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深圳市华浩德电子有限公司

Shenzhen Fahold Electronics Co.,Ltd.

SPECIFICATION

K1-V100Y-260ZQ Series Waterproof Power Supply

Product Name: K1-V100Y-260ZQ

Summarize: 105W LED Driver

Version: V00

Release date: 2022-08-20

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: _____

SIGNATURE AND SEAL BY US		
Date:	**2022/08/20**	
Prepared By	**Checked By**	**Approved By**
Dingquan Lu	Zhuanhong Wu	Tom Huang

Please sign back within 7 days after confirmation. If you do not sign back, it will be regarded as your company's default acceptance. In the event of abnormal quality, it will be implemented according to this product specification. **CUSTOMER APPROVED SIGNATURE**		
Customer Model No:		
Date:		
ENG	**QA**	**OTHER**

E479229

Features:

- ◆IP65 protection grade;
- ◆Constant current design,
- ◆Various dimming methods: 0(1)-10V dimming, PWM, RX,
- ◆Smooth dimming from 5% to 100%, compatible with three levels of color temperature, three levels of power adjustment;
- ◆Surge protection: DM: 6KV, CM: 6KV;
- ◆Protections: SCP/OVP/OTP
- ◆Optional12V/200mA auxiliary;
- ◆The dimming signal is isolated from the LED output;
- ◆5 years warranty

Application:

Street lights, Industrial lights, Grow lights, Landscape lighting

■ Introduction

This document details the electrical performance and environmental requirements of 105W LED constant current driver with 0(1)-10V dimming. This power supply is only suitable for LED loads.

■ Model and Key parameters Table 1

Model	Max. output Power	Nominal input voltage	Input Voltage Range (Vac)	Output Voltage Range (Vac)	Max output Voltage (Vdc)	Max. Output current (A)	Full-power Current range	Defaul output current	Efficiency @277V	Efficiency @480V
K1-V100Y-260ZQ	105W	277-480	249-528	180-260	310	0.58	0.39-0.52A	0.52A	92%	95%

■ Mode code naming rules

K1-V 100 Y-260 Z Q

- Blank:Non Aux; 12:With Aux
- Additional functions: Blank wihtout additional functions
  C represent models with CCT/Power Switch,
  D represent models with Power Switch,
  E represent models with CCT Switch
- Max.output voltage
- Dimming mode： B with 0-10/PWM/RX dimming
  D with Dail dimming
  N No dimming
- Output power
- Product models

Technical Data

Input characteristics	
Input voltage	277-480Vac
Input Frequency	50/60Hz
Input Current (Typ.)	0.6A @277Vac , 100% load
Standby power consumption	2.5W MAX
Inrush current	45A max. @ 277Vac, 25℃ cold start
Power factor (Typ.)	PF>0.90 @ 277-480Vac ,100% load
THD	THD<20% @ 277-480Vac,100% load
Output characteristics	
Current accuracy	± 5%
Efficiency	≥92% @277Vac, ≥95% @480Vac
Output Voltage	180-260V
Ripple current	<5%
Linear adjustment rate	3%
Load Regulation	3%
Boot delay	Max 1.0 seconds@347VAC
Programmable current output range	Nominal voltage and current range can be adjusted by controller programming; The total output power does not exceed 105W (actual output voltage x actual output current = power).
Protective function	
Open circuit protection	When the LED is open, the product enters the protection state, such as hiccup or clamping at the highest output voltage state, the product will not be damaged, and the power supply will resume normal operation when the fault is eliminated or restarted.
Short circuit protection	When the output is short-circuited, the input power will be reduced accordingly. After the short-circuit condition is removed, the power supply will automatically return to normal.
Over temperature protection	Drop current mode. When the over temperature is removed, the current will automatically resume.
Environmental conditions	
Operating temperature	-40℃ - +50℃
Humidity	10% - 90% RH, (not condensed)
Storage temperature	-40℃ to +85℃
Storage humidity	10% - 90%RH, Non-condensing (sea level to 2000 meters)
vibration	10 - 500HZ X, Y, Z vertical axes vibrate at a constant acceleration of 1.0G (depth 3.5mm) for 1 hour
Protection class	IP65
Safety standard	
Dielectric strength	Primary--Dim: 1960VAC/10mA/3S Primary--ground: 1960Vac/10mA/3S

