

SPECIFICATION

FD-200K series waterproof power supply

Product Name: FD-200K-260X

Summarize: 200W LED Driver

Version: V00

Release date: 2022-05-09

Customer ID : _____**Customer Model :** _____**Products Code :** _____**Sample Model :** _____**Version :** _____

| GNATURE AND SEAL BY US | | |
|-------------------------------|-------------------|--------------------|
| Date: | 2022/05/09 | |
| Prepared By | Checked By | Approved By |
| Yajuan lei | Zhuanhong wu | Jiafei lin |

| | | |
|---|-----------|--------------|
| Please confirm and send it back with signature within 7 days. Otherwise we will assume your acceptance. And if any quality dissent, will execute according to this product specification. | | |
| CUSTOMER APPROVED SIGNATURE | | |
| Customer Model No: | | |
| Date: | | |
| ENG | QA | OTHER |
| | | |
| | | |

Feature:



- ◆ IP65.
- ◆ Constant Current Design: Output current adjustable via Offline program
- ◆ 0(1)-10V dimming: Smoothly dimming & flicker free.
- ◆ Dim to off without afterglow.
- ◆ DIP Button: 3 types CCT Color switchable & Rated Power Switchable.
- ◆ Surge Immunity: D-M:4KV/ C-M:6KV.
- ◆ Protection: Short Circuit, Open Circuit.
- ◆ Auxiliary Output 12V/200mA
- ◆ Dimming signal is isolated from LED output.
- ◆ Compatible with lighting sensor control

Application:

UFO High Bay/Round High Bay

Introduction

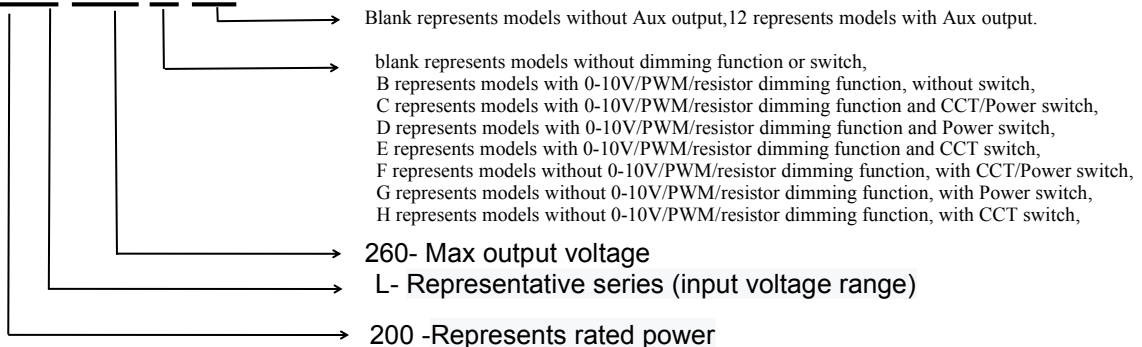
The document details the electrical, mechanical and environmental specifications of a 200W constant current LED driver with 0-10V Dimming. This LED driver only suitable for LED load.

Model and Key parameters Table 1

| Model | power (W) | Output voltage (V) | Max output voltage(Vdc) | output current (A) | Efficiency(%) @120V | Efficiency(%) @347V |
|----------------------|-----------|--------------------|-------------------------|--------------------|---------------------|---------------------|
| FD-200L-260*/B/D/G | 200 | 180-260 | 310 | 1.0(Max.) | 91 | 94 |
| FD-200L-260*/C/E/F/H | 200 | 180-250 | 310 | 1.0(Max.) | 91 | 94 |

