www.fahold.com

深圳市华浩德电子有限公司

Shenzhen Fahold Electronics Co.,Ltd.

SPECIFICATION

K1-V150X series waterproof power supply

Product Name: K1-V150X-260X

Summarize: 150W LED Driver

Version: V00

Release date: 2022-06-29

Add.:Floor 2,4,5, 6 Building C, Starlight Industrial Park, NO. 4, Shihuan Road,Shilong Community, Shiyan Town, Bao'an District, Shenzhen, China.

Customer ID : _____

Customer Model : _____

Products Code : _____

Sample Model : _____

Version : _____

GNATURE AND SEAL BY US		
Date：	**2022/06/29**	
Prepared By	**Checked By**	**Approved By**
QingPing Yan	GaoZhong LI	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：

E479229

- 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 150W 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(%) @277V	Efficiency(%) @480V
K1-V150X-260*/B/D/G	150	180-260	310	0.75(Max.)	91	93
K1-V150X-260*C/E/F/H	150	180-250	310	0.75(Max.)	91	93

■ Model code naming rules

K1-V150X-260 X-12

Blank represents models without Aux output,12 represents models with Aux output.

blank represents models without dimming function or switch,
B represents models with 0-10V/PWM/resistor dimming function, without switch,
C represents models with 0-10V/PWM/resistor dimming function and CCT/Power switch,
D represents models with 0-10V/PWM/resistor dimming function and Power switch,
E represents models with 0-10V/PWM/resistor dimming function and CCT switch,
F represents models without 0-10V/PWM/resistor dimming function, with CCT/Power switch,
G represents models without 0-10V/PWM/resistor dimming function, with Power switch,
H represents models without 0-10V/PWM/resistor dimming function, with CCT switch,

260- Max output voltage

Dimmer way

150 -Represents rated power

V-Representative series (input voltage range)

Representative product model

■ Technical data

Input characteristics	
Input Voltage	277-480Vac
Input Frequency	50/60Hz
Input Current (Typ.)	1.7A @277 -480Vac , 100% load
No load Voltage	5Wmax
Inrush Current	75Amax. @ 480Vac, 25℃
Power factor（Typ.）	PF>0.95 @ 277Vac, PF>0.90 @ 480Vac, 100% load, see chart 2
THD	THD<20% @ 277-480 Vac, 100% load see chart 3
Output characteristics	
Current accuracy	± 5%
Efficiency	≥91% @ 277 Vac, ≥93% @ 480Vac, see chart 1
Output Voltage	Table 1
Ripple and Noise	270Vp-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 150W (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℃ - +50℃
Operating Relative Humidity	10% to 90% RH, non-condensing
Storage Temperature	-40℃ to +75℃
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 S-E:500VAC/5mA/60S

Insulation Resistance	I/P-O/P:>50M Ohms / 500VDC / 25℃ / 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 Leve 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@277Vac, 100% load. See lifetime vs. Tc curve for the details
MTBF	≥ 200,000H@ 25℃,277Vac, 80% load. (MIL-HDBK-217F)
Warranty	5 years
Others	
Dimensions	127*61.6mm（∮*H）
Weight	950g+/-10g

Remark

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.

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.

3、Please use a special programmer to adjust the current of the power supply and write the program by adjusting the light .

4、When adjusting the output current of the led driver, ensure that the total output power does not exceed the rated maximum power

5、 The parameters above including the power factor, THD, efficiency are all tested under the ambient temperature 25℃ and humidity 50%, AC input 277V and 90% output load.

Dial the code function

Type	Gears	Min	Iout	Max	Remarks
power regulator	A	0.95*Io	Io	1.05*Io	Io is rated output current value, rated value set in A position
	B	0.69*Io	0.75*Io	0.79*Io	
	C	0.45*Io	0.5*Io	0.53*Io	

