IP65 1000W Outdoor Constant Voltage LED Driver For LED Plant Lamp

Our Product Introduction

Basic Information

- Place of Origin: CHINA
- Brand Name: ANROFU
- Certification: CE ROHS FCC DLC ETL
- Model Number: USP-1000-56-BA
- Minimum Order Quantity: 1
- Delivery Time: 3-5 working days
- Payment Terms: T/T, Western Union, MoneyGram
- Supply Ability: 10000 PCS Per Day

Product Specification

- Product Name: 1000W LED Grow Light Driver
- MAXIMUM INPUT CURRENT: 6.8A
- Input Voltage: AC 200-277 V
- STANDBY POWER CONSUMPTION: ≦3W
- POWER: 1000W
- POWER FACTOR: ≥0.98(200Vac) ≥0.98(230Vac) ≥0.97(277Vac)
- VOLTAGE RANGE: 24~56V
- CURRENT RANGE: 0~22.0A
- MAXIMUM NO-LOAD VOLTAGE: ≦58V
- CURRENT ACCURACY: ±5%
- Highlight: **1000W Constant Voltage LED Driver**, **IP65 Constant Voltage LED Driver**, **Outdoor Constant Voltage LED Driver**

Product Description

The Driver For LED Grow Light For Indoor Plants 1000W Constant Current + Constant Voltage LED Driver

✣ Features

- ♦ 200-277 Vac range input
- ♦ Patent constant power output function
- ♦ With an independent 12V / 300 mA auxiliary power supply
- ♦ Efficiency ≥95%
- ♦ Built-in active PFC circuit, isolated output, no strobe
- ♦ Three-in-1 dimming: 0-10V, PWM, resistance
- ♦ Built-in lightning protection: line to line 6KV, line to ground 6KV
- ♦ All-metal case Class I IP65 waterproof design

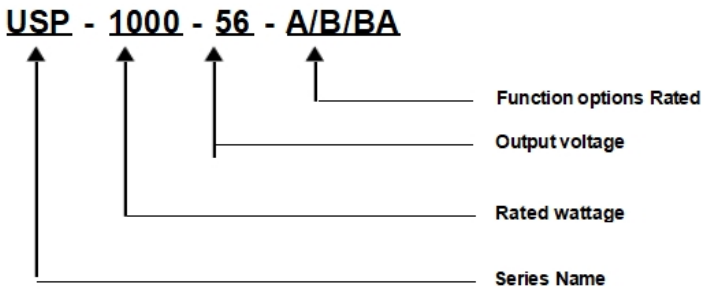
✣ Application

- ♦ LED plant lamp
- ♦ LED outdoor lighting
- ♦ LED UV curing lamp
- ♦ LED high-power projection lamp
- ♦ All kinds of LED constant current output lamps or equipment

✣ Description

The USP1000W series is a 24-56V DC output range, providing users with a flexible LED lamp set design. The maximum power of 1000W outdoor constant current drive product has an input voltage range of 200-277 Vac and a power factor of more than 0.98. This series of products is designed for LED lighting, specially designed for LED plant lights, LED outdoor lighting lights, LED UV curing lights, etc. With high lightning protection and waterproof grade, three-in-one dimming and 0-10V dimming off function, low standby power consumption. Ultra-high conversion efficiency, compact shell design, good heat dissipation, greatly improve the reliability, and extend the life of the product.
Comprehensive protection, including over pressure protection, short circuit protection, over temperature drop and off protection, is to ensure the barrier-free operation of this product.