Model code naming rules

FD-200L-260 B-12



■ Technical data

| Input characteristics | |
|---|---|
| Input Voltage | 120-347Vac |
| Input Frequency | 50/60Hz |
| Input Current (Typ.) | 2.3A @120-347 Vac , 100% load |
| No load Voltage | 2.5Wmax |
| Inrush Current | 100Amax. @ 347Vac, 25°C |
| Power factor (Typ.) | PF>0.95 @ 120Vac, PF>0.90 @ 347Vac, 100% load, see chart 2 |
| THD | THD<20% @ 120-347 Vac, 100% load see chart 3 |
| Output characteristics | |
| Current accuracy | ± 5% |
| Efficiency | ≥91% @ 120 Vac, ≥94% @ 347Vac, see chart 1 |
| Output Voltage | Table 1 |
| Ripple and Noise | 20Vp-p |
| Line Regulation | 3% |
| Load Regulation | 3% |
| Turn On Delay Time | Under normal conditions, the maximum delay time is 1 second |
| Built-in programming to adjust current | |
| Programmable current output range | the total output power does not exceed 200W (actual output voltage * actual output current = power), otherwise, it can not be guaranteed. |
| Protection functions | |
| Open circuit | When the LED disconnection the product is protected such as hiccup or when it is at the highest point of output voltage, the power supply shall be self-recovery when the fault condition is removed. |
| Short Circuit | The input power shall decrease when the output rail short, the power supply shall be self-recovery when the fault condition is removed. |
| Environmental conditions | |
| Operating Temperature | -40°C - +50°C |
| Operating Relative Humidity | 10% to 90% RH, non-condensing |
| Storage Temperature | -40°C to +75°C |
| Storage Relative Humidity | 10% to 90%RH, non-condensing (Sea level to 2,000 m) |
| Vibration | 10 to 500HZ Sweep at constant acceleration of 1.0G (depth: 3.5mm)for 1 Hour for each of the perpendicular axes X, Y, Z. |
| Degrees of Protection | IP65 |
| Safety compliance | |
| Dielectric Strength | P-S:3750VAC/5mA/60S P-E:1500VAC/5mA/60S P-E:500VAC/5mA/60S |

| | |
|--|---|
| Insulation Resistance | I/P-O/P:>50M Ohms / 500VDC / 25°C / 70% RH. |
| Leakage Current | The leakage current shall be less than 0.25mA for Class 2 at maximum input voltage |
| Safety Standard | UL:UL8750, CSA 250.13 |
| EMI | FCC: PART 15B Subpart B; ANSI C63.4:2014 |
| ESD | Electrostatic discharge/immunity Severity Level Level3 air discharge: ±8KV Severity Level Level2 contact discharge: ±4KV performance criterion: B |
| RF | 80-1000MHZ; Severity Level Level2/ 3V/M; Performance Criterion: A |
| Group pulse | 1.0KV (Class B) |
| Surge Immunity | Severity Level Level2 Differential mode:4KV Severity Level Level3 Common mode:6KV. performance criterion: B |
| Reliability | |
| Life Time | ≥5Years H@230Vac, 100% load. See lifetime vs. Tc curve for the details |
| MTBF | ≥ 200,000H@ 25°C,230Vac, 80% load. (MIL-HDBK-217F) |
| Warranty | 5 years |
| Others | |
| Dimensions | 127*61.6mm (φ *H) |
| Weight | 950g+/-10g |
| Remark | |
| <p>1、 It is recommended that customers install over-voltage and under-voltage protection and surge protection devices in the lamp power supply circuit to ensure the safety of electricity consumption.</p> <p>2、 The led driver is used in combination with terminal equipment as a part of the whole lamp. As EMC performance is affected by LED lamps and wiring, terminal equipment is manufactured The supplier needs to re-confirm the EMC of the whole set of equipment.</p> <p>3、 Please use a special programmer to adjust the current of the power supply and write the program by adjusting the light .</p> <p>4、 When adjusting the output current of the led driver, ensure that the total output power does not exceed the rated maximum power</p> <p>5、 The parameters above including the power factor, THD, efficiency are all tested under the ambient temperature 25°C and humidity 50%, AC input 230V and 90% output load.</p> | |

■ Dial the code function

| Type | Gears | Min | Iout | Max | Remarks |
|-----------------|-------|---------------------|---------------------|---------------------|---|
| power regulator | A | 0.95*I _o | I _o | 1.05*I _o | I _o is rated output current value, rated value set in A position |
| | B | 0.70*I _o | 0.75*I _o | 0.80*I _o | |
| | C | 0.45*I _o | 0.50*I _o | 0.55*I _o | |

| | | | | | |
|-------------|----|-------------|-------|--------------------------|----------------------------------|
| Temperature | CW | Cold light | 6000K | Red LED+/Black LED- | Common male connection, rated CW |
| | NW | white light | 4500K | Red LED+/Black/Pink LED- | |
| | WW | Warm light | 3000K | Red LED+/PinkLED- | |

■ Dimming function

| Dimming type | parameter | Min | Typ | Max | Remarks |
|----------------|------------------|-------|-------|-------|---------------------------|
| 0-10V 1-10V | Signal Level | 0V | | 10V | |
| | Dim Range | 10% | | 100% | Output current percentage |
| | Dim-off Level | 0.6V | 0.7V | 0.8V | |
| | On Level | 0.75V | 0.85V | 0.95V | |
| PWM | Signal Level | 0V | | 10V | |
| | Signal Frequency | 1KHz | | 2KHz | |
| | duty ratio | 5% | | 100% | |

