥60%/115VAC, 230VAC; @load≥75%/277VAC) (Please refer to "TOTAL HARMONIC DISTORTION" section) | | |
| | EFFICIENCY(Typ.) | 92% | 93% | 94% |
| | AC CURRENT (Typ.) | 2.2A / 115VAC | 1.1A / 230VAC | 0.9A / 277VAC |
| | INRUSH CURRENT (Typ.) | COLD START 65A(twidth=550μs measured at 50% Ipeak) at 230VAC; Per NEMA 410 | | |
| | MAX. NO. of PSUs on 16A CIRCUIT BREAKER | 3 units (circuit breaker of type B) / 6 units (circuit breaker of type C) at 230VAC | | |
| | LEAKAGE CURRENT | <0.75mA / 277VAC | | |
| | STANDBY POWER CONSUMPTION | Standby power consumption<2.5W when dimming off | | |
| | PROTECTION | OVERLOAD | 108 ~ 135% rated output power Hiccup mode or Constant current limiting, recovers automatically after fault condition is removed | |
| SHORT CIRCUIT | | Shut down o/p voltage, re-power on to recover | | |
| OVER VOLTAGE | | 13 ~ 18V | 27 ~ 34V | 53 ~ 65V |
| | | Shut down o/p voltage, re-power on to recover after fault condition is removed | | |
| OVER TEMPERATURE | | Shut down o/p voltage, re-power on to recover after fault condition is removed | | |
| ENVIRONMENT | WORKING TEMP. | Tcase=-20 ~ +85℃ (Please refer to " OUTPUT LOAD vs TEMPERATURE" section) | | |
| | MAX. CASE TEMP. | Tcase=+85℃ | | |
| | WORKING HUMIDITY | 20 ~ 95% RH non-condensing | | |
| | STORAGE TEMP., HUMIDITY | -20 ~ +80℃, 10 ~ 95% RH | | |
| | TEMP. COEFFICIENT | ±0.03%/℃ (0 ~ 50℃) | | |
| | VIBRATION | 10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes | | |
| FUNCTION | WIERLESS PROTOCOL | Bluetooth low energy 2.4GHz protocol | | |
| | WIERLESS DISTANCE | Up to 40m(open area) | | |
| | DIMMING | Please refer to "DIMMING OPERATION" section | | |
| SAFETY & EMC | SAFETY STANDARDS | UI8750(type "HL"), CSA C22.2 No. 250.13-12; ENEC BS EN/EN61347-1, BS EN/EN61347-2-13, BS EN/EN62384 independent, EAC TP TC 004 approved | | |
| | WITHSTAND VOLTAGE | I/P-O/P: 3.75KVAC | | |
| | ISOLATION RESISTANCE | I/P-O/P: 100M Ohms / 500VDC / 25℃ / 70% RH | | |
| | EMC EMISSION | Refer to BS EN/EN55015, BS EN/EN61000-3-2 Class C (@load≥60%) ; BS EN/EN61000-3-3, EAC TP TC 020 | | |
| | EMC IMMUNITY | Refer 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 | 2413.4 K hrs min. Telcordia SR-332 (Bellcore) ; 211.1 K hrs min. MIL-HDBK-217F (25℃) | | |
| | DIMENSION | 195*68*39.5mm (L*W*H) | | |
| | PACKING | 1.03Kg; 12pcs/13.4Kg/0.71CUFT | | |
| NOTE | 1. All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25℃ of ambient temperature. 2. 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. 3. De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details. 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. (as available on https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf) 5. This series meets the typical life expectancy of >50,000 hours of operation when Tcase, particularly (Tc) point (or TMP, per DLC), is about 75℃ or less. 6. Please refer to the warranty statement on MEAN WELL's website at http://www.meanwell.com 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). 8. It is not recommended to connect to capacitive loads. 9. To fulfill requirements of the latest ErP regulation for lighting fixtures, this LED power supply can only be used behind a switch without permanently connected to the mains. ※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx | | | |

■ DIMMING OPERATION



※ Dimming principle for PWM style output

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



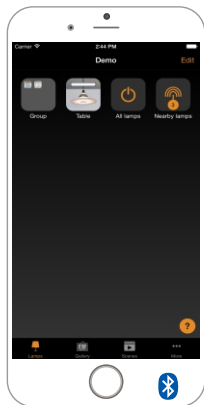
※ Bluetooth control

- To be used through APP available on Apple Store and Google Play Store for iOS and Android.