✣ Model Encoding



Model	IP Rate	Function	Note
A	IP65/IP67	Output constant current fixed	Existing product
B	IP65/IP67	Constant current Dimming 0-10V	Existing product
BA	IP65/IP67	three-in-one dimming +12v auxiliary power supply model	Existing product

✣ Main Electrical Properties

MODEL		USP-1000-56-A	USP-1000-56-B	USP-1000-56-BA	NOTE
INPUT	VOLTAGE	200~277VAC	200~277VAC	200~277VAC	
	FREQUENCY	50~60Hz	50~60Hz	50~60Hz	
	MAXIMUM INPUT CURRENT	6.8A	6.8A	6.8A	
	INRUSH CURRENT	≦60A	≦60A	≦60A	
	STANDBY POWER CONSUMPTION	≦3w	≦3w	≦3w	
	POWER FACTOR	≥0.98(200Vac) ≥0.98(230Vac) ≥0.97(277Vac)	≥0.98(200Vac) ≥0.98(230Vac) ≥0.97(277Vac)	≥0.98(200Vac) ≥0.98(230Vac) ≥0.97(277Vac)	Full-load

	THD	≦10.0% (200Vac) ≦10.0% (230Vac) ≦10.0% (277Vac)	≦10.0% (200Vac) ≦10.0% (230Vac) ≦10.0% (277Vac)	≦10.0% (200Vac) ≦10.0% (230Vac) ≦10.0% (277Vac)	Full-load
OUTPUT	VOLTAGE RANGE	24~56V	24~56V	24~56V	
	CURRENT RANGE	Max 22.0A	0~22.0A	0~22.0A	
	MAXIMUM NO-LOAD VOLTAGE	≦58V	≦58V	≦58V	
	EFFICIENCY	≥91.0% @200Vac ≥92.0% @230Vac ≥92.0% @277Vac	≥91.0% @200Vac ≥92.0% @230Vac ≥92.0% @277Vac	≥91.0% @200Vac ≥92.0% @230Vac ≥92.0% @277Vac	Full-load
	CURRENT ACCURACY	±5%	±5%	±5%	The actual≤±3%
	RIPPLE VOLTAGE	±1% max 2%	±1% max 2%	±1% max 2%	Full-load
	RIPPLE CURRENT	±5% max 10%	±5% max 10%	±5% max 10%	
	TURN ON TIME	≦2S	≦2S	≦2S	
	LINEAR ADJUSTMENT RATE	±1%	±1%	±1%	
	LOAD REGULATION	±3%	±3%	±3%	The actual≤±2%
AUXILIARY POWER SUPPLY (OPTIONAL)	OUTPUT VOLTAGE	/	/	12.8V±10%	
	OUTPUT(CURRENT)	/	/	300mA±5%	

✣ Dimming Performance (three-in-one dimming)

PARAMETER		LEAST VALUE	TYPICAL CASE	CREST VALUE	NOTE
0-10V DIMMING (OPTIONAL)	APPLIED PRESSURE	0V	0-10V	15V	Over 15V may cause the internal components of the power supply to burn out, and the function of the power supply is abnormal
	THE DIMMING RANGE	8%	10-100%	100%	DIM + comes with an output of 100 uA current
	PUSH THE DIMMING VOLTAGE	0.8V	1-10V	10V	DIM + and DIM-no output
RESISTANCE DIMMING (OPTIONAL)	EXTERNAL LIGHT ADJUSTMENT RESISTANCE	8K Ω	0-100KΩ	100KΩ	90 K Ω above is 100% output
	THE DIMMING RANGE	8%	10-100%	100%	DIM + comes with 100 uA constant flow output
PWM AIMING	PWM HIGH LEVEL	9.5V	9.6-10V	10.5V	Dimmer PWM high level maximum
	PWM LOW LEVEL	0V	0-0.35V	0.5V	Dimmer PWM low level maximum
	THE PWM DIMMING FREQUENCY SEGMENT	500Hz	1KHz	2KHz	Best job at 1 KHz

(SELECTABLE)	PWM DUTY CYCLE	7%	10-100%	100%	DIM + and DIM-no output
	THE DIMMING RANGE	8%	10-100%	100%	DIM + comes with 100 uA constant flow output
THE DIMMING SHUT DOWN	TURN OFF THE VOLTAGE	5%	6%	7%	According to the voltage, PWM, resistance ratio
	CUT-IN VOLTAGE	6%	7%	8%	

Note: 1. When using PWM or voltage dimming, please note that the dimmer controller is set at 10% to the lowest dimming value, and be set to close below 10%, and the lower limit is not lower than 8%! For other dimming methods, please also refer to this method.