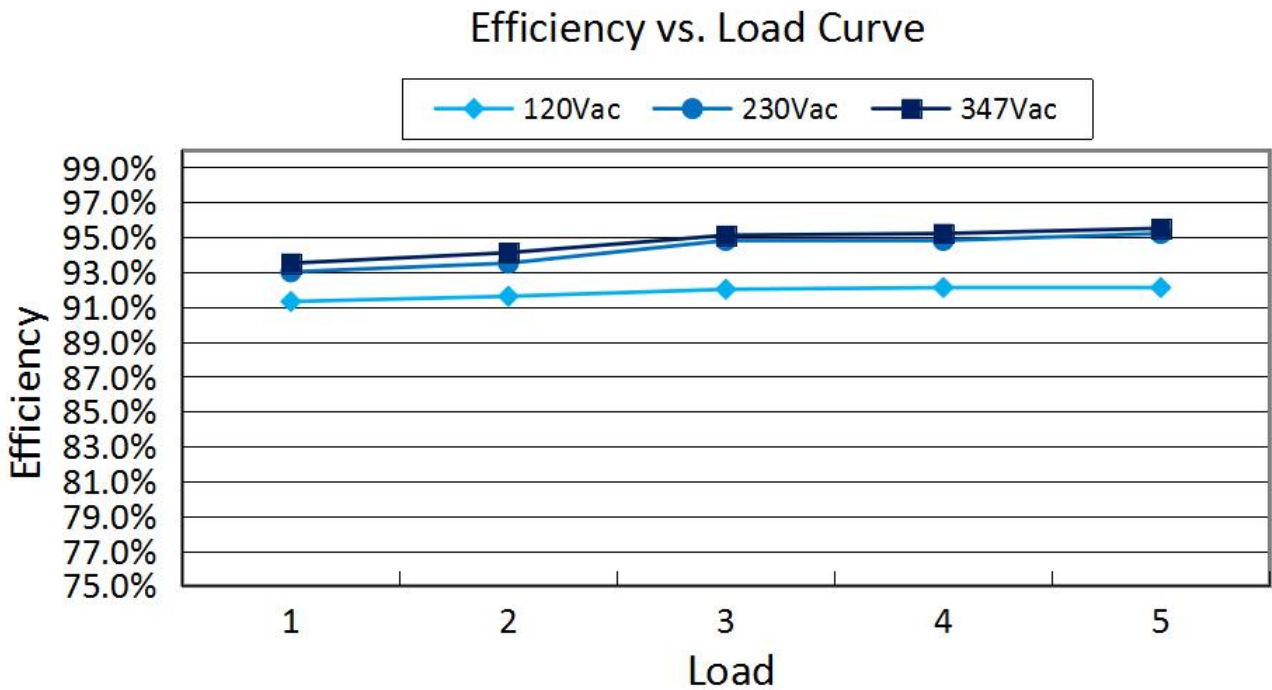
■ Dimming range

| Function | | | 0-10V | | | | PWM | | | RX | | | |
|----------------|----|-----|-------|-----|-----|-----|-----|-----|-----|-----|------|------|--|
| Yes Or No | | | Y | | | | Y | | | Y | | | |
| 0-10V | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | open | |
| I _r | 0 | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | 100% | |
| PWM | 0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | open | |
| I _r | 0 | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | 100% | |

