

SPECIFICATION

SS-100A Series LED Driver

Model: SS-100A-XX

Description: 100W LED DRIVER

Rev.: V01

Release Date: 2018-04-27





REVISION HISTORY

Rev.	Description of Change	Changed Date	Remarks
V00	Original release	2018/01/11	
V01	Update start-up time	2018/04/27	

Features

- Efficiency up to 89%
- IP67 rated; Suitable for Dry, Damp and Wet Locations
- Protections: SCP, OTP, OCP
- Metal case with full potted for hazardous scenarios
- Surge Protection: L/N-PE: 6kV, L-N: 4kV
- 5 years warranty



Description

SS-100A series are constant Voltage LED driver with universal input voltage 90-305Vac and high power factor. They are specifically designed for LED strips, LED sign, billboard and landscape 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 Voltage Tolerance	THD (Typ.)	PF (Typ.)	Efficiency (Typ.)
SS-100A-12	12V	8.3A	100W	±5%	8%	0.98	87%
SS-100A-24	24V	4A	96W	±3%	8%	0.98	89%

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	Derated@ 90-100Vac, see Fig. 1
AC input range	90 Vac		305 Vac	
Input frequency range	47Hz		63Hz	
Max input current			1.4A	90Vac, full load
Inrush current			60A	Cold start, 230Vac/50Hz , Twidth=450us measured at 50% Ipeak
No load power		0.5W	1W	277Vac/50Hz, No load
Power factor	0.96	0.98		230Vac/50Hz, full load
	0.95			100-277Vac/50Hz, 70-100% Load
THD		8%	10%	230Vac/50Hz, full load
			20%	100-277Vac/50Hz, 80-100% Load

Output Characteristics

Parameter	Min	Typ.	Max	Remarks	
Output voltage range	SS-100A-12	11.40V	12.0V	12.60V	full load
	SS-100A-24	23.30V	24.0V	24.70V	
Output current range	SS-100A-12	0		8.3A	
	SS-100A-24	0		4.0A	
Efficiency @230Vac	SS-100A-12	85%	87%		Output 12V/8.3A, see Fig. 5
	SS-100A-24	87%	89%		Output 24V/4A , see Fig. 5
Output voltage tolerance	SS-100A-12	-5%		+5%	full load
	SS-100A-24	-3%		+3%	full load
Output voltage ripple (PK-PK)			1%	2%	Oscilloscope/20MHz, output with a 0.1uf ceramic capacitor and a10uf electrolytic capacitor
Start-up time			1.2S	1.5S	115Vac
			0.6S	1S	230Vac
Output overshoot/undershoot	-10%			+10%	When the driver on or off
Line Regulation	-1.5%			+1.5%	Full load
Load Regulation	-2%			+2%	
Transient response	Overshoot amplitude	-5%		+5%	di/dt=1A/μs, 25%-75%-25%
	Recover time			10ms	

Other Characteristics

Parameter		Min	Typ.	Max	Remarks
Protection	OCP	115% I _o		130% I _o	Hiccup mode
	OTP	90°C	100°C	110°C	T _c , IC lock, must restart
	Short Circuit Protection	Driver will not damaged with short-circuit power <5W			Hiccup mode
Life time			55,000hrs		230Vac, full load, T _c 75°C, See Fig. 6
MTBF			200,000hrs		230Vac, full load, T _a = 25°C, (MIL-HDBK-217F)
Temperature Coefficient		-0.03%/°C		+0.03%/°C	T _c : 0°C ~ 85°C
T _c				85°C	
Warranty			5 years		T _c : 70°C
Net Weight			800g		
Dimension		193mm*63mm*40mm			L x W x H

NOTE: All the parameters above are tested T_a 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	✓	
CE	EN 61347-2-13:2014 EN61347-1:2008+A1:2011+A2:2013	✓	
Item	Standard	Remark	
Insulation strength	Input-output	3750Vac/10mA Max/60s	Reinforced insulation
	Primary-Earth	1875Vac/10mA Max/60s	Basic insulation
	Sec.- Earth	1000Vac/10mA Max/60s	Function insulation
Insulation resistance	Input-output	≥10MΩ	Testing Voltage: 500Vdc
Ground resistor		≤0.1Ω	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

NOTE: SOSEN warrants the LED Driver itself complies with EMC standard. However, LED Driver's EMC should be re-checked when integrated into lighting systems due to unexpected interference as component.