2. When the resistance is used for parallel dimming (parallel light modulation), the number of parallel units is: N, then the resistance for dimming~is: 90 KΩ / N, and the dimming resistance value must be greater than the calculated value, then 8% 100% dimming can be realized.

3. When the dimmer is used for dimming, when 20% of the power is input, the power supply may have slight noise and water ripple phenomenon. At this time, the power supply enters the light load and high efficiency frequency jump mode, which is a normal phenomenon.

✣ Other Performance

PARAMETER		SPECIFICATIONS	NOTE
LIFE LENGTH	SHELL TEMPERATURE≤65	100000H	
	SHELL TEMPERATURE≤75	50000H	
DEFENCIVE FUNCTION	OVERCURRENT PROTECTION	95%~108%	Constant current limit mode, after the load abnormal mode is removed, the power supply will automatically restore the output
	SHORT-CIRCUIT PROTECTION	0-10%power (Intermittent beating)	
	OVERVOLTAGE CROWBAR	≥ floating voltage+10%	At the overtemperature Tc point, the power supply starts to linearly reduce the power, and the Tc temperature returns to the power supply in the normal working area
	OVERTEMPERATURE PROTECTION	Tc drop≥93	
AVERAGE INTERVAL FAILURE TIME CALCULATION (MTBF)		189400H	230 Vac full load, ring temperature 25 (MIL-HDBK-217)
SHELL TEMPERATURE		Tc:max 98	If the power supply is added to 98 , the power supply is reduced to about 40%
CLASSIFICATION OF WATERPROOF		IP65	
QUALITY ASSURANCE		Five years	SHELL TEMPERATURE:≤75
WEIGHT		2.90Kg	USP-1000-56-BA model weight
SIZE		420.0*90.8*44.5 mm	Including the L-type mounting bracket dimensions on both sides
INPUT LINE SPECIFICATIONS		3*16 AWG L=450mm	The default wire length, the external wire length can only be large or equal, not small.
OUTPUT LINE SPECIFICATIONS		2*14 AWG L=300mm Double output	
TUNING LIGHT SPECIFICATIONS		2*22 AWG L=350mm	
DIMMING + AUXILIARY SOURCE LINE SPECIFICATION		3*22 AWG L=350mm	

✣ Environmental Requirements

PARAMETER	LEAST VALUE	TYPICAL CASE	CREST VALUE	NOTE
WORKING TEMPERATURE	-30	25	+50	
STORAGE TEMPERATURE	-40	25	+90	

WORKING HUMIDITY	10%RH		90%RH	
ABOVE SEA LEVEL			4000 Meters	

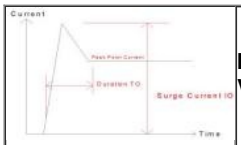
✣ **Safety Regulations And Electromagnetic Compatibility Standards**

ATTESTATION	SAFETY STANDARDS	CERTIFICATION STATUS	NOTE
UL	UL8750	√	
TUV	EN 61347-2-13:2014 EN61347-1:2008+A1:2011+A2:2013 EN62493:2015		
SAA	AS/NZS61347.2.13		
CCC	GB 19510.14-2009		
CE	EN 61347-2-13:2014 EN61347-1:2008+A1:2011+A2:2013		
The EMI / EMS project	Standard / level	criterion	
FCC	ANSI C63.4:2009 Class B		
CONDUCT CE	EN55015:2013+A1:2015		
RADIATION RE	EN55015:2013+A1:2015		
HARMONIC WAVE	IEC/EN 61000-3-2	Class C	
SURGE	IEC/EN61000-4-5	CRITERION B(Difference Module 6kV, Common Mode 6kV)	