Example:



The APP is "Casambi"



■ OFFICIAL WEBSITE AND ECOSYSTEM INFORMATION

CASAMBI

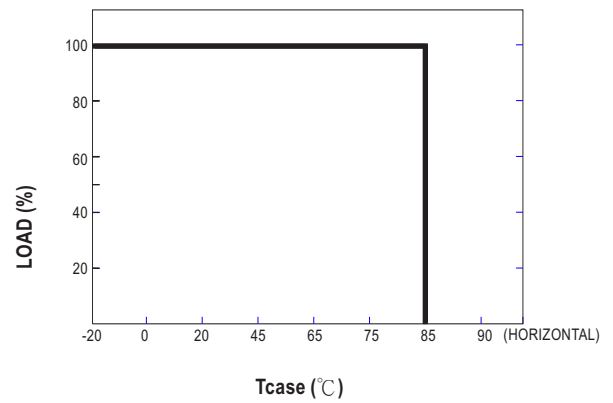
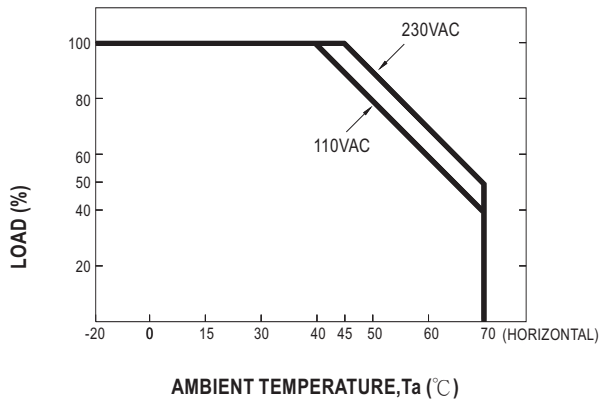
The real time Bluetooth IC temperature is shown in the APP. In case it reaches above 65 °C (equivalent to Tc 80°C), the driver will be turn off to provide a protection. In case the units is cooled down, it can be manually turn ON and back to normal operation again.

NOTE: 1.This software temperature protection is an extra independent function from driver its own hardware over temperature protection(when it is enabled, it needs re-AC power on to recover).

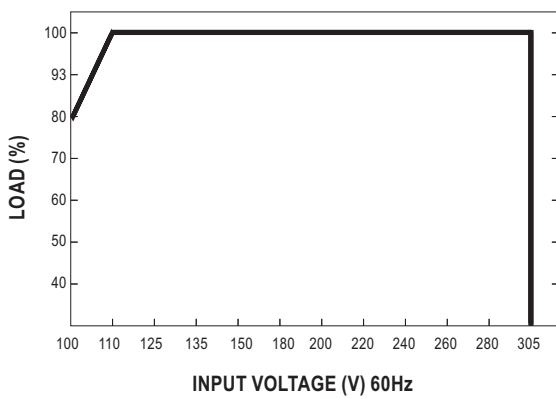
2.In general the software temperature protection is triggered before the hardware one when in over temperature.

3.Website: <https://www.casambi.com>

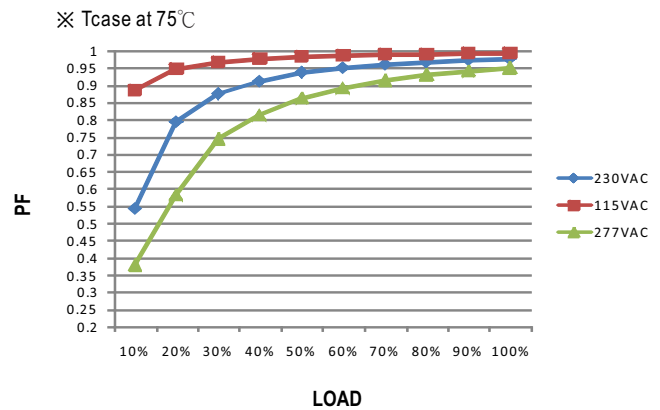
■ OUTPUT LOAD vs TEMPERATURE



■ STATIC CHARACTERISTIC

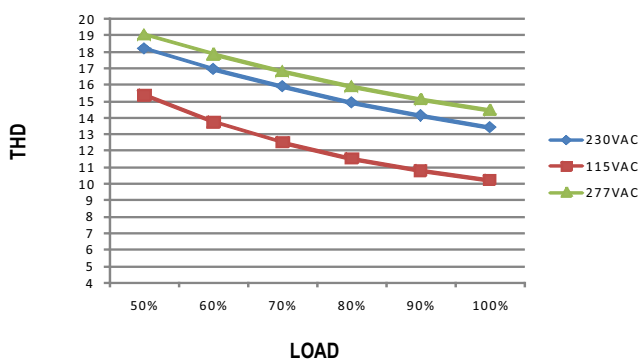


■ POWER FACTOR (PF) CHARACTERISTIC



■ TOTAL HARMONIC DISTORTION (THD)

