

100W LED High Bay Driver

Features

- High Efficiency (Up to 96.0%)
- General AC Input Voltage (90 to 305Vac)
- 3 in 1 dimming: 0-10V, 10V PWM, resistance (optional)
- Waterproof (IP67) and suitable for Dry / Damp / Wet

Location

- Lightning protection: 4 kV line-line, 4 kV line-earth
- Built-in active PFC function, higher PF, lower THD
- All-Around Protection: OVP, SCP
- High power supply auxiliary capability 12Vdc/50mA(optional)
- 5 years warranty



Description

EUC100-0250N is a 100W LED high bay driver that operates from 90-305Vac input with excellent power factor. Its round shape is created mainly for high bay. The ultra-high efficiency and good heat dissipation construction, greatly help to improve the reliability of the products. Its over voltage protection, short circuit protection and the lightning protection(4KV DM, 4KV CM), extending product life a lot.

Model

EUC100-0250N(A)-T0(B0)

N(A): N means non-dimming, A means dimming available;

T0(B0): T0 means VDE wire, in line with CE/CB certificate, B0 means BIS certificate.

Performance Parameters

| Model | | EUC100-250N(dimming optional) |
|--------|----------------------|--------------------------------------|
| Output | Output voltage | 420-435Vdc (@no load) |
| | | 365-395Vdc (@0.25A) |
| | Rated output current | 0.25A(output current decided by LED) |
| | Max. output current | 0.27A |

| | | |
|-------------------------|----------------------------|--|
| | Ripple & Noise Pk-Pk | 10% * Max. output current |
| | Efficiency (Typ.) | 95.5%@230Vac/full load |
| | Auxiliary voltage (Typ.) | 12V |
| | Auxiliary current (Max.) | 50mA |
| Input | Input power | 100W,@25°C,230Vac |
| | Rated input current | 1Arms Max |
| | Input voltage range | Rated 100-277Vac; Limitation 90-305Vac |
| | Frequency range | 47-63Hz |
| | Power Factor (Typ.) | PF>0.99@120Vac, PF>0.98@230Vac, PF>0.96@277Vac , @full load,47-63Hz; Other load conditions, please refer to power factor curve |
| | Total harmonic distortion | THD<13%,@230Vac,full load; Please refer to: total harmonic distortion waveform |
| | Inrush current (Typ.) | 45A @230Vac, Ta=25°C, cold start |
| | Leakage current | <0.75mA @ 277Vac |
| Protection | Short circuit protection | Hiccup mode, recovers automatically after load fault condition is removed |
| | Over voltage protection | Hiccup mode, recovers automatically after voltage fault condition is removed |
| Environment | Ambient temp. | Ta: -40~70°C, please refer to load VS temperature curve |
| | Working humidity | 20~90% RH, no condensation |
| | Storage temp. and humidity | -40~+85°C, 10~95% RH |
| | Environmental protection | UL Dry, Damp or Wet Location, IP65 |
| | Vibration protection | 10~500Hz, 5G 12min./cycle, period for 72min. each along X, Y, Z axes |
| Safety & EMC | Safety standard | IEC/EN61347-1(GB19510-1-2009), IEC/EN61347-2-13(GB 19510.14-2009), UL8750, CSA C22.2 NO. 250.13-12; IP65 approved |
| | Withstand voltage | I/P&O/P-PE:1.5KVac, leakage current<10mA |
| | Insulated resistance | I/P&O/P-PE>100M Ohms/500VDC/25°C/70%RH |
| | EMI | EN55015 , FCC PART15-CLASSB |
| | Harmonic current | EN61000-3-2 Class C |
| | Lightning protection | Line-to-Line: 4KV, Line-to-PE: 4KV |
| | EMS | EN61000-4-2,3,4,5,6,8,11; EN61547 Industry standard |
| Others | MTBF | ≥200Khrs, MIL-HDBK-217F(25°C) |
| | Weight/Size | See mechanical data for details |
| | Case color | Black |