Performance Curves

Fig. 1 Output Power VS Input Voltage

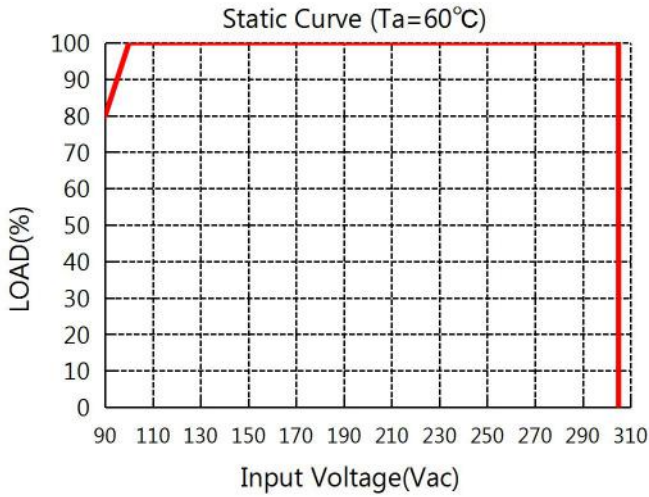


Fig. 2 O/P Power VS Ambient Temperature

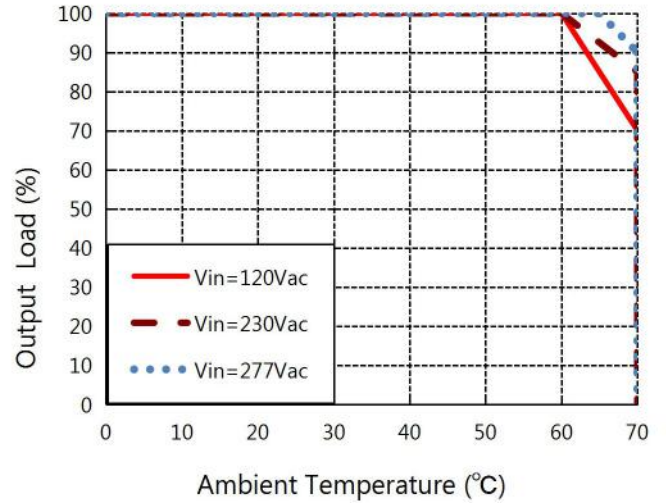


Fig. 3 Power Factor VS Output Power

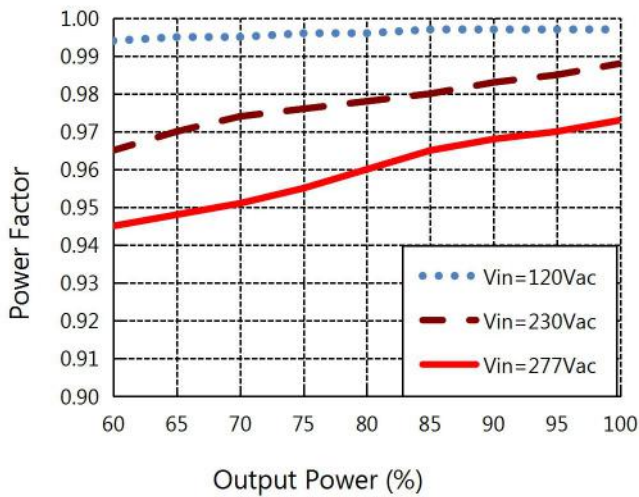


