

SPECIFICATION

SS-50U Series LED Driver

Model: SS-50U-XX

Description: 50W LED DRIVER

Rev.: V00

Release Date: 2017-08-16

SHENZHEN SOSEN ELECTRONICS CO.,LTD

A3 Building, Gonghe Fourth Industrial Area, Shajing Street, Baoan District
Shenzhen, China 518104

Features

- Efficiency up to 88%
- IP67 rated; Suitable for Dry, Damp and Wet Locations
- Protections: SCP, OVP
- Metal case with full potted for hazard scenarios
- Surge Protection: L/N-PE: 6KV, L-N: 4KV
- Class 2
- 5 years warranty



Description

SS-50U series are constant current LED driver with universal input voltage 90-305Vac and high power factor. They are specifically designed for LED luminaries such as high bay, high mast and street lights with low standby power, high efficiency, compact housing and good thermal management, which greatly enhance the reliability and lifespan. Comprehensive protections, including Over Voltage Protection, Short Circuit Protection and Over Temperature Protection, ensure proper functioning.

Model List

Model	O/P Voltage	O/P Current	Max. O/P Power	O/P Current Tolerance	THD (Typ.)	PF (Typ.)	Efficiency (Typ.)
SS-50U-42	24-33V	1.5A	50W	±7%	10%	0.97	88%
	24-36V	1.4A					
	30-42V	1.2A					
SS-50U-54	32-48V	1.05A	50W	±7%	10%	0.97	88%
	42-54V	0.95A					

Note: Default Tested at 230Vac, full load, Ta 25°C.



Input Characteristics

Parameter	Min	Typ.	Max	Remarks
Rated AC input range	100 Vac		277 Vac	
AC input range	90 Vac		305 Vac	
Input frequency range	47Hz		63Hz	
Max input current			0.7A	90Vac, full load
Inrush current			45A	230Vac/50Hz, cold start
No load power		0.5W	1W	277Vac/50Hz, No load
Power factor	0.95	0.97		230Vac/50Hz, full load
	0.92			100-277Vac/50Hz, 70-100% Load
THD		10%	12%	230Vac/50Hz, full load
			20%	100-277Vac/50Hz, 70-100% Load

Output Characteristics

Parameter	Min	Typ.	Max	Remarks
Output voltage range	SS-50U-42	24V	42V	Power derated @ 24-32Vdc, see Fig. 1
	SS-50U-54	32V	54V	Power derated @ 32-42Vdc, see Fig. 1
Rated output voltage	SS-50U-42	32V	42V	Po=Vo*Io=50W, full load, see Fig. 1
	SS-50U-54	42V	54V	
Rated output current	SS-50U-42		1.5A	Output 24-33V
			1.4A	Output 24-36V
			1.2A	Output 30-42V
	SS-50U-54		1.05A	Output 32-48V
			0.95A	Output 42-54V
No load voltage	SS-50U-42		49V	
	SS-50U-54		60V	
Efficiency @230Vac	SS-50U-42	86%	88%	Output 42V/1.2A, see Fig. 5
	SS-50U-54	86%	88%	Output 54V/0.95A , see Fig. 5
Output current tolerance	-7%		+7%	
Output Voltage Ripple (PK-PK)		10%	20%	Full load
Output current ripple (PK-PK)		150%	200%	Full load
Start-up current overshoot			10%	
Start-up time		1S	2S	230Vac
Line Regulation	-3%		+3%	Full load
Load Regulation	-3%		+3%	



Other Characteristics

Parameter	Min	Typ.	Max	Remarks
Short Circuit Protection	Driver will not damaged with short-circuit power <5W			Hiccup mode
Life time		55,000hrs		230Vac, full load, Tc 75°C, See Fig. 6
MTBF		200,000hrs		230Vac, full load, Ta= 25°C, (MIL-HDBK-217F)
Temperature Coefficient	-0.03%/°C		+0.03%/°C	0°C ~ 90°C
Tc			90°C	
Warranty		5 years		Tc 70°C
Net Weight		420g		
Dimension	116.5mm*63mm*37mm			L x W x H

NOTE: All the parameters above are tested Ta 25°C, unless specified.