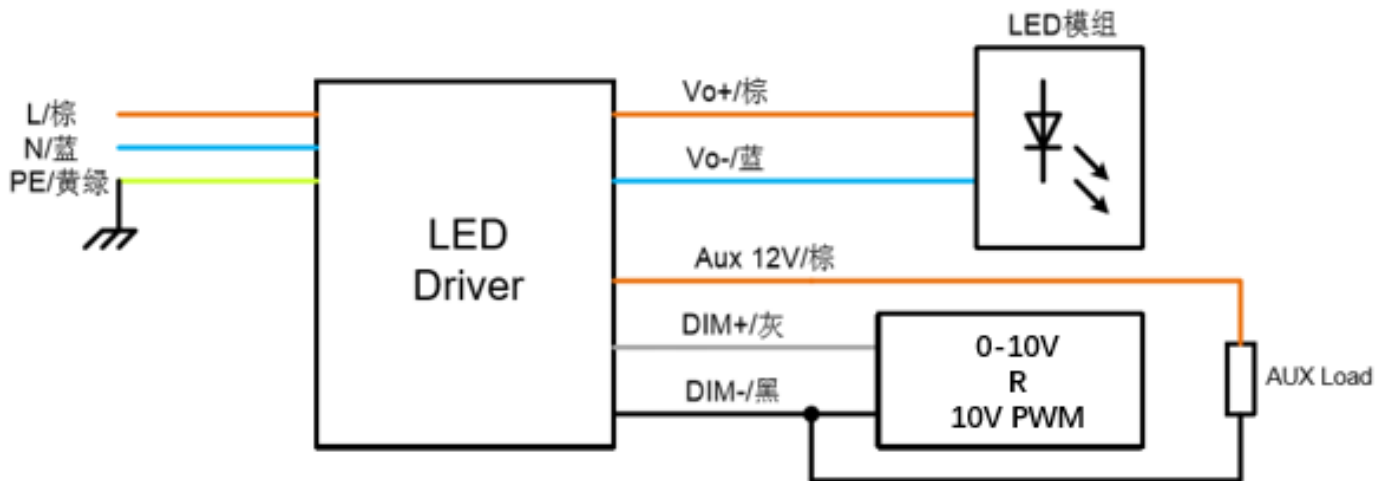
Notes:

All parameters not specially mentioned are measured at 230Vac input, full load, 50% of humidity, and 25°C of ambient temperature.

Dimming General Specifications

| Parameters | Min. | Typical Value | Max. | Remarks |
|-----------------------------------|-------|---------------|-------|---------|
| 0-10V Dimming wire voltage range | -20 | | +20 | |
| 0-10V Dimming wire current range | 300uA | | 2.5mA | |
| Dimming wire range recommendation | 0V | - | 10V | |
| PWM high level | - | 10V | - | |
| PWM low level | - | 0V | - | |
| PWM frequency range | 200Hz | - | 3KHz | |
| PWM proportion | 0% | - | 100% | |
| Resistance range | 0Ω | - | 30KΩ | |