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

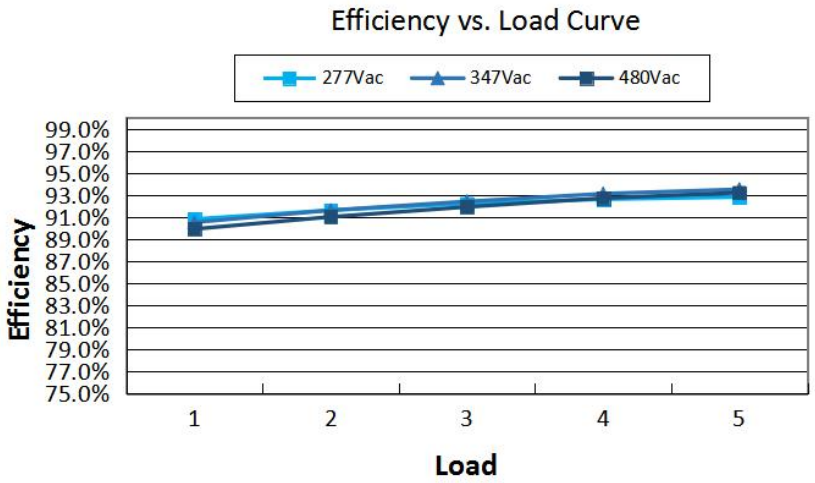
Dimming type	parameter	Min	Typ	Max	Remarks
0-10V 1-10V	Signal Level	0V		10V	
	Dim Range	10%		100%	Output current percentage
	Dim-off Level	0.6V	0.7V	0.8V	
	On Level	0.75V	0.85V	0.95V	
PWM	Signal Level	0V		10V	
	Signal Frequency	1KHz		2KHz	
	duty ratio	5%		100%	

Dimming range

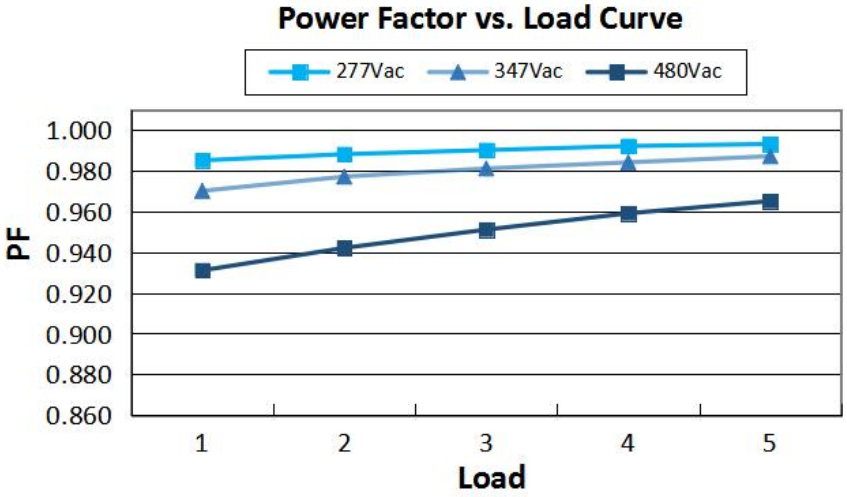
Function			0-10V			PWM			RX			
Yes Or No			Y			Y			Y			
0-10V	0	1	2	3	4	5	6	7	8	9	10	open
Ir	0	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	100%
PWM	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	open
Ir	0	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	100%

Note:
1. Ir is the output current percentages.Ir
2. Ir above is typical values.