Insulation resistance	I/P-O/P：>10MΩ@500VDC (Control terminal)
Leakage current	At the maximum input voltage, the leakage current of the product should be less than 0.75mA
Safety standards	UL:UL8750
Electromagnetic interference	FCC： PART 15B Subpart B; ANSI C63.4:2014
ESD Electrostatic Discharge (Electrostatic) Immunity	Electrostatic discharge/immunity level 3 air discharge: ±8KV Level 2 Contact discharge: ±4KV Performance standard: B
RF field strength	Radio frequency electromagnetic field drug susceptibility test, 80-1000MHZ; level 2, 3V/M; Performance standard: A
Group pulse	1.0KV (performance standard: B)
Surge lightning strike	Differential mode:6kV Common mode:6KV Performance Standard: C
Reliability	
Lifespan	≥5 years H@347Vac, 100% load. See Life Cycle and Tc Curves for details
Warranty	5 years (at 80% continuous load)
Other	
Size	127*61.6mm
Weight	950g+/-10g
Remark	
1. It is recommended that customers install over-voltage protection and surge protection devices in the power supply circuit of lamps to ensure the safety of electricity use. 2. The power supply is used as a component of the whole lamp in combination with the terminal equipment. Because the EMC performance is affected by the LED lamps and wiring, the terminal equipment manufacturing The manufacturer needs to re-confirm the EMC of the whole device. 3. Please use a special programmer to adjust the current of the power supply, and program and write through the dimming light. 4. When adjusting the output current of the power supply, please ensure that the total output power does not exceed the rated maximum power. 5. Unless otherwise specified, the above parameters are the test results under the conditions of ambient temperature 25℃, humidity 50%, 100% load, and input voltage230Vac.	

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	0.70*Io	0.75*Io	0.80*Io	
	C	0.45*Io	0.50*Io	0.55*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

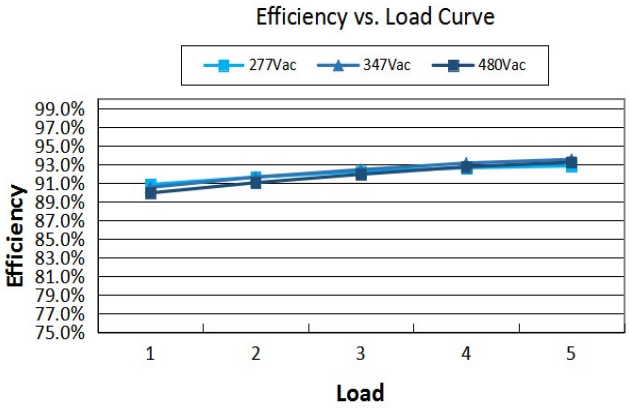
Dimming type	parameter	minimum	Typical value	maximum	Remark
0-10V 1-10V	signal level	0V		10V	
	Dimming range	10%		100%	Output current percentage
	shutdown level	0.6V	0.7V	0.8V	
	turn on level	0.75V	0.85V	0.95V	
PWM	signal level	0V		10V	
	signal frequency	200Hz	1KHz	2KHz	
	duty cycle	5%		100%	
Resistor	resistance	10kΩ		100kΩ	
	Dimming range	10%		100%	Output current percentage