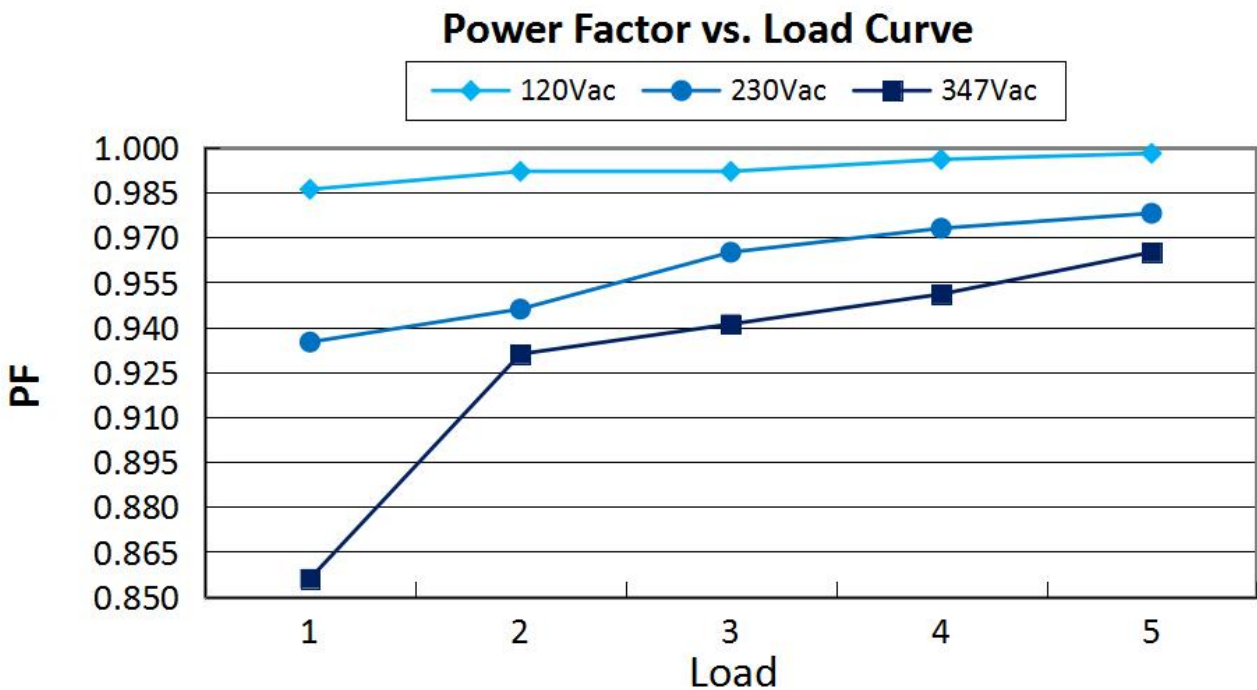
Note:

1. I_r is the output current percentages.I_r
2. I_r above is typical values.

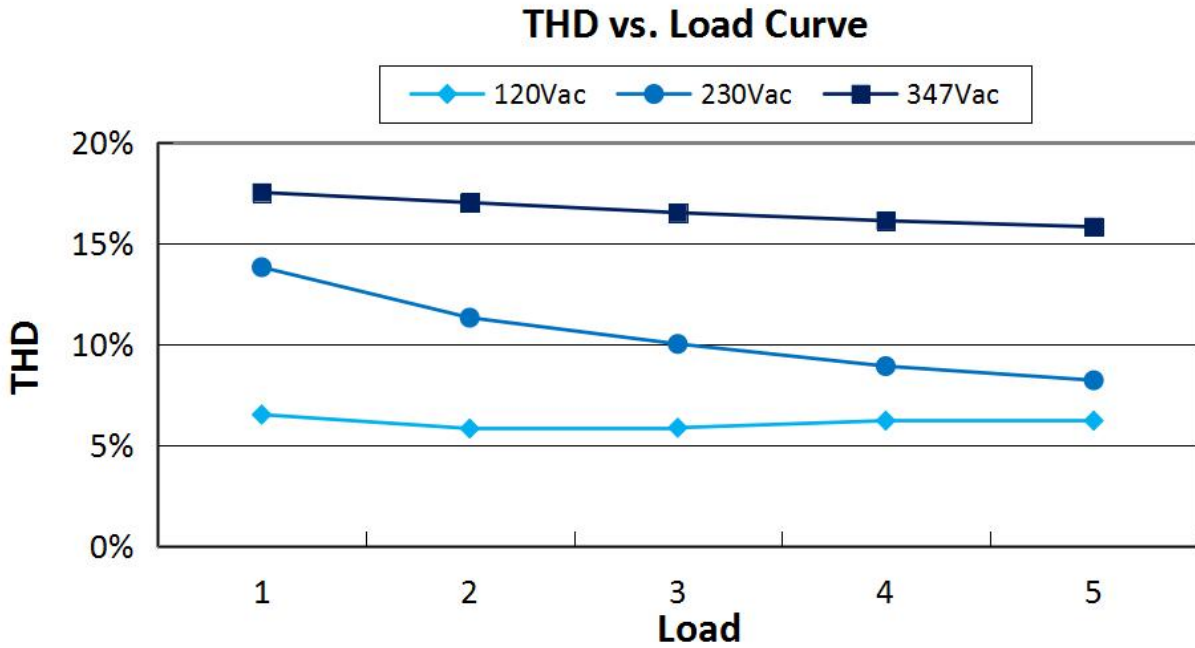
■ **Efficiency vs. Load**



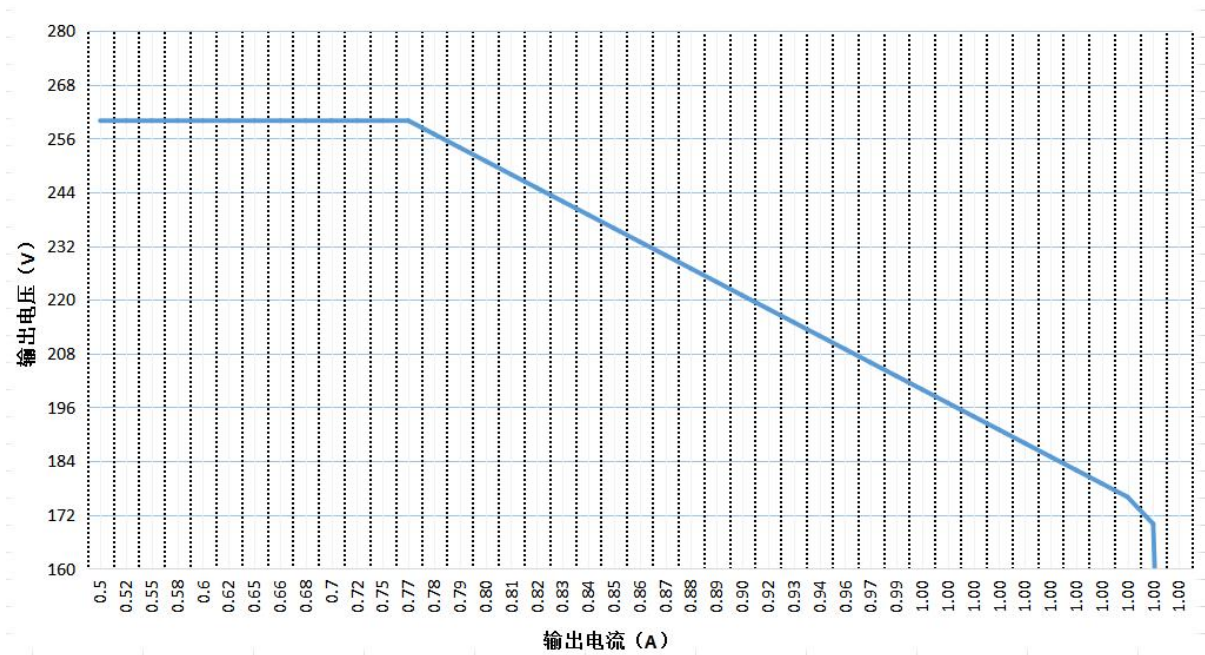
■ **Power Factor**



