

# SPECIFICATION

## 100W LED DRIVER

Issued date: May.31.2016

Model: SS-100H

REV : V03

Description: 100W AC to DC LED DRIVER

Customer : \_\_\_\_\_

Customer Approval Signature	SHENZHEN SOSEN ELECTRONICS CO LTD		
	WRITTEN	CHECKED	APPROVED

**SHENZHEN SOSEN ELECTRONICS CO LTD**

## 【1. Applications】

- LED Advertising Sign
- LED Architectural Lighting
- LED Commercial Industrial Lighting
- LED General Luminaries



Figure 1

## 【2. Features】

- ◆ Constant Current
- ◆ Built-in Active PFC Function
- ◆ High efficiency up to 91%
- ◆ IP67 design for indoor or outdoor installations
- ◆ Protections: short circuit/over temperature/over voltage
- ◆ Aluminum housing, cooling by free air convection
- ◆ CE, TUV, UL, BIS approved

## 【3. Model Listing】

ITEM	MODEL	Output Voltage	Output current	output power	Output current tolerance	Output voltage (No load)	Ripple & noise	Efficiency (typ.230V)
3.1	SS-100H-33	24-33V	3.05A	100.7W	±5%	36V	≤1%	90%
3.2	SS-100H-36	24-36V	2.8A	100.8W	±5%	38V	≤1%	90%
3.3	SS-100H-42	30-42V	2.4A	100.8W	±5%	44V	≤1%	90%
3.4	SS-100H-48	36-48V	2.1A	100.8W	±5%	51V	≤2%	90%
3.5	SS-100H-54	42-54V	1.85A	99.9W	±5%	56V	≤2%	90%

## 【4. Model naming rules】

SS-100H-48■	■ : Stands for the last letter
The last letter	Based model, Through external potentiometer to adjustable output current, output current adjusting range is 70% to 100%.
The last letter for C	Timing dimmer, through the preset program timing dimmer.
The last letter for T	A single timing dimmer, the product internal timer, time has eight kinds of optional: such as 5 hours, 6 hours, 7 hours, 8 hours,, work mode: 24 hours implementation a cycle.

**【5. Input characteristics】**

ITEM	Parameter	Min	Typ	Max	Remarks
5.1	Rated AC input range	100 Vac		277Vac	
5.2	AC input range	90 Vac		305 Vac	
5.3	Input frequency range	47Hz		63Hz	
5.4	Max input current			1.4A	Vin=90Vac, full load
5.5	Inrush current			60A	Vin=230Vac/50Hz, cold start
5.6	Power factor	0.98			Vin=230Vac/50Hz, full load, Ta=25°C
		0.9			100-277Vac, 70-100% full load, Ta=25°C
5.7	THD			10%	Vin=230Vac/50Hz,full load, Ta=25°C
				20%	100-277Vac, 70-100% full load, Ta=25°C

**【6. Output】**

ITEM	Parameter	Min	Typ	Max	Remarks
6.1	Output current tolerance	-5%		+5%	
6.2	Ripple & noise			1%Vo	Measurement is done by 20MHz bandwidth oscilloscope and the output paralleled a 0.1Uf ceramic capacitor and a 10uF electrolysis capacitor. Ta=25°C
6.3	Efficiency	89%	91%		Vin=230Vac/50Hz, full load
6.4	Overshoot / Undershoot	-10%		+10%	Test with lamp, Ta=25°C
6.5	Rise Time			500mS	
6.6	Turn - on Delay Time		1.0S	3.0S	Vin=120Vac
				2.0S	Vin=230Vac

**【7. PROTECTION FUNCTION】**

ITEM	Parameter	Min	Typ	Max	Remarks
7.1	Over Voltage Protection	108%	110%	115%	latch off
7.2	Short Circuit Protection	A long time short circuit is not damaged, Pin: ≤10W			Auto-recovery, hiccup
7.3	Over Temperature Protection	90°C	100°C	110°C	Case temperature; blackout and restart