■ Dimming range

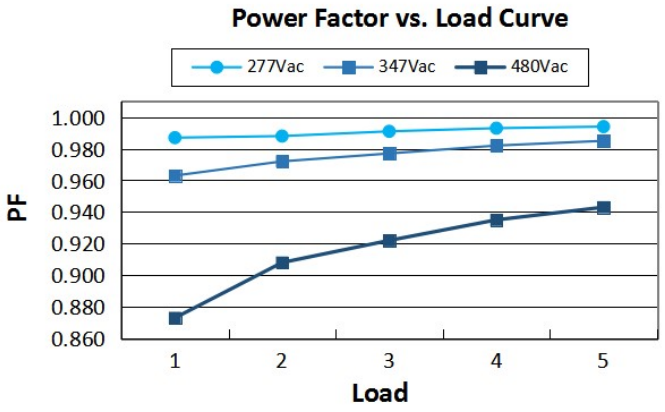
Function			0-10V			PWM			RX			
Yes Or No			Y			Y			Y			
0-10V	0	1	2	3	4	5	6	7	8	9	10	open
Ir	0	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	100%
PWM	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	open
Ir	0	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	100%
RX	0Ω	10K Ω	20K Ω	30K Ω	40K Ω	50K Ω	60K Ω	70K Ω	80K Ω	90K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