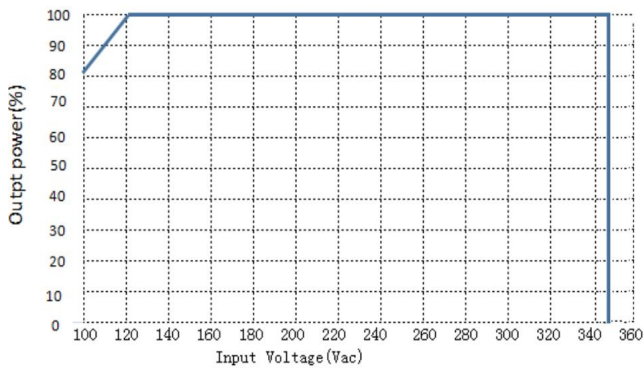
■ **THD vs. Load**



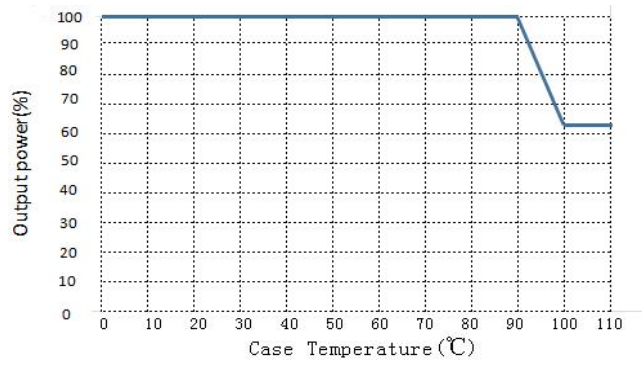
■ **Power Curve**



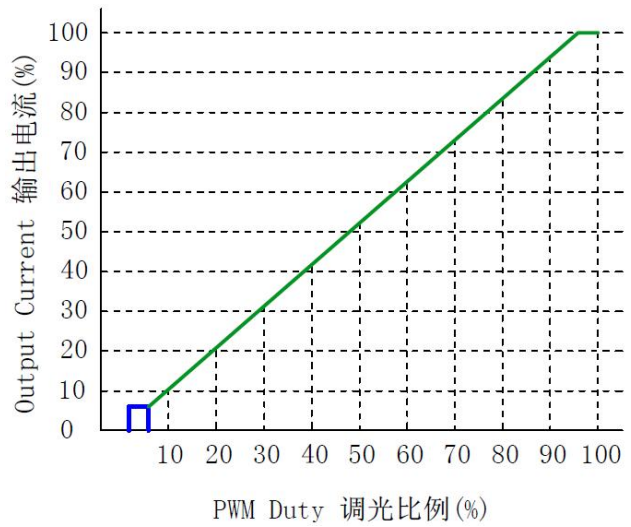
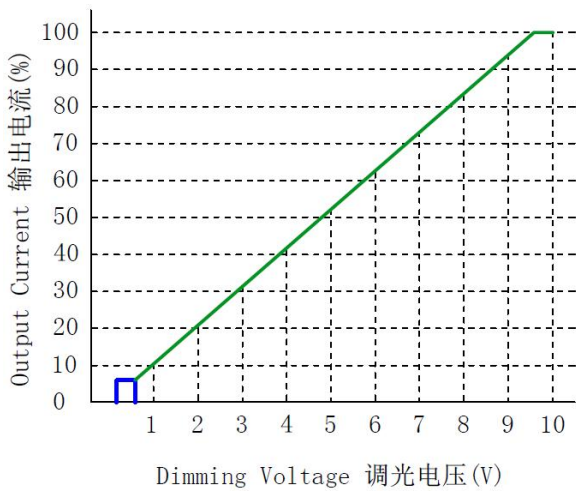
Output power VS Input voltag(50°C max.)