Wiring diagram

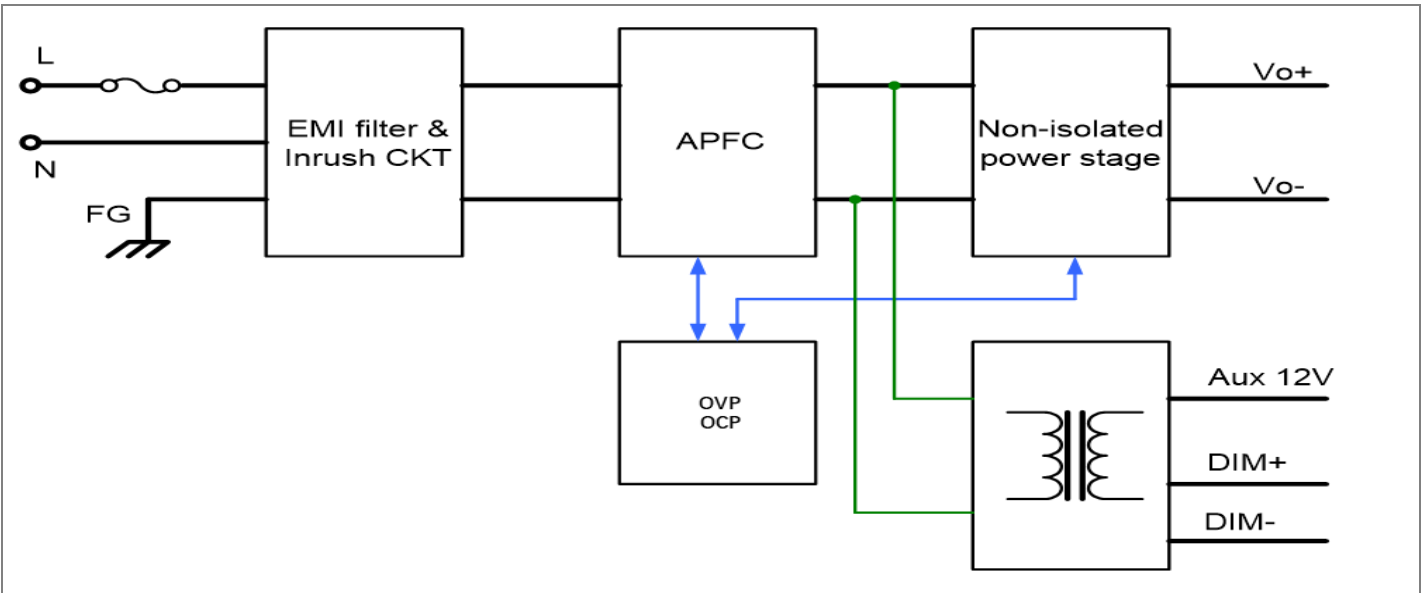


Remarks:

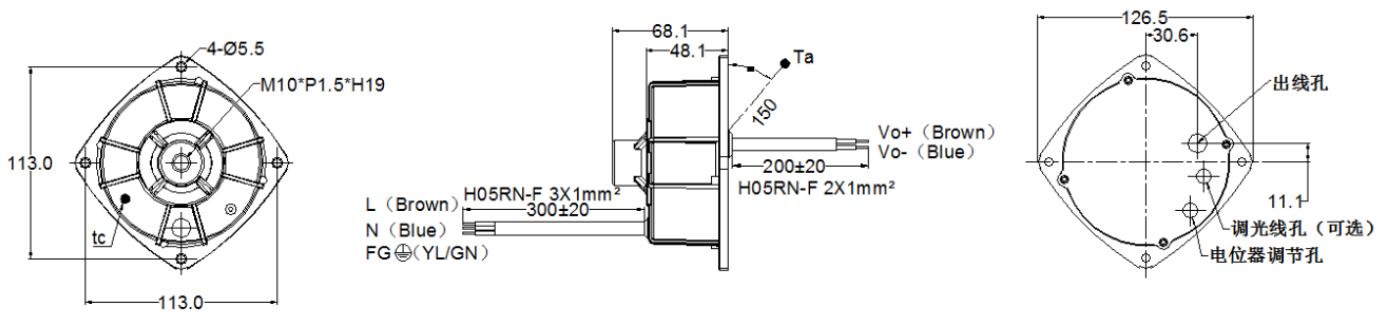
CE/CB version: L/brown, N/blue, G/yellow-green, V0+/brown, V0-/blue