Environmental Requirements

Parameter	Min	Typ.	Max	Remarks
Operating Temperature	-40°C	25°C	+60°C	See Fig. 2
Storage Temperature	-40°C	25°C	+85°C	
Operation Humidity	10%RH		90%RH	
Storage Humidity	5%RH		95%RH	
Altitude	-65m		4,000m	
Cooling Method	Air Cooling			

Safety and EMI/EMS Standards

Certification	Standard	Status	Remark
UL/CUL	UL8750		Pending
TUV	EN 61347-2-13:2014 EN61347-1:2008+A1:2011+A2:2013 EN62493:2015		Pending
SAA	AS/NZS61347.2.13		Pending
CCC	GB 19510.14-2009		Pending
CE	EN 61347-2-13:2014 EN61347-1:2008+A1:2011+A2:2013	✓	

Item	Standard	Remark
Insulation strength	Input-output	3200Vac/5mA Max/60s
	Primary-Earth	1600Vac/5mA Max/60s
	Sec.- Earth	1000Vac/5mA Max/60s
Insulation resistance	Input-output	≥10 MΩ

Ground resistor	≤0.1 Ω	25A/1min
Leakage current	≤0.75mA	277Vac

Item	Criterion	Remark
Conduction Emission	EN55015:2013+A1:2015	
Radiation Emission	EN55015:2013+A1:2015	
Harmonic Current Emissions	IEC/EN 61000-3-2	Class C
Surge	IEC/EN61000-4-5	Difference mode 4KV, Common mode 6KV Criterion B

Performance Curves:

Fig. 1 O/P Voltage VS Output Current

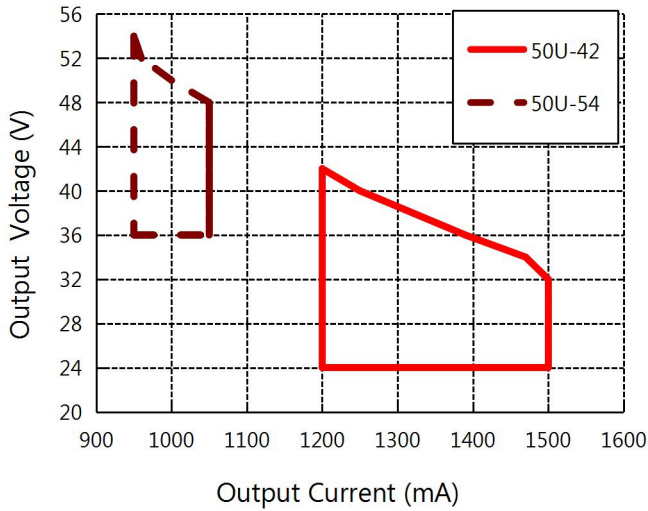


Fig. 2 O/P Power VS Ambient Temperature

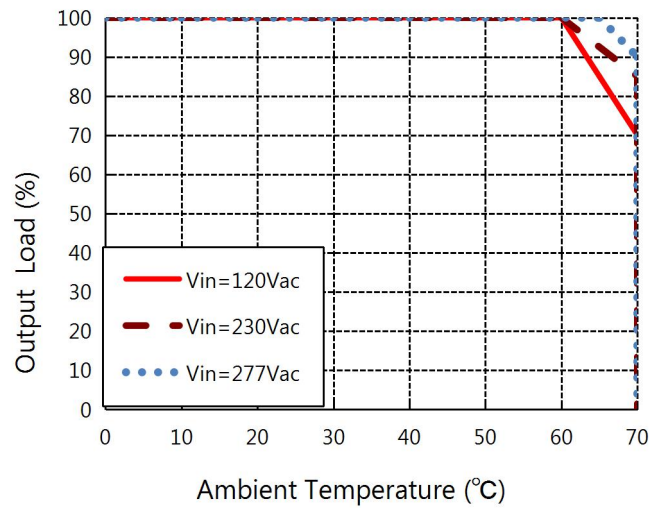


Fig. 3 Power Factor VS Output Power

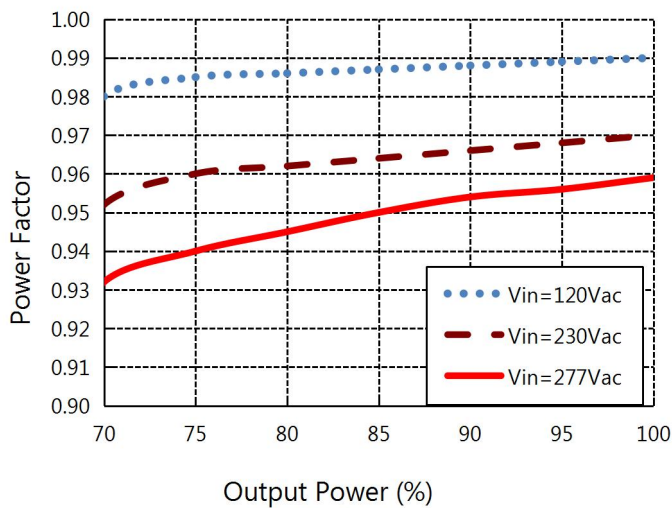


Fig. 4 THD VS Output Power

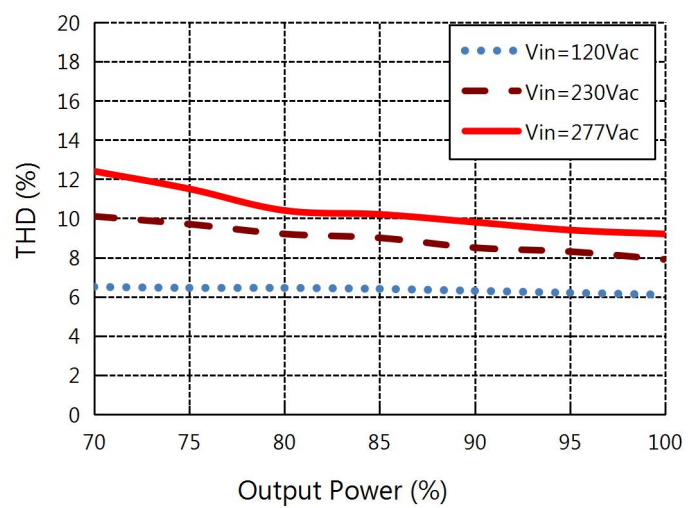


Fig. 5 Efficiency VS Output Power

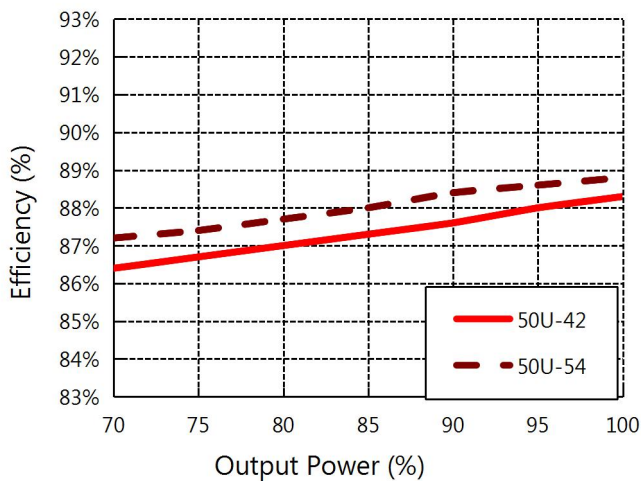
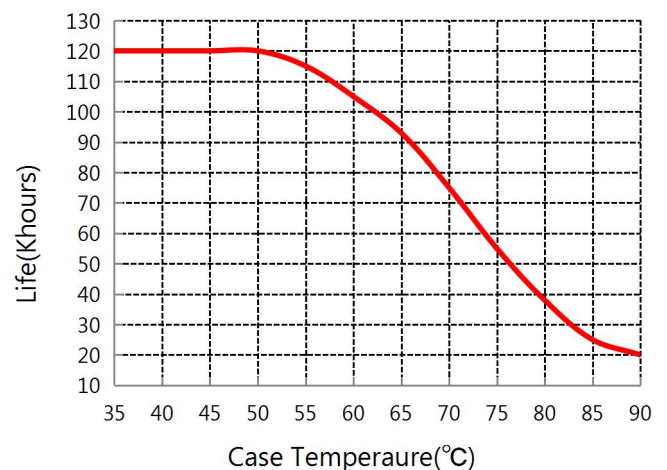
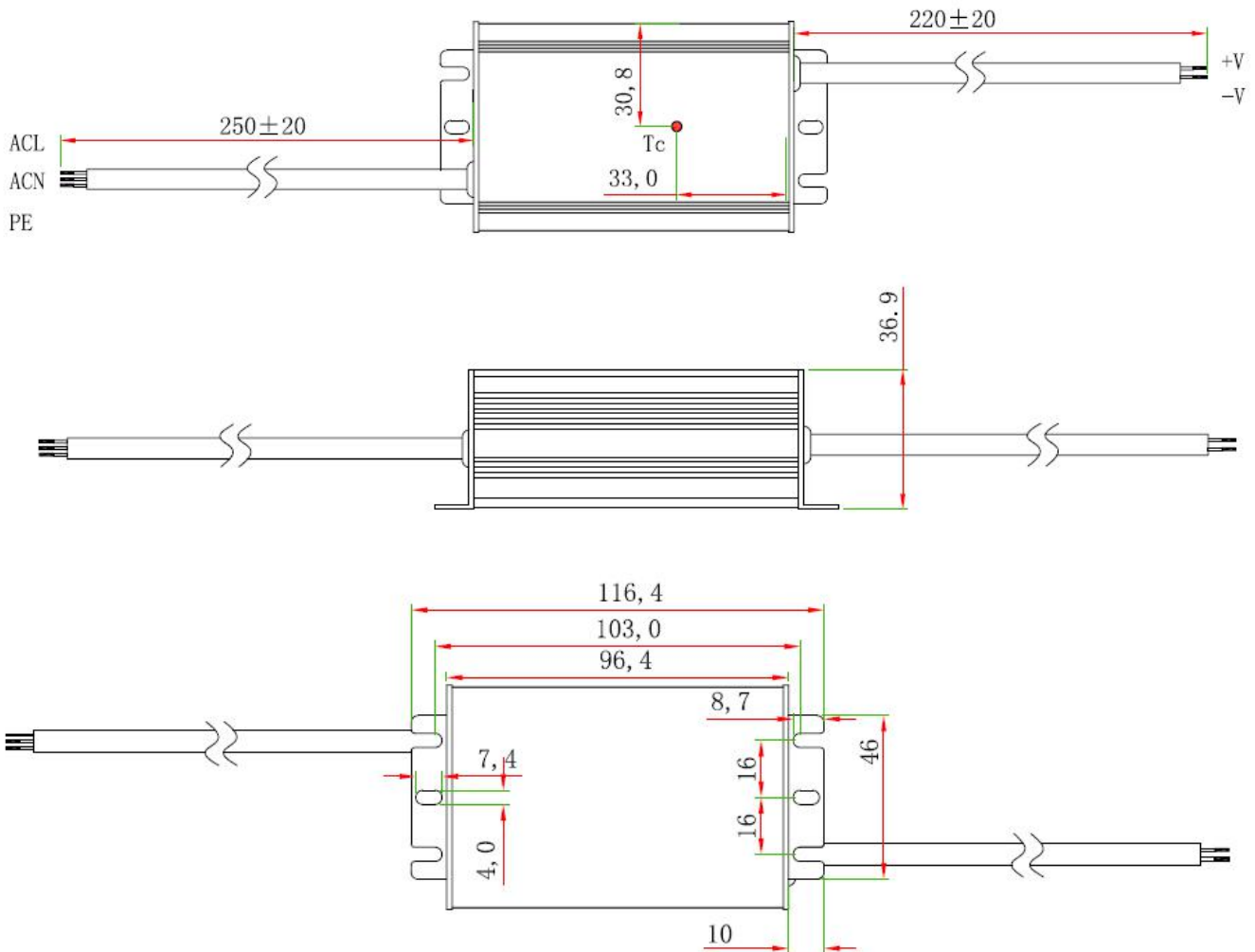