Remark:
1. the percentage of output current
2. typical values

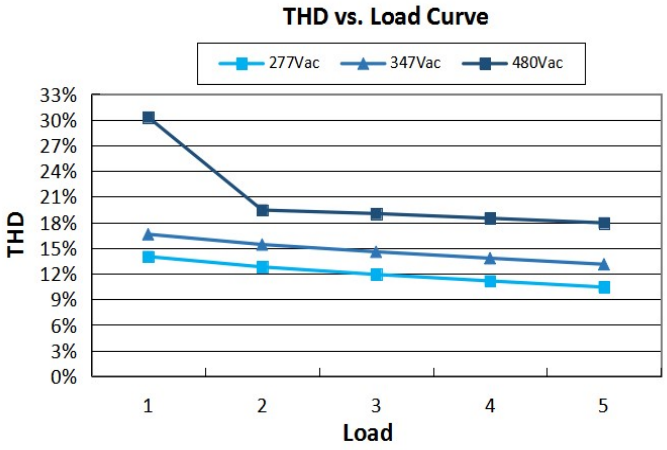
Efficiency VS. Load



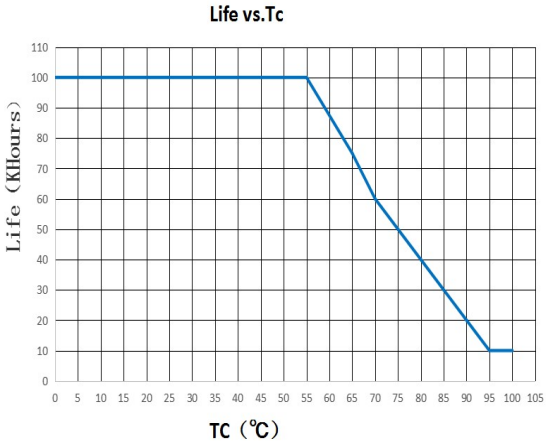
Power Factor VS. INPUT



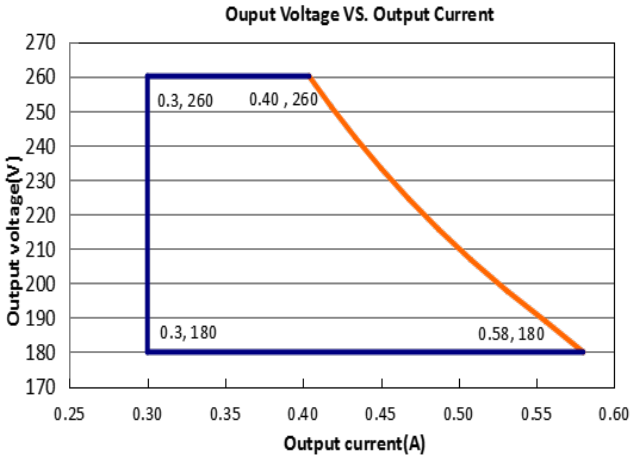
THD VS.load



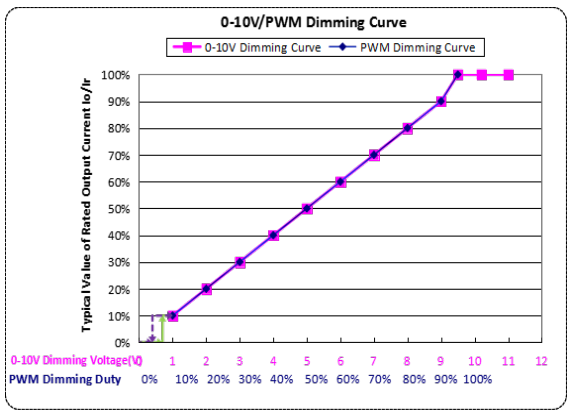
life and temperature



Power Factor

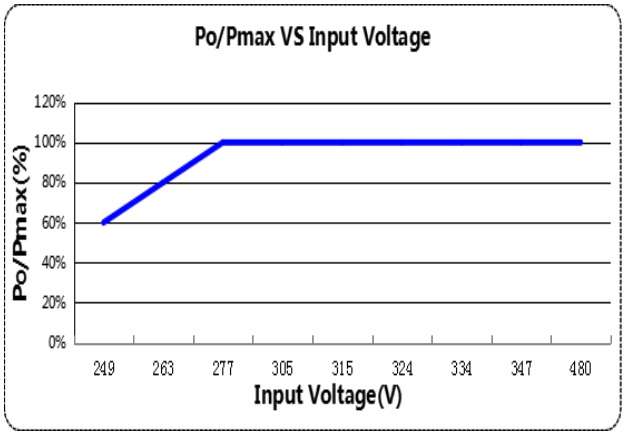


Dimming curve

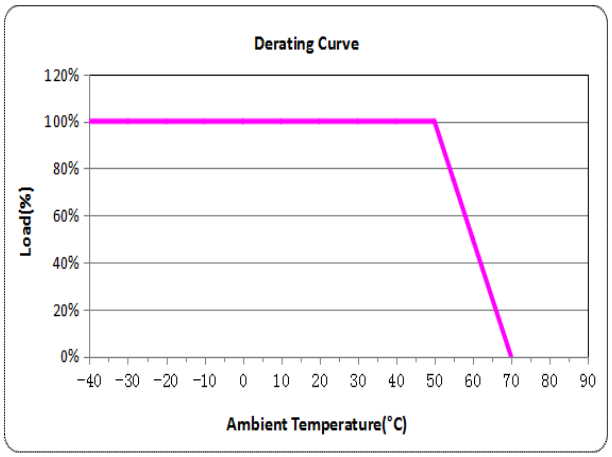


Remark:
1:Load 1 ---60% Load
2:Load 2---70% Load
3:Load 3---80% Load
4:Load 4---90% Load
5:Load 5---100% Load