SAA version: L/brown, N/blue, G/yellow-green, V0+/brown, V0-/blue

Electrical block diagram

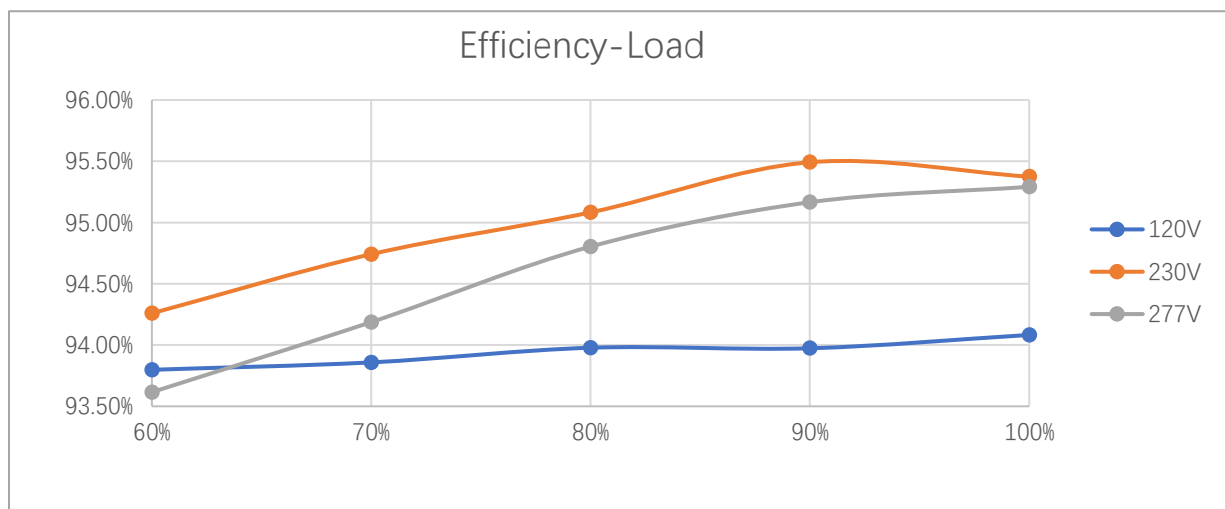


Mechanical size

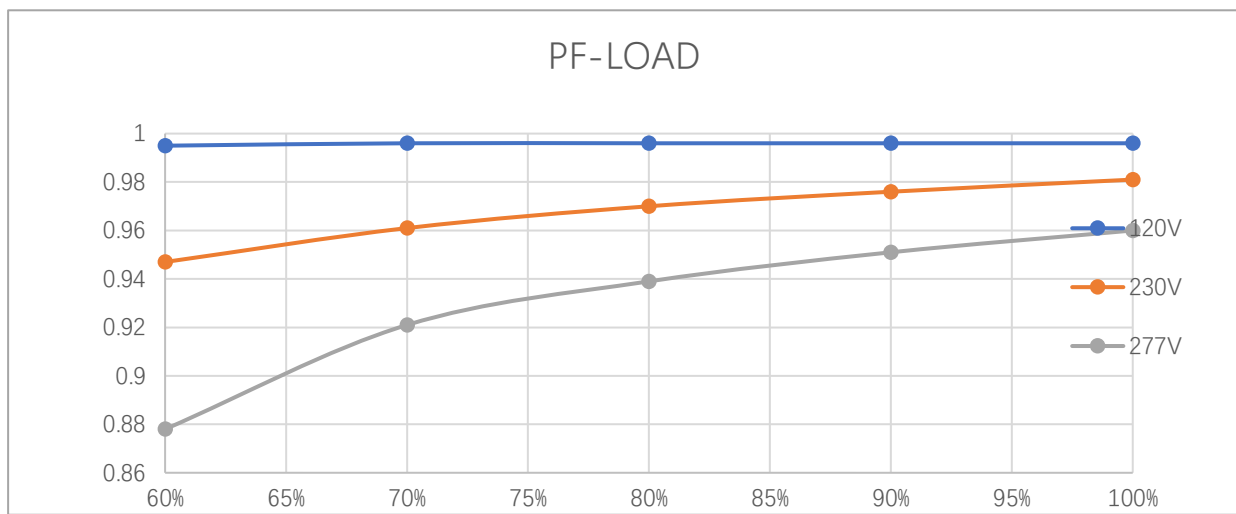


- t_c : Max. Case Temperature. (case temperature measured point)
- T_a : Ambient Temperature measured point
- Unit: mm