Fig. 4 THD VS Output Power

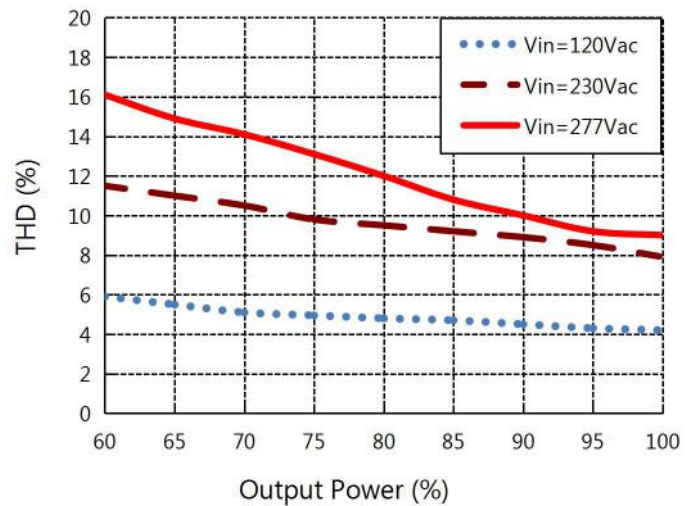


Fig. 5 Efficiency VS Output Power

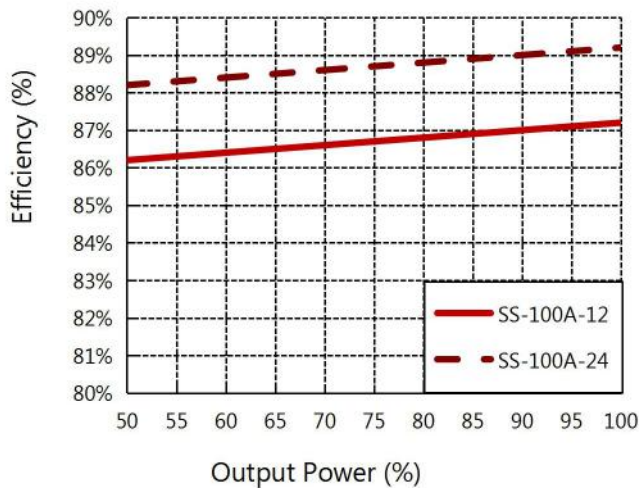
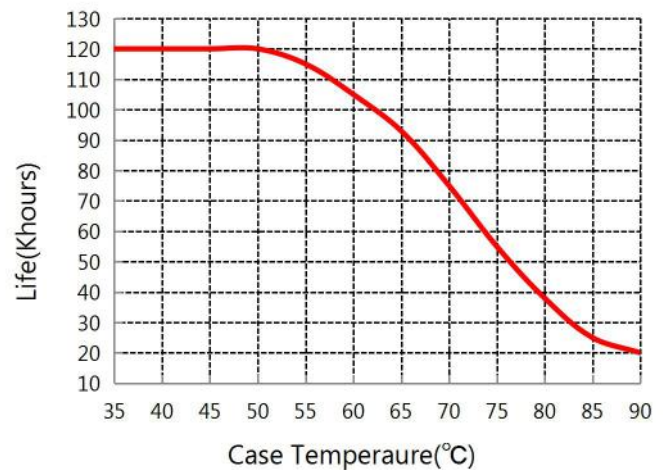
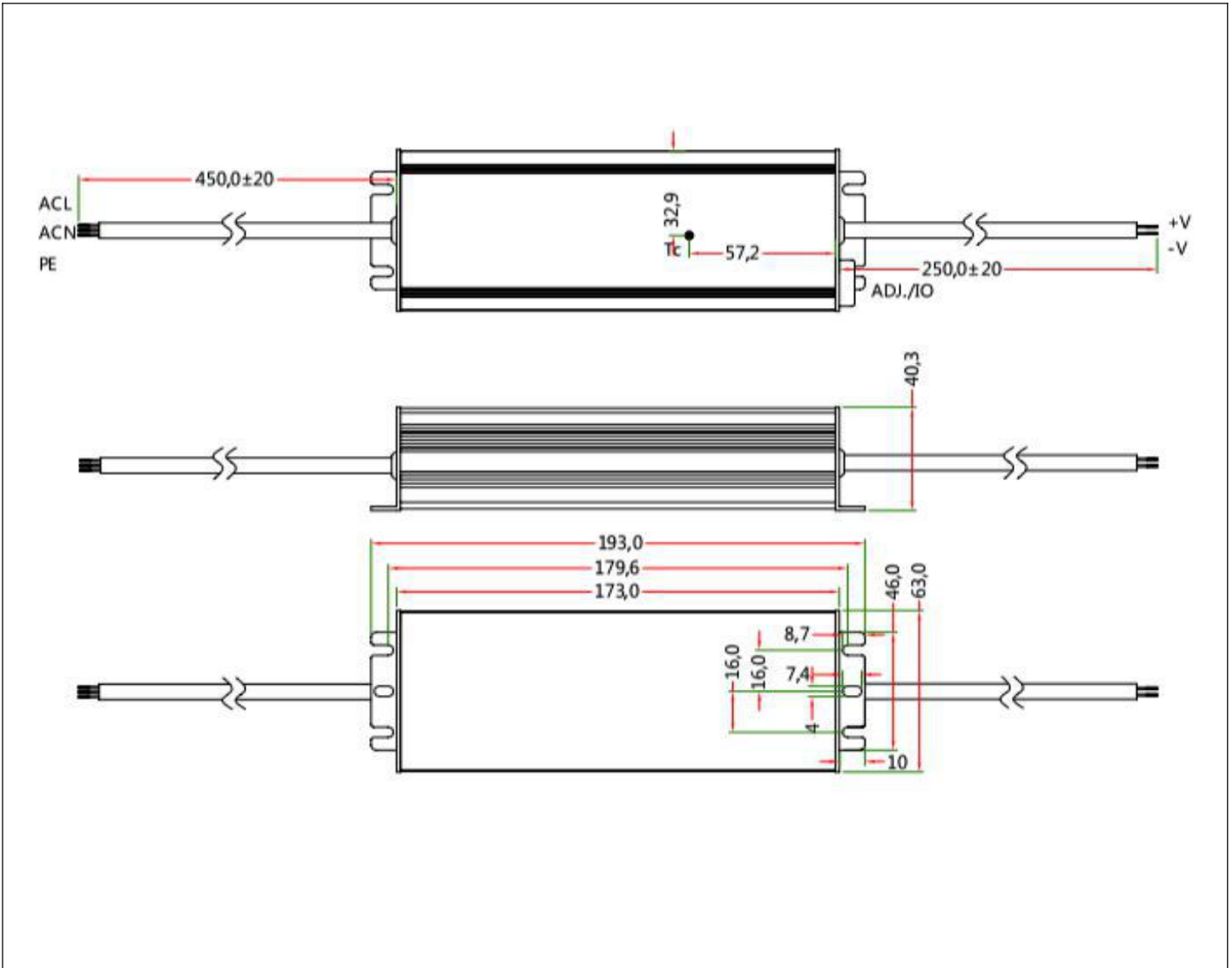