**【8. Environment requirement】**

ITEM	Parameter	Min	Typ	Max	Remarks
8.1	Operating Temperature	-40°C	25°C	+70°C	refer to Derating Curve, Figure 2
8.2	Storage Temperature	-40°C	25°C	+85°C	
8.3	Operation Humidity	10%RH		90%RH	
8.4	Storage Humidity	5%RH		95%RH	
8.5	Altitude	-65m		4000m	
8.6	Cooling Method	Air Cooling			

**【9. Other Requirements】**

ITEM	Parameter	Min	Typ	Max	Remarks
9.1	Life time		100,000 hours		230Vac, 100% on load, Tc=60°C,
9.2	MTBF Estimation		500,000hours		230Vac, Ta=25°C, 100% on load (MIL-HDBK-217F)
9.3	Temperature coefficient	-0.03%/°C		+0.03%/°C	
9.4	Weight		800g		
9.5	Case temperature			90°C	
9.6	Size	195mm*63mm*40mm			

**【10. Safety Standards & EMI/EMS Standards】**

10.1 Safety Standards			
Certification	Safety Standards	State	Remarks
CE	EN 61347-2-13:2014 EN61347-1:2008+A1:2011+A2:2013	■	
TUV	EN 61347-2-13:2014 EN61347-1:2008+A1:2011+A2:2013 EN62493:2010	■	
UL	UL8750	■	
CQC/CCC	GB 19510.14-2009	■	
10.2 Safety Requirements			
ITEM	Technical requirements	Remarks	
Insulation strength	Input-output	3200Vac/5mA Max/60 seconds	Reinforced insulation ;No flashover and breakdown
	Primary- Earth	1600Vac/5mA Max / 60second	Based insulation ; No flashover and breakdown
	Secondary- Earth	1000Vac/5mA Max / 60second	Function insulation ; No flashover and breakdown
Insulation resistance	Input-output	≥10 MΩ	Testing Voltage: 500Vdc
Ground resistor		≤0.1Ω	40A/2min
Leakage current		≤0.75mA	Vin=277Vac
10.3 EMC Requirements			
ITEM	Standards	Criterion	
CE	EN55015:2006+A1:2007+A2:2009	CLASS B	
RE	EN55015:2006+A1:2007+A2:2009	CLASS B	
SURGE	IEC/EN61000-4-5	Difference mode±4KV, common mode ±6KV Criterion B	