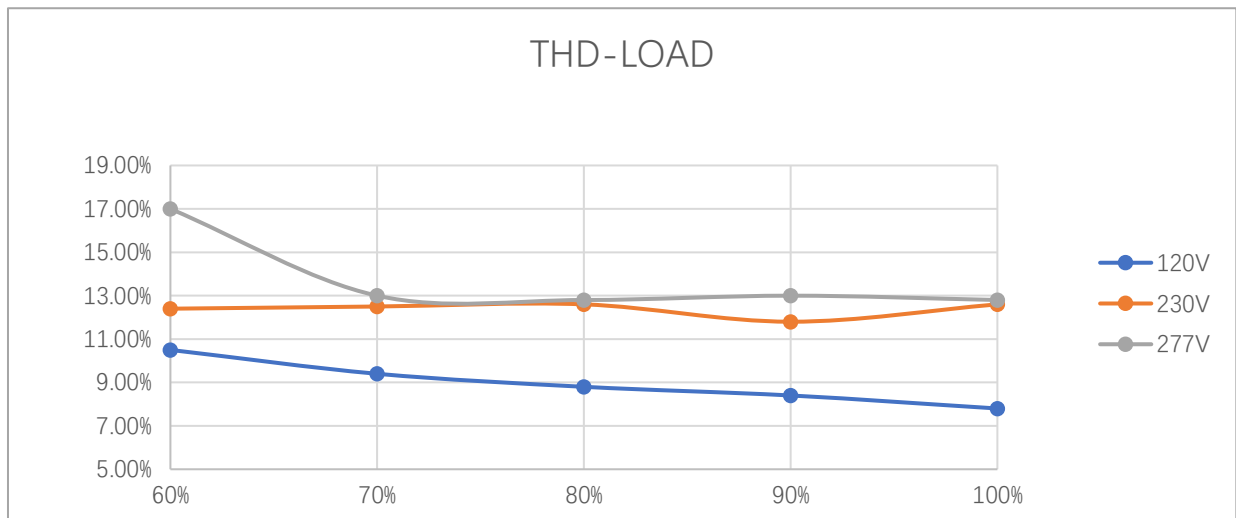
Efficiency waveform



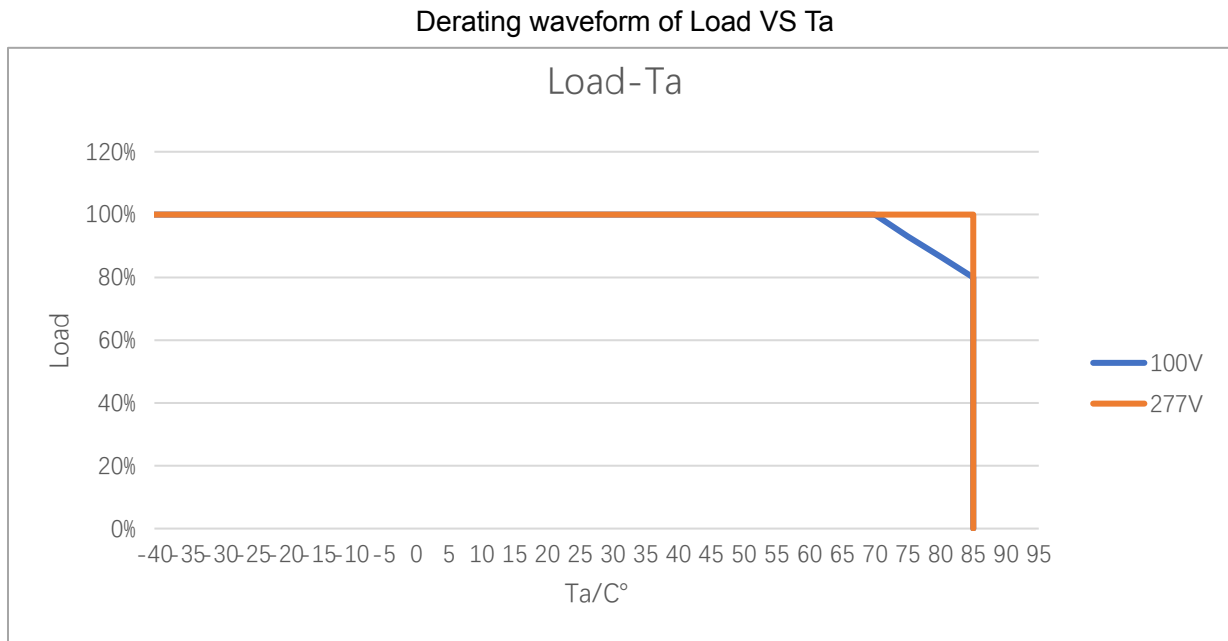
Power factor (PF) waveform



Total harmonic distortion (THD) waveform