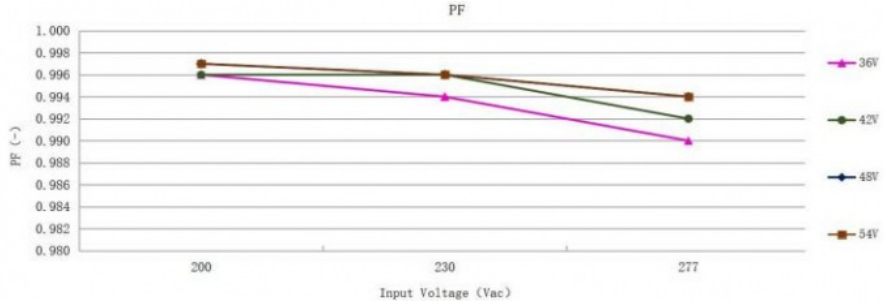
SAFETY REGULATION TEST PROJECT		QUALIFICATION	NOTE
DIELECTRIC COMPRESSIVE STRENGTH	Input to output	3750Vac/5mA Max/60s	Strengthen the insulation, no breakdown, no flying arc
	Primary to ground	1600Vac/5mA Max/60s	Basic insulation, no breakdown, no flying arc
	Secondary to ground	1000Vac/5mA Max/60s	Functional insulation, no breakdown, no flying arc
INSULATION RESISTANCE	INPUT TO OUTPUT	≥10 M Ω	Test Voltage: 500 Vdc
earthing resistance		≤0.1 Ω	25A/1min
leakage current		≤0.75mA	277Vac

Note: The power supply meets the relevant EMC standard, and the power supply is a part of the terminal equipment system, and the EMC should be reconfirmed in combination with the whole system.

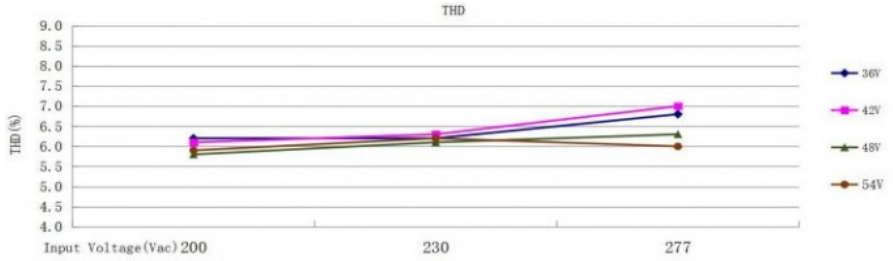
✣ **Insurge Current Characteristic Curve**

	INPUT VOLTAGE Vo	SURGE CURRENT Io	TIME To	NOTE
	200Vac	30.0A	88us	
	230Vac	36.8A	63us	
	277Vac	44.8A	55us	

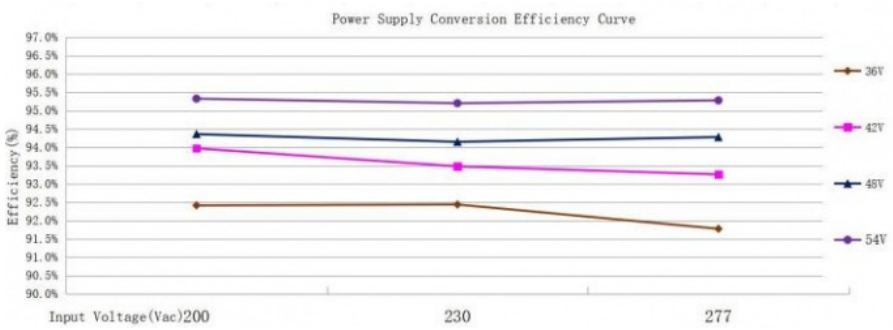
✣ **Input Power Factor Characteristic Curve**