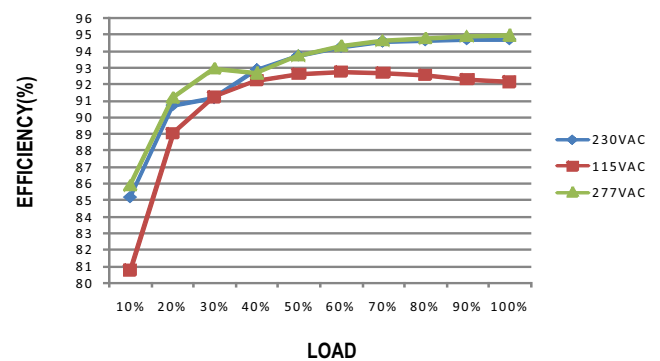
※ 48V Model, T_{case} at 75°C



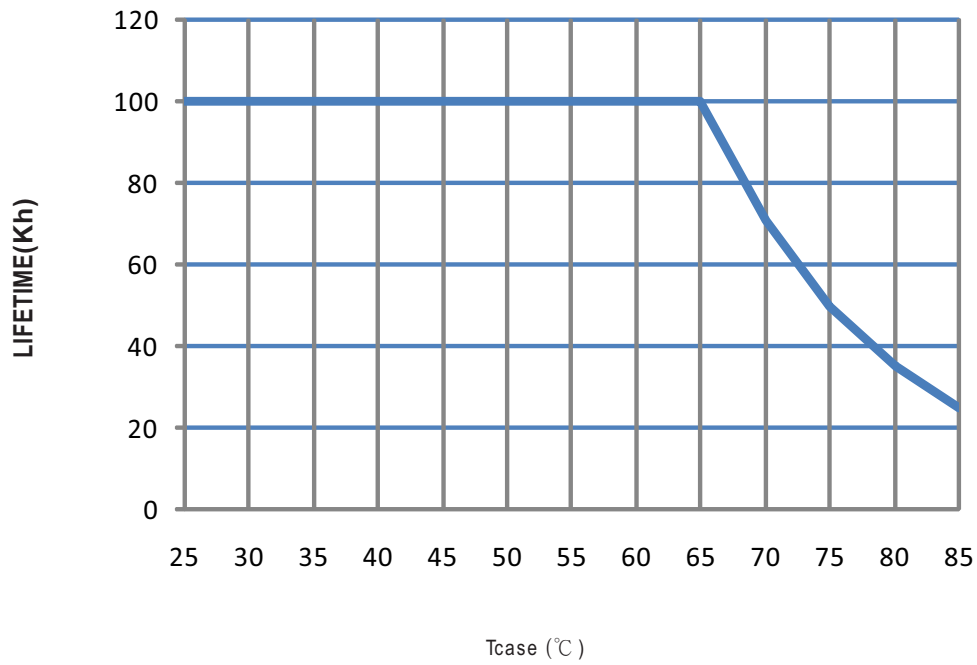
■ EFFICIENCY vs LOAD

PWM-200 series possess superior working efficiency that up to 94% can be reached in field applications.