Fig. 6 Lifespan VS Case Temperature



Mechanical Characteristics(Unit: mm)



NOTE:

Input Wire	Global certified wire: SJOW, H05RN-F/YZW/PNCTF 3*17AWG 105°C 3*1.0mm ² , YELLOW&GREEN: PE BROWN: L, BLUE: N
Output Wire	Global certified wire: SJOW, H05RN-F/YZW/PNCTF 2*17AWG 105°C 2*1.0mm ² , BROWN: V+, BLUE: V-

Label

CE

INPUT
(输入端)


○ACL (BROWN 棕)

○ACN (BLUE 蓝)

○ (GREEN/YELLOW)
(绿/黄)

www.szsofen.com

Made in China (中国制造)



MODEL:SS-50U-42 Class 2 LED控制装置

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A3 building, Gonghe Fourth Industrial Area, Shajing Street, Baoan District, 518104 Shenzhen, PEOPLE'S REPUBLIC OF CHINA

SOSEN

INPUT (输入): 100-240V~ 0.7A 50/60Hz PF: 0.95
277V ~ 0.3A 50/60Hz(277V~ for Nourth America only)

OUTPUT (输出): 24-42V= Max.1.5A Max.49V Rated Power: 50W

Suitable for Dry, Damp and Wet Locations



OUTPUT
(输出端)

V+ (BROWN 棕) ○

V- (BLUE 蓝) ○

tc: 90°C

ta: 60°C

RoHS SELV  **IP67** 

Package, Transportation & Storage

1. Package

- Outside carton dimension: L×W×H =500mm×390mm×170mm;
- 28PCS/Carton;
- Net weight/PCS: 0.42kg;
- Gross weight/Carton: 13kg.

2. Transportation

Packaging is designed suitable for transportation by trucks, vessels and flights. The products should be shielded from direct sunshine, loaded/unloaded with caution.

3. Storage

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

Products should be rechecked if stock for over 1 year before installation.