Power derating Waveform



Notes:

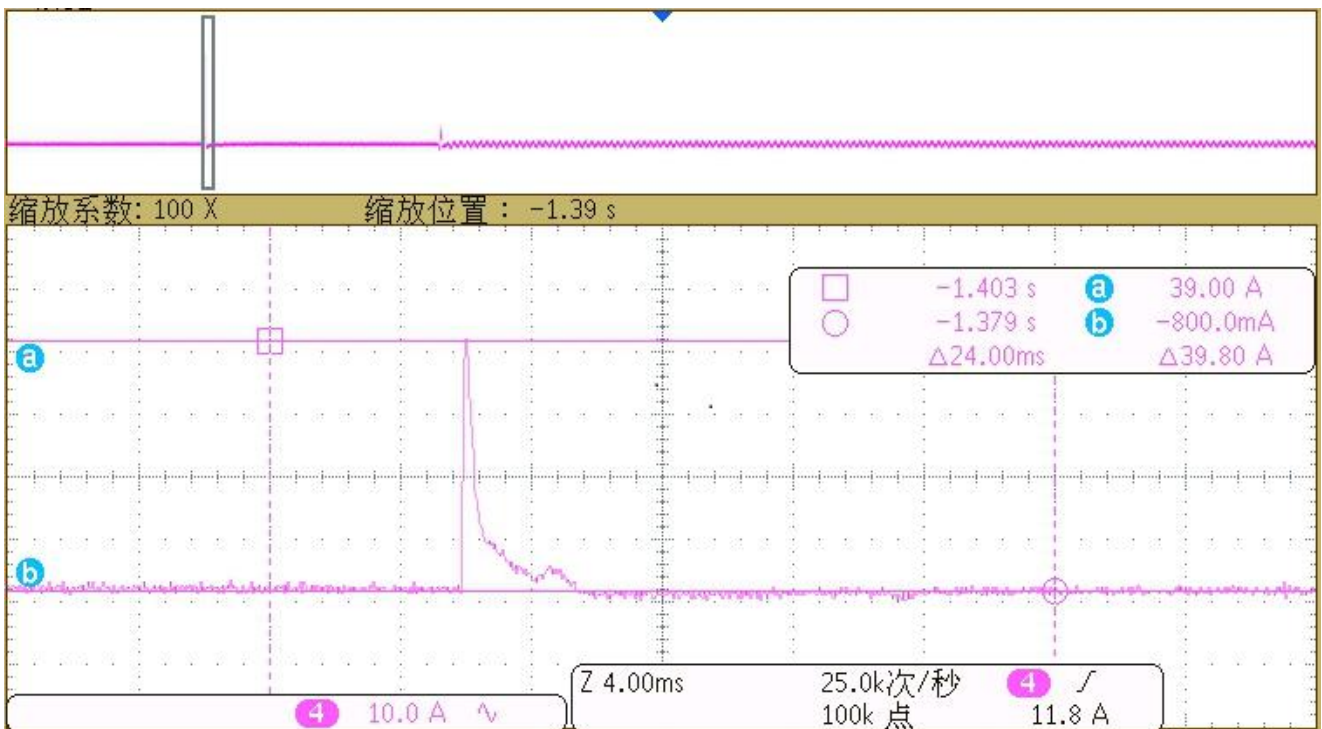
Derating waveform of Load VS Ta, Ta means the ambient temperature around the driver.