Output power VS Shell temperatur

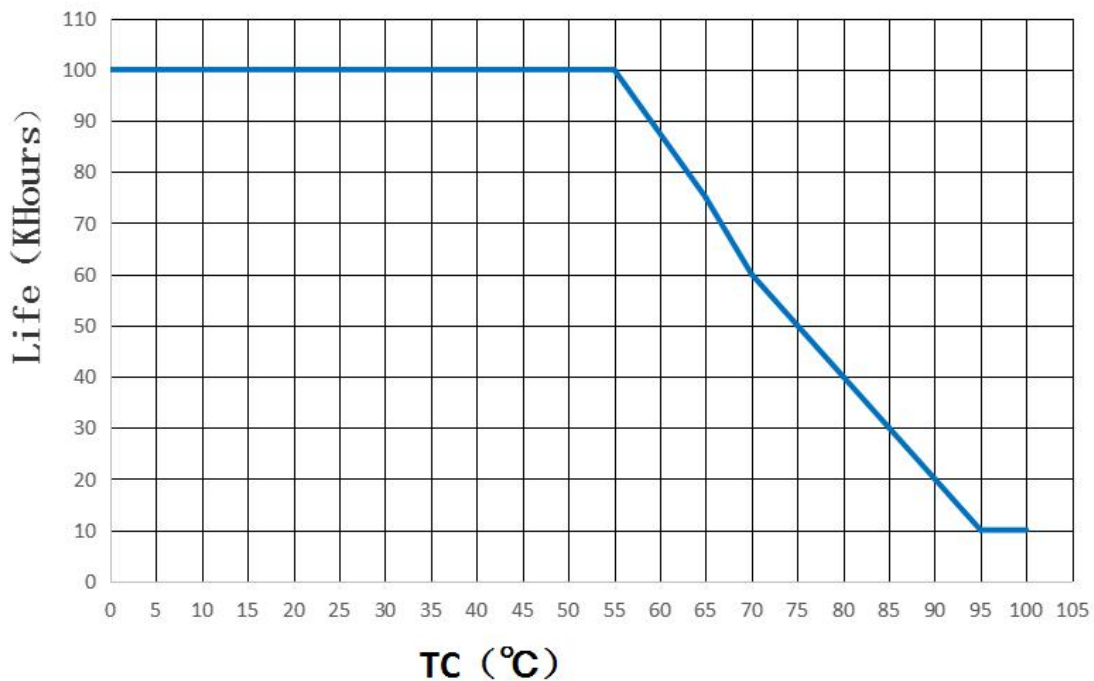


■ Dimming curve

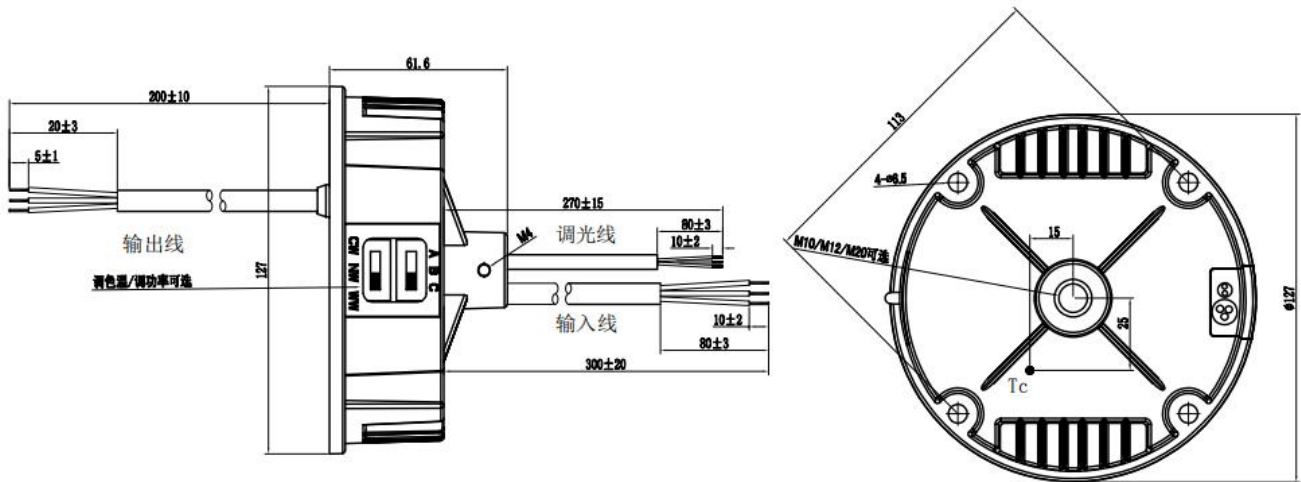


■ Life vs. Tc P5

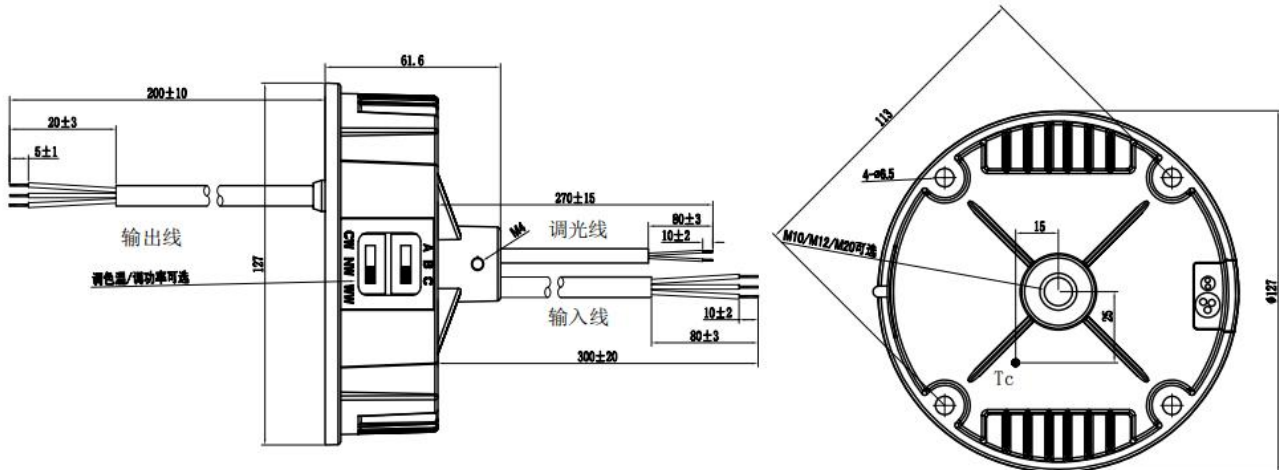
Life vs.Tc



■ Dimensional Drawing (unit: mm)12V



■ Dimensional Drawing (unit: mm)









| | |
|----------------|--|
| Input Wire | UL 300V 18#, Black-L,White-N, Green-PG |
| Output Wire | UL 300V 18#, Red_LED+,Black_LED-,Pink_LED- |
| Dimming Wire | UL 300V 22#, Purple_DIM+, Pink_DIM-/12V- |
| Auxiliary Wire | UL 300V 22#, Black/White_12V+ |