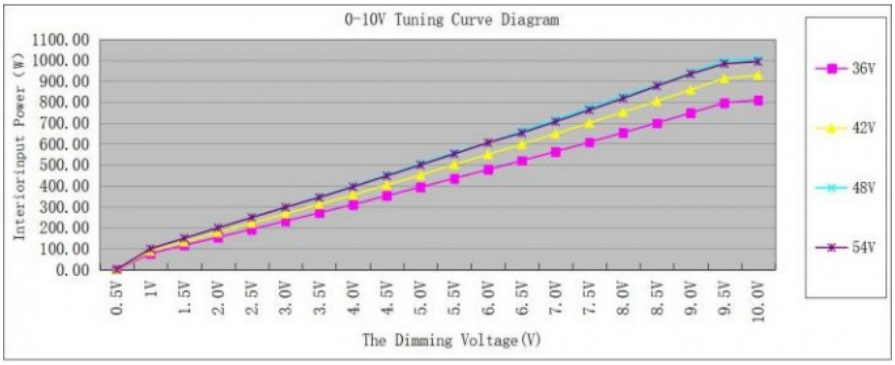
✣ **Enter The THD Property Curve**



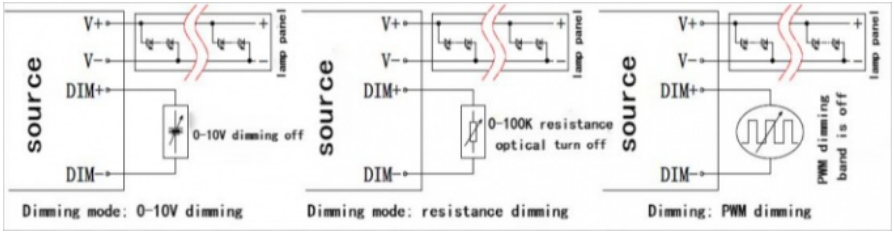
✣ **Input And Output Conversion Efficiency Characteristic Curve**



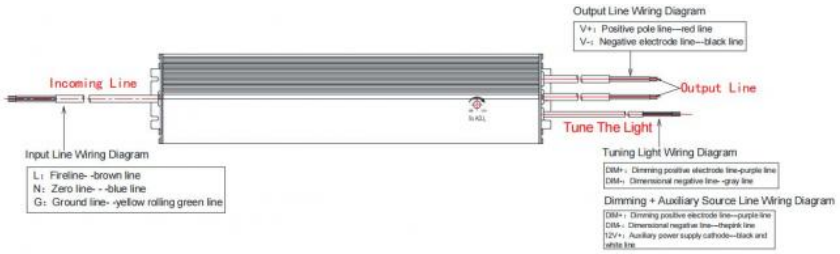
✣ **Product Dimming Curve Characteristics**



Three-in-one dimming, other dimming modes, refer to the 0-10V dimming curve ratio change.



✣ **System Wiring Diagram**



Remarks:

Dimming mode:0-10V dimming	Dimming mode: resistance dimming	Dimming: PWM dimming
1. Dimmer port output current: 100 uA	1. Dimmer port output current: 100 uA	1. Dimmer port output current: 100 uA
2. This power supply should be directly connected to the light board, not suitable for external drive	2. This power supply should be directly connected to the light board, not suitable for external drive	2. This power supply should be directly connected to the light board, not suitable for external drive

3. Off off voltage: 0.45-0.7V	3. Off off resistance: 2.0-6.0 K Ω	3. Dimmer voltage: 0-10V, dimmer frequency: 500-2 KHz
4. Open voltage: 0.65-0.85V	4. Open resistance: 5.0-8.0 K Ω	4. Turn-off the duty cycle: 4.0-6.5%
5. Maximum dimming voltage: 9.65-9.85V	5. Highest dimmer resistance: 90K-95 K Ω	5. Open the duty cycle: 7-8.5%
	6. In parallel dimming, the resistance value is: for each one unit, the highest dimmer resistance value should be divided by the number of parallel power supplies. For example, for three parallel power supplies, the resistance value: 90 / 3 = 30 KΩ	6. Maximum dimming duty cycle: 96-100%

This power supply can accept 0-10V dimming / resistance dimming / PWM dimming and other three-in- one dimming control, excellent dimming linear.

The various dimming curves vary according to the ratio of 0-10V dimming.