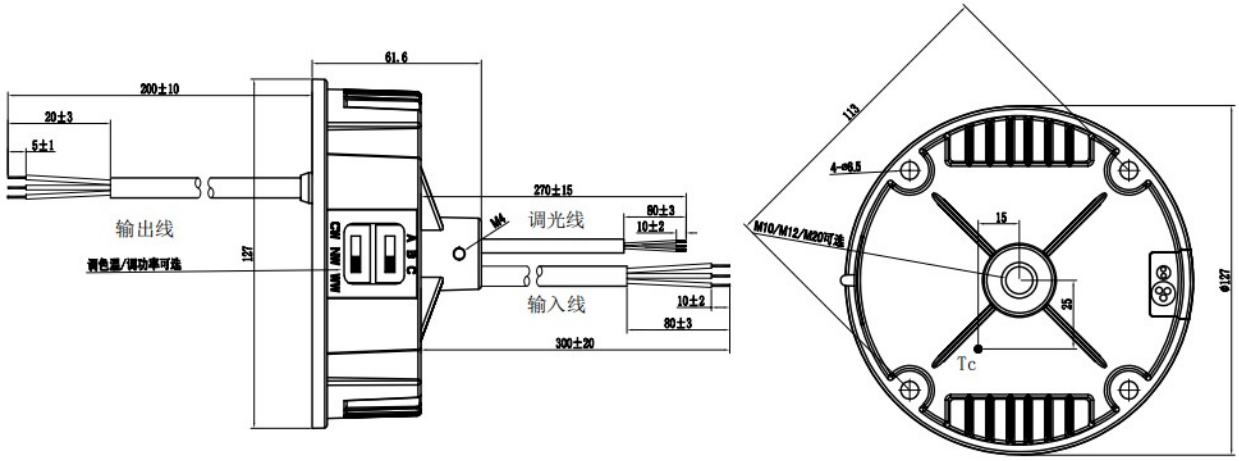
Output power Vs. Input voltage



Output power VS. Ta



Schematic diagram of appearance size



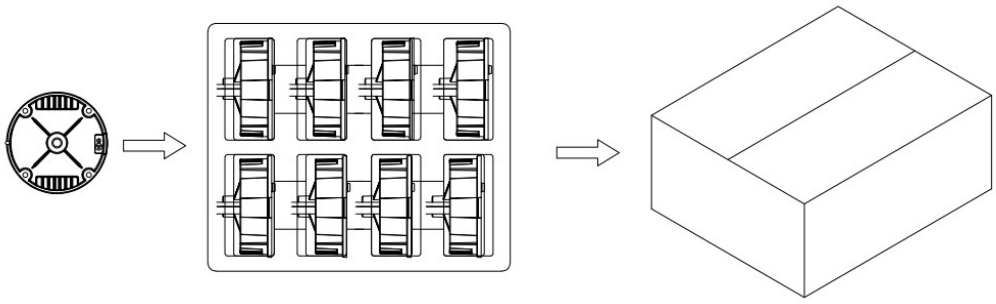
Input Wire	UL STW or SOW 600V 18#，Black-L,White-N, Green-PG
Output Wire	UL SJTW or SJOW 300V 18#，Red_LED+,Black_LED- ,Pink_ LED-
Dimming Wire	UL 2517 300V 22#, Purple_DIM+, Pink_DIM-/12V-
Auxiliary Wire	UL 2517 300V 22#, Black/White_ 12V+

Installation considerations

1. The lightning protection level of the power supply meets the standard requirements of IEC61000-4-5 and other countries. If it is used in lightning-prone areas or areas with relatively complex power grid environment, it is recommended to install a professional lightning protection module on the AC input end of the power supply.

Packaging, Transportation & Storage

1. Packaging



Box size	400mmx330mmx148mm（L×W×H）
quantity	8PCS/Tier；1 Tier/Box；8 PCS/Box
weight	950kg±5%/PCS；8.4Kg±5%/Box

2. Shipping

It is suitable for transportation by car, ship and plane. It should be covered with awning, sun protection and civilized loading and unloading during transportation.

3. Storage

Product storage should comply with the provisions of GB3873-83.

Products with a storage period of more than one year should be re-inspected and can only be used after passing the test.

Disclaimer:

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

Product installation and use precautions

■Do not connect the AC power supply to the DC output port and dimming port.

■Do not use more than the nominal power of the power supply.

■Do not use the power supplies in parallel on the same lamp.

■This product is a constant current LED power supply, only suitable for LED lamps.

Safety and Precautions

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

■Do not install the power supply in an area with inflammable and explosive materials to avoid explosion and fire.

■Do not disassemble the power supply or replace the device without permission to avoid electric shock.

Modification Resume

Version	Modification description		Modified date	Remark
	before fixing	Before and after the change		
00	first release	---	2022/8/20	