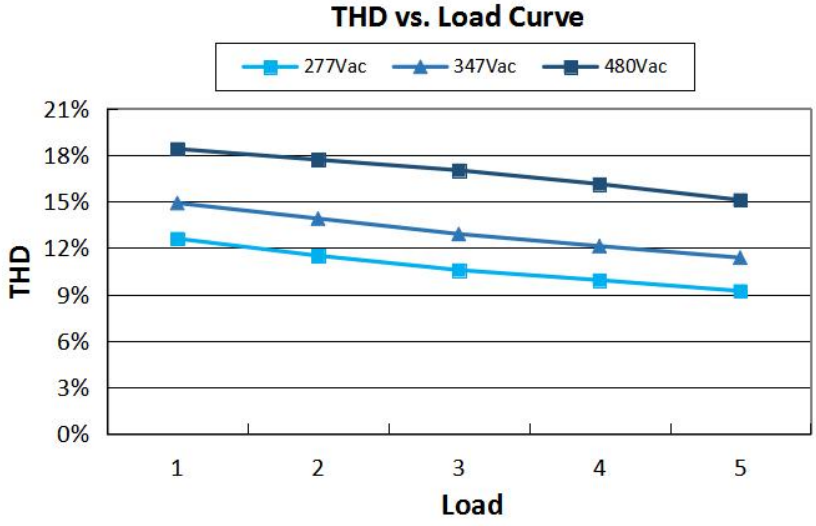
■ Efficiency vs. Load



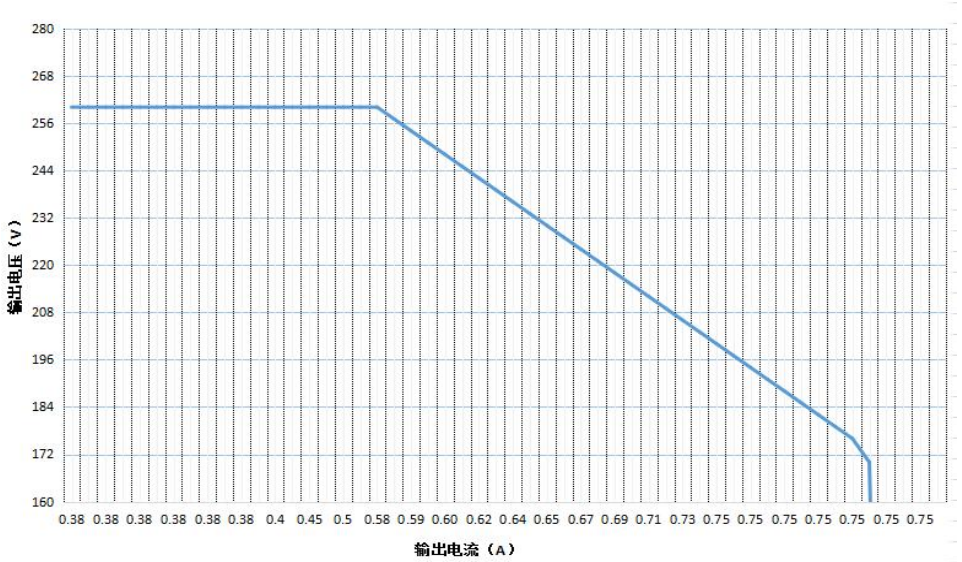
■ Power Factor



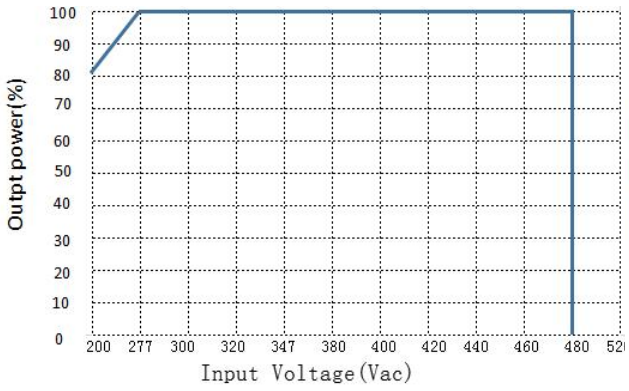
■ THD vs. Load



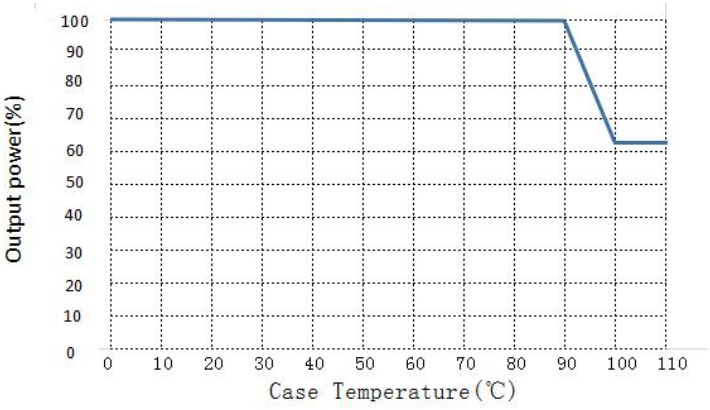
■ Power Curve

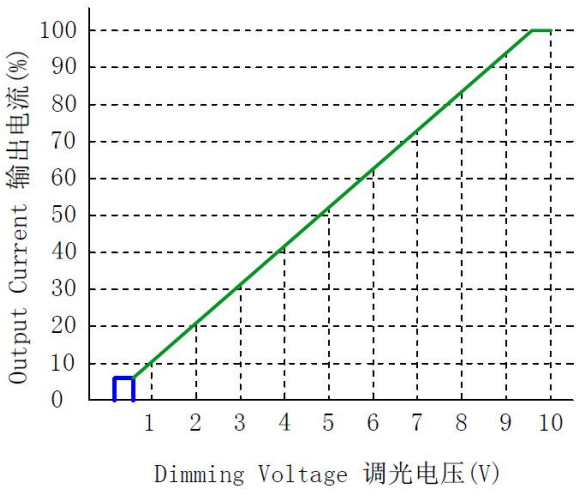


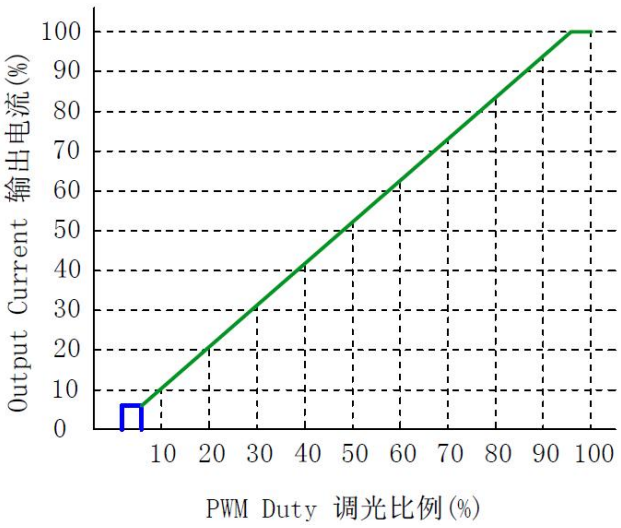
Output power VS Input voltag(50℃ max.)