■ LABEL-With 12V

| | | | |
|--|---------------|---|--|
|  www.fahold.com | | Constant Current LED Driver Model:FD-200L-260B12 | |
| INPUT | | INPUT:120-347V~2.3A 50/60Hz OUTPUT:180-260V = 1.0A(Max) Prated:200W Max. Used for LED modules only tc:90°C | OUTPUT LED+ (RED) ○ LED- (BLACK) ○ |
| <input type="radio"/> ACL (BLACK) <input type="radio"/> ACN (WHITE) <input type="radio"/>  (GREEN) <input type="radio"/> DIM+ (PURPLE) <input type="radio"/> DIM- /12V-(PINK) <input type="radio"/> 12V+ (BK/WH) | MADE IN CHINA | IP65 |   |
| | |   | |

■ LABEL

| | | | |
|--|---------------|---|--|
|  www.fahold.com | | Constant Current LED Driver Model:FD-200L-260B | |
| INPUT | | INPUT:120-347V~2.3A 50/60Hz OUTPUT:180-260V = 1.0A(Max) Prated:200W Max. Used for LED modules only tc:90°C | OUTPUT LED+ (RED) ○ LED- (BLACK) ○ |
| <input type="radio"/> ACL (BLACK) <input type="radio"/> ACN (WHITE) <input type="radio"/>  (GREEN) <input type="radio"/> DIM+ (PURPLE) <input type="radio"/> DIM-(PINK) | MADE IN CHINA | IP65 |   |
| | |   | |

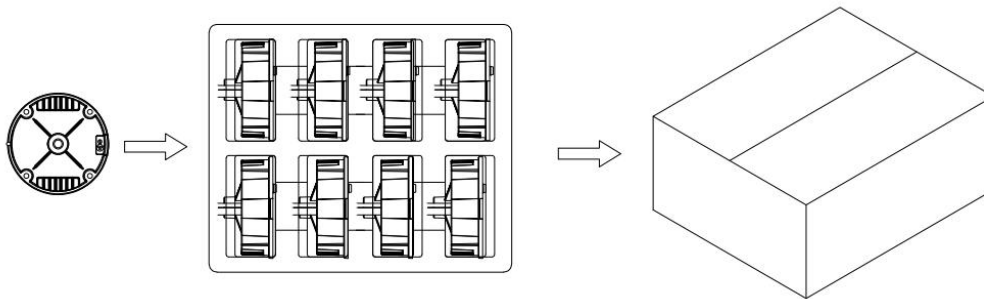
Installation considerations

1.Lightning protection level meets IEC61000-4-5 standard requirement, if you use the lightning occurs or the area of power grid environment is relatively complex, suggest on the led driver AC input terminal equipped with professional lightning protection module.

Package, Transportation & Storage

1. Package

Mode 1 (default factory mode)



| | |
|--------------------------|----------------------------------|
| Packing case size | 400mmx330mmx148mm (L×W×H) |
| Quantity | 8PCS/Tier; 1 Tier/Box; 8 PCS/Box |
| Weight | 950kg±5%/PCS; 8.4Kg±5%/Box |

2. Transportation

Packaging is designed suitable for transportation by truck, ship, and plane. The products should be shielded from sunshine, and loaded and unloaded carefully.

3. Storage

The product storage meet the standard of the GB 3873—83.

Product should be re-checked over 1 year.

Disclaimer:

The content of this manual is made according to the existing information of the product. Due to the product version upgrade or other reasons, the content of the manual may be changed. Our company reserves the right to improve the product without prior notice, and reserves the right of final explanation for the performance description of the company's products. Our company is committed to improving the quality of products and constantly upgrading and optimizing the products.

Products Installation and Using should Note:

- Do not connect alternating current to DC output side and dimming side.
- Application do not exceed the power 200W.
- Do not use the Driver in parallel on the same lamp.
- This product is a constant current LED Driver, only suitable for LED lamps and lanterns.

Safety and Attentions

In order to reduce the risk of personal injury, electric shock, fire, and power supply damage, please read the following specifications carefully and follow these rules to prevent danger.

- Do not install the Driver in the area with inflammable and explosive materials to avoid explosion and fire.
- Please do not disassemble the Driver and replace the components without permission, so as to avoid electric shock.