Fig. 6 Lifespan VS Case Temperature



Mechanical Characteristics(Unit: mm)



NOTE:

Input Wire	UL SJTW #18AWG 3*0.824 mm ² , O.D: 7.8mm, GREEN: PE, BLACK: L, WHITE: N
Output Wire	UL SJTW #18AWG 2*0.824 mm ² , O.D: 7.6mm, RED: V+, BLACK: V-


Label

UL

INPUT

- ACL---BLACK
- ACN---WHITE
- ⊕---GREEN

MADE IN CHINA
www.szsosen.com



MODEL:SS-100A-12
LED Driver

Shenzhen Sosen Electronics Co.,Ltd

INPUT : 100-277V ~ Max.1.4A 50/60Hz PF>0.95







OUTPUT : 12V --- 8.3A 100W

Suitable for Dry, Damp and Wet Locations Type HL


-tc tc: 90°C
 ta: 60°C
 Type TL 90/70°C

OUTPUT

- V+ ---RED ○
- V- ---BLACK ○

RoHS SELV IP67

SOSEN LED DRIVER 

Package, Transportation & Storage

1. Package

- Outside carton dimension: L×W×H =500mm×390mm×170mm;
- 14PCS/Carton;
- Net weight/PC: 0.8kg
- Gross weight/Carton: 12kg

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.