Lifetime Waveform (230VAC input/Full load)

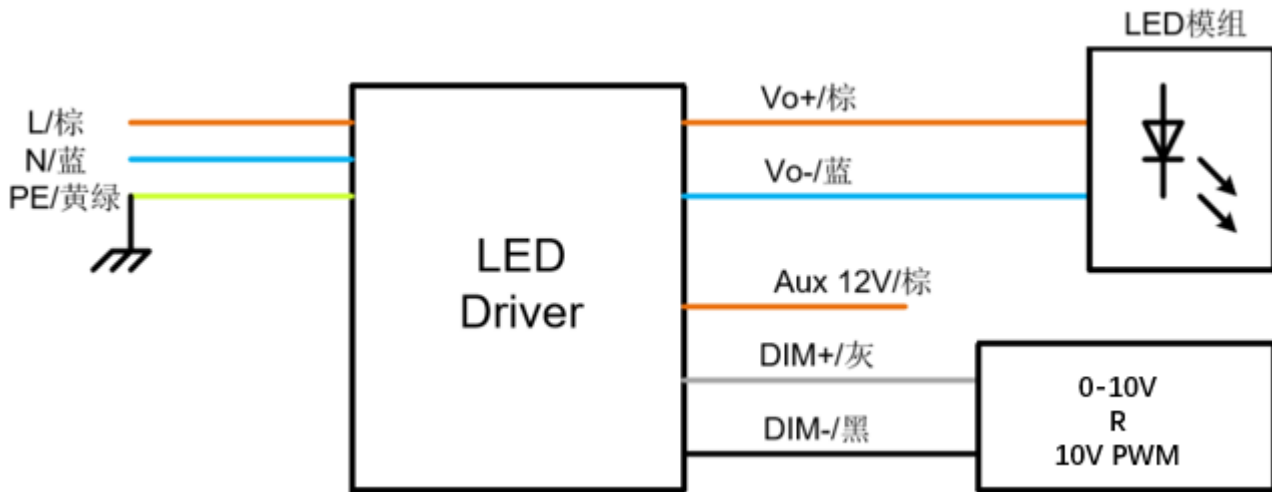


Notes: different input voltage range, different application environment, different external heat dissipation design and other factors, which will lead to a certain difference in the temperature rise of the case. In any of the above application conditions, the temperature of the actual case (Tc) must be less than 89°C, and this reduction curve can be established. If there is any doubt about the actual application environment, please contact the relevant personnel in time.

Inrush Current Waveform(Vin=230Vac at 25°C)