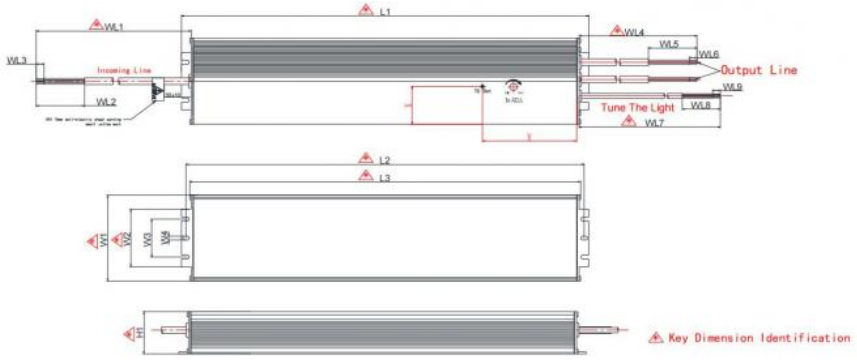
When the resistance is used, the maximum resistance is 90-95K. If the resistance value is too low, the power output power is insufficient. If the resistance value exceeds this value, the part is exceeded without change, and the maximum power output of the power supply.

When the voltage dimming is connected with the PWM dimming, the polarity cannot be connected, otherwise it will cause abnormal power output and seriously damage the internal components of the power supply.

If multiple power sources are used in parallel dimming, when the auxiliary power supply is needed, only one of the auxiliary power supply is needed to be connected, and all auxiliary power supply output lines cannot be used together. Otherwise, due to the parallel auxiliary power supply, it may cause one of the parallel power supply of the same group with no output.

When multiple power sources are dimming in parallel, the light can be used in parallel, with our 0-10V with off dimmer, the effect is better.

✣ Mechanical Size Characteristics



Detailed Parameter Table (UNIT :mm)

Power supply length	**L1**	**L2**	**L3**	**NA**	**NOTE**
	420.0±1	**410.0±1**	**403±1**		
Power supply width	**W1**	**W2**	**W3**	**W4**	**W3 is the central point spacing of the side cover mounting hole**
	90.8±1	**60.8±0.5**	**40.0±0.5**	**4.0±0.1**	
Power supply height	**H1**	**NA**	**NA**	**NA**	
	44.5±1				
TC drop	**X**	**Y**	**NA**	**NA**	
	35.8±0.5	**127.5±1**			
AC incoming line	**W L1**	**W L2**	**W L3**	**NA**	
	450±10	**70±10**	**12±1**		**16 AWG**
DC outlet line*2	**W L4**	**W L5**	**W L6**	**NA**	
	300±20	**50±10**	**12±1**		**14 AWG**
DIM light tuning	**W L7**	**W L8**	**W L9**	**NA**	
	350±10	**70±10**	**12±1**		**22 AWG**

DIM dimming + auxiliary power supply	**W L7**	**W L8**	**W L9**	**NA**	
	350±10	**70±10**	**12±1**		**22 AWG**

✥ The Nameplate Data

USP-1000-56-A

USP-1000-56-B

USP-1000-56-BA

Note: 1. The actual output parameters of the power supply are labeled with small labels on the power output baffle, and the label coding rules on the output baffle are:
Constant current: a.230Vac CC/48.0V / 19.3A, said: input voltage: 230Vac, output 48.0V/ 19.3A constant current, and so on

✥ Special Explanation

If the customer needs to adjust the current adjustment potential device on the power supply, please pay attention to the input power of the product does not exceed the rated power for use, otherwise it will cause abnormal power supply or shorten the service life of the product.

For the wire connecting the power supply and the lamp board, please be as short as possible. The line number specification of the extended connection line should not be lower than the specification of our power output line, otherwise there is a high pressure drop (line loss), which will affect the overall power conversion efficiency of the lamp, which will cause the insufficient power supply of the lamp board and the luminous intensity will decrease.

For the same power supply board, please try to consider the line loss of the power supply line, measure the power supply voltage value on the lamp board in different positions, and balance the power supply voltage value. Due to the high line loss, it will cause the luminous intensity of the lamp board on the lamp.

The on-load voltage range marked on this product is the normal on-load voltage range, leaving a certain margin upward, but please do not use the super power range.

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