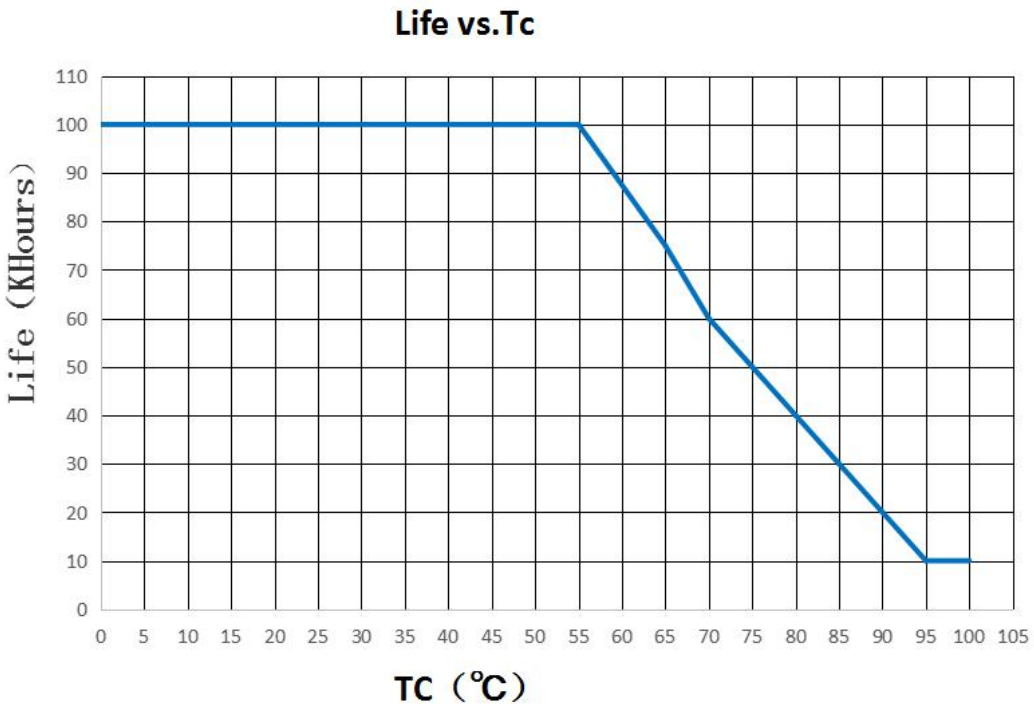
Output power VS Shell temperatur



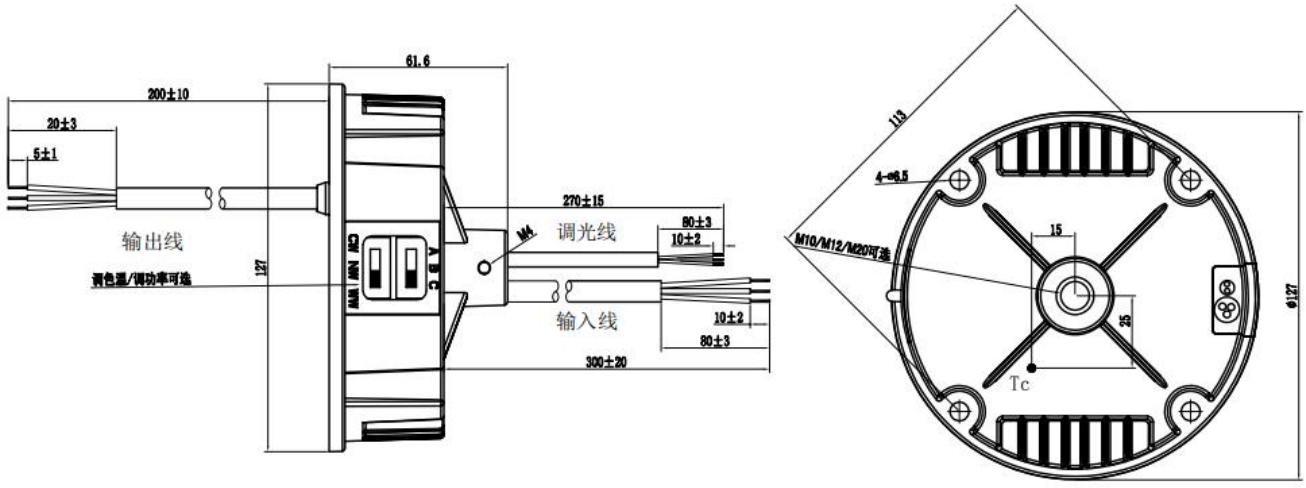




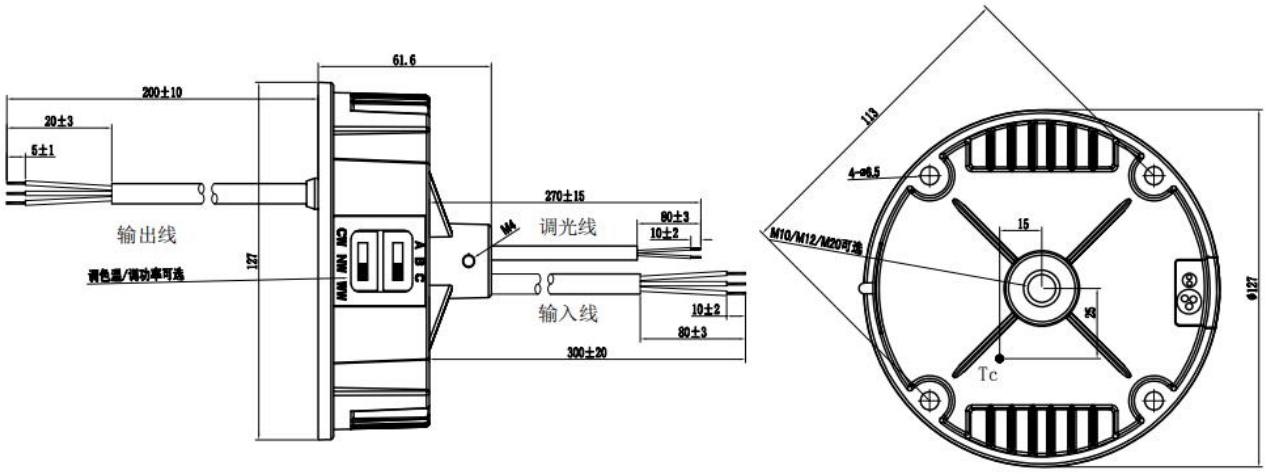
■ Life vs. Tc P5



■ Dimensional Drawing (unit: mm)12V



■ Dimensional Drawing (unit: mm)



Input Wire	UL 600V 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

■ LABEL

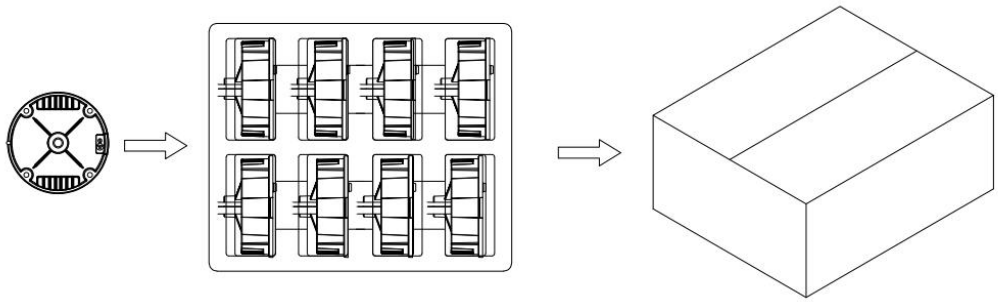
Installation considerations

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 150W.

■ 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.

ECN History ECN

Rev	Description of Change		Changed Date	Notes
	Before	After		
00	Original Release	---	2022/06/29	