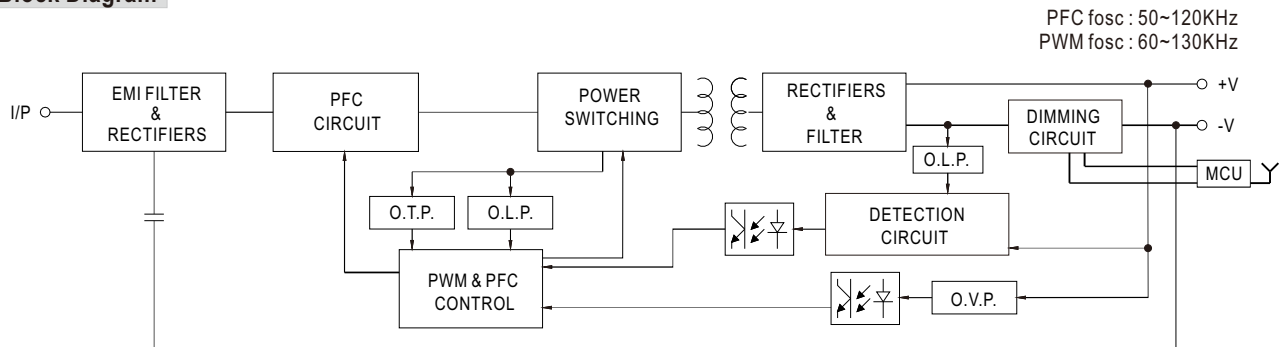
※ 48V Model, T_{case} at 75°C



■ LIFE TIME



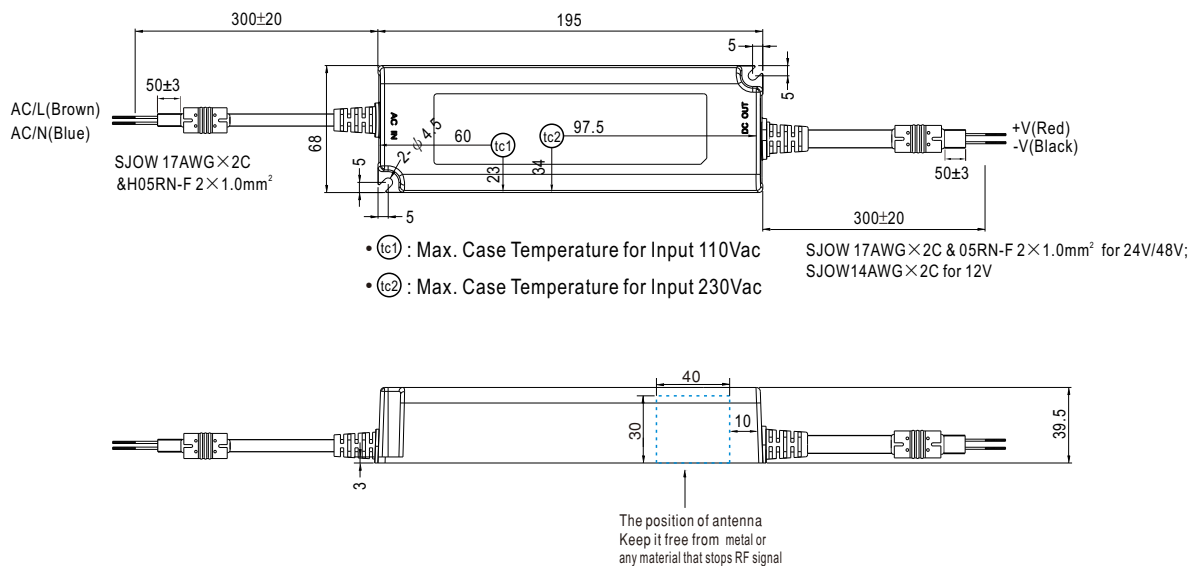
Block Diagram



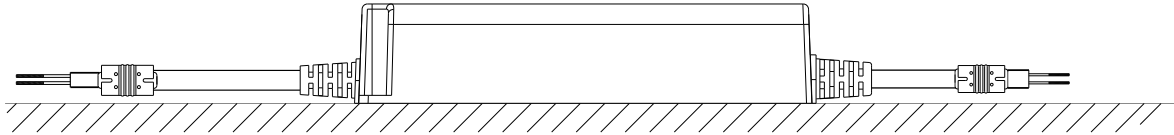
Mechanical Specification

Case No. PWM-200

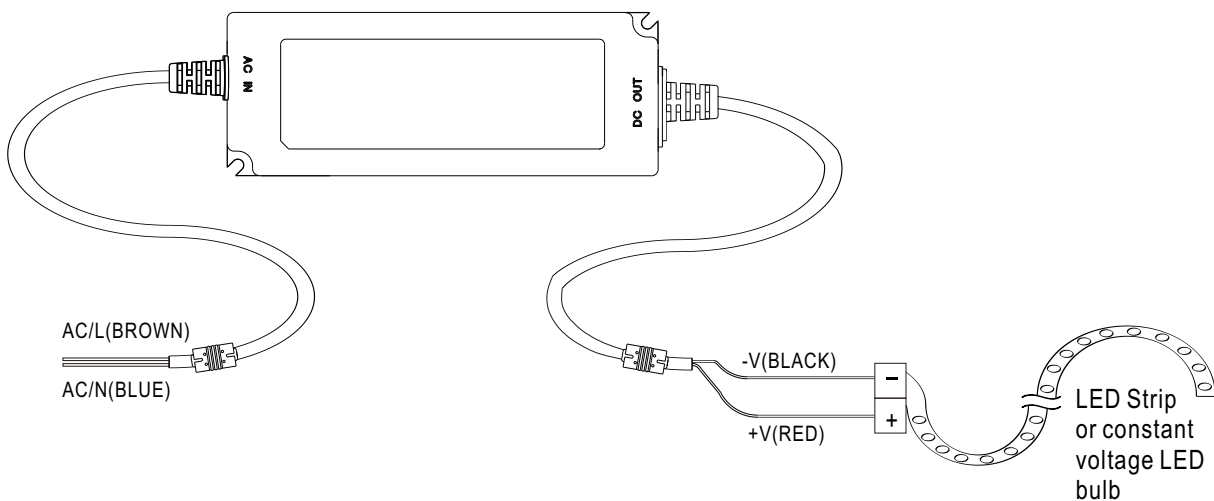
Unit:mm



■ Recommend Mounting Direction



■ Installation Manual



⊙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.
- Tc max. is identified on the product label. Please make sure that temperature of Tc point will not exceed limit.
- 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.