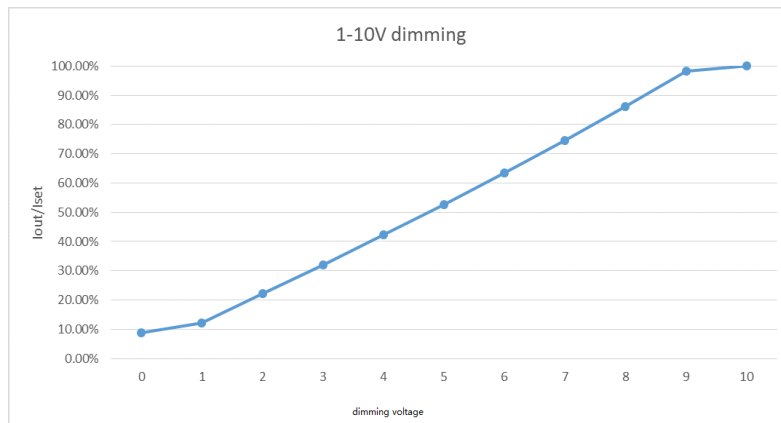


Dimming

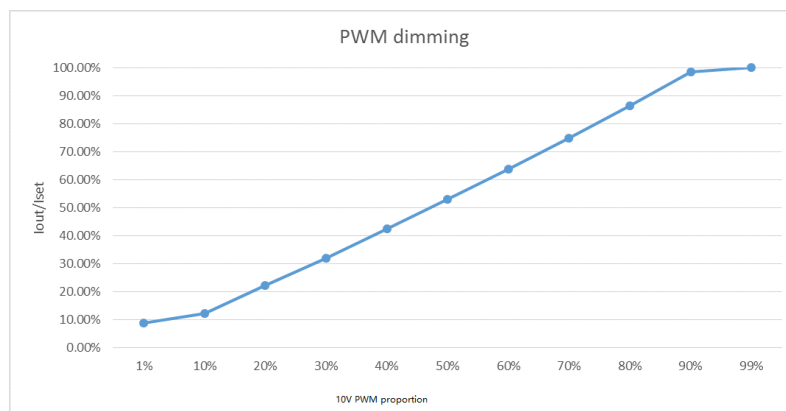


Remarks:

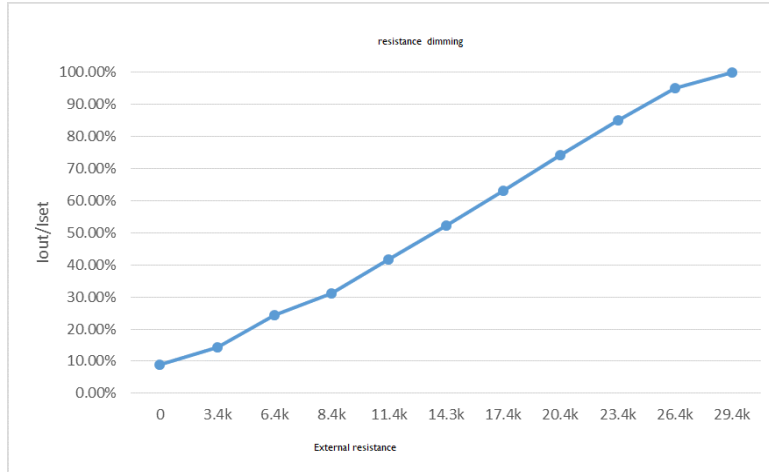
1. Noted: Dim+ and Dim- signals can't be connected to Vo+, Vo-
2. If the dimming function is not used, the Dim+ and Dim- signals should be suspended.



Dimming input: additional voltage



Dimming input: additional PWM



Dimming input: additional resistance

Attention:

1. The driver should be kept away from heat source and inflammable or explosive materials.
2. The driver should be installed in open space. In actual application, Tc temperature should not exceed the max allowed temperature(89°C) in the most extreme condition.
3. With high voltage danger! Please don't check under the condition of live working. Only professional electricians may carry out wiring and other operations.
4. Ensure that the input / output wires joint are completely sealed and waterproof-treated if required to prevent electric shock and leakage. The impedance caused by the connection mode in the application should not affect the normal function of the driver.
5. The driver lifespan is directly related to the driver working temperature. Please refer to the life&temperature curve to evaluate the applicability of the driver.
6. In practical application, please pay attention to the surge capacity of the front protector.
7. In the practical application of non-isolated driver, attention should be paid to isolation distance between the wire and heatsink.

Version history

| Date | Version | Content | Reasons | Remark |
|-----------|---------|------------|-------------|------------|
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| | | | | |
| Edited by | | Checked by | Approved by | Files code |
| Date | | Date | Date | |

For any upgraded version, we will not inform specially. If needed, please contact us by sales@baldurspower.com