【11. Characteristics of figure】

Figure 2: Derating Curve

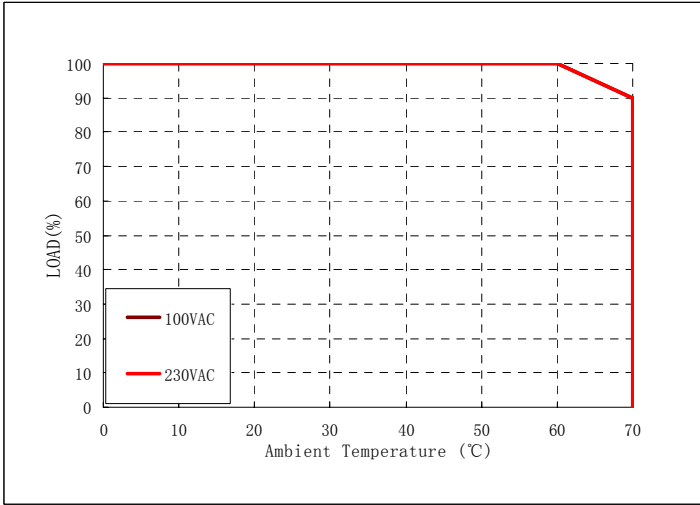


Figure 3: Static Characteristics

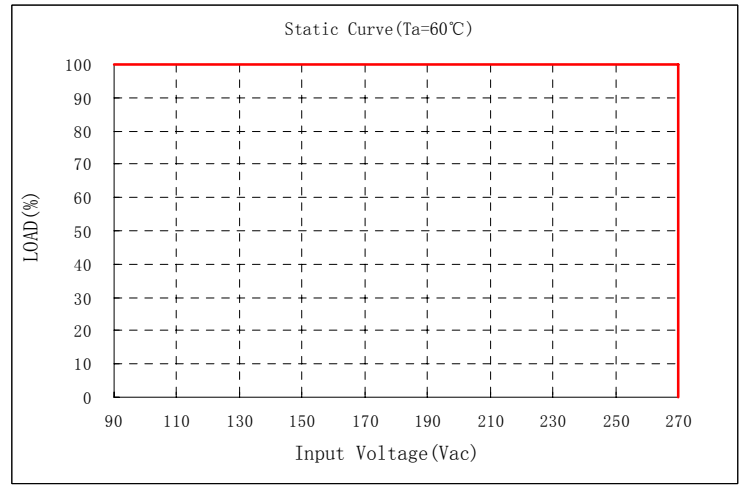


Figure 4: PF Curve(full load)

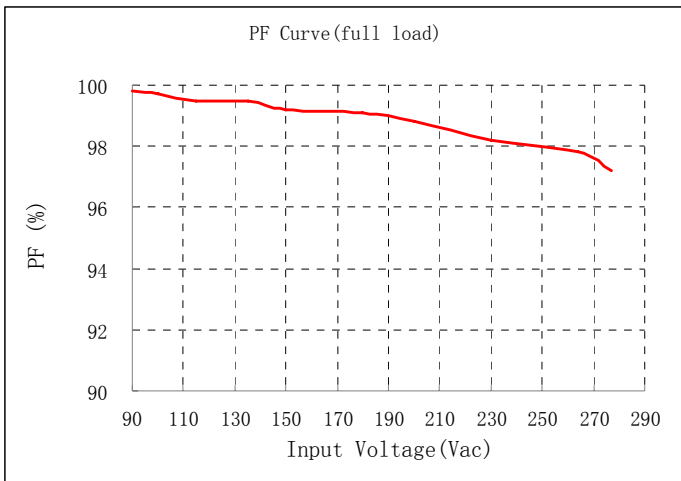
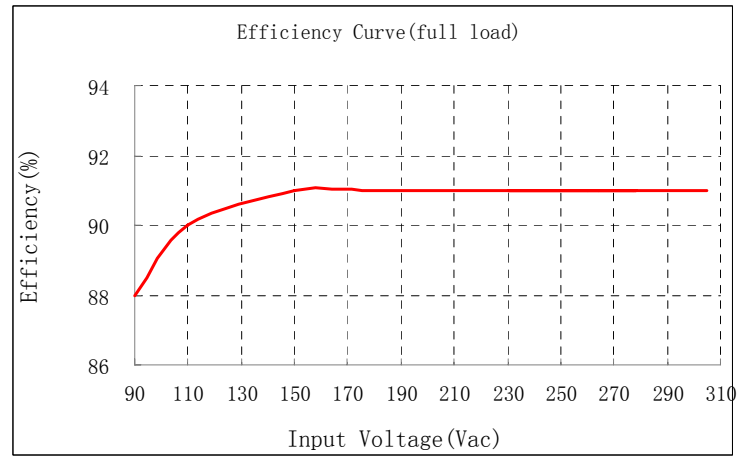
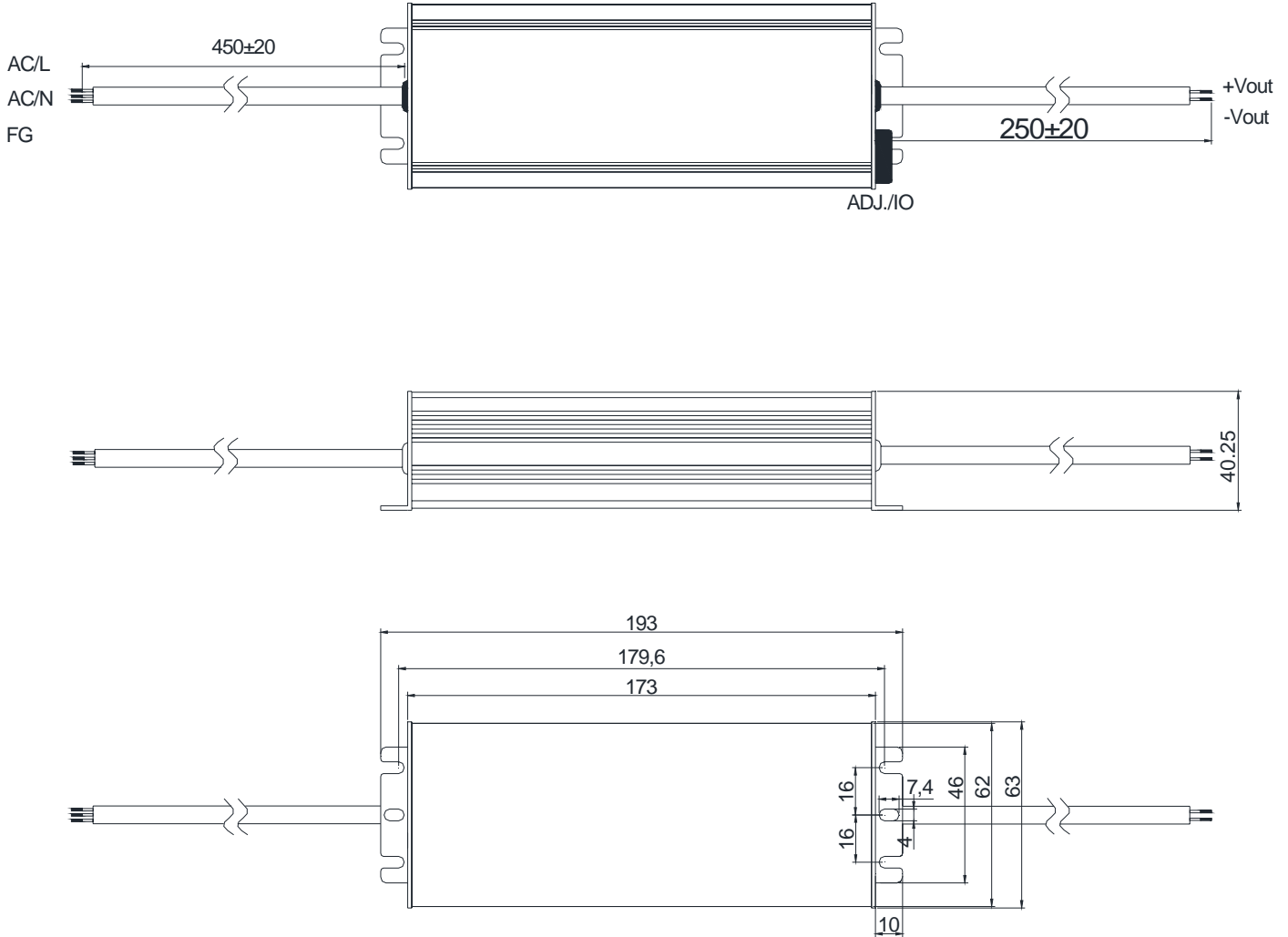


Figure 5: Efficiency Curve (full load)



【12. Mechanical characteristics】

图 6: Based model



Remarks:

AC input cable	1. American standard cable: UL SJTW #18AWG $3 \times 0.824 \text{mm}^2$ , Outer diameter: 7.8mm; Green: PE, Black: L, White: N 2. European standard cable: VDE H05RN-F $3 \times 1.0 \text{mm}^2$ , Outer diameter: 7.4mm, Brown: L, Blue: N, Yellow & Green: PE
DC output cable	1. American standard cable: UL SJTW #18AWG $2 \times 0.824 \text{mm}^2$ , Outer diameter: 7.3mm; Red: V+, Black: V- 2. European standard cable: VDE H05RN-F $2 \times 1.0 \text{mm}^2$ , Outer diameter: 7.0mm; Brown: V+, Blue: V-

【13. Label】

CCC	
<p>○ ACL --- BROWN (棕) INPUT (输入端)</p> <p>○ ACN --- BLUE (蓝)</p> <p>○  --- GREEN/YELLOW (绿黄)</p> <p>HTTP://www.szsofen.com MADE IN CHINA 制造地: 中国</p>	<div style="text-align: center;"> <b>MODEL (型号): SS-100H-33</b>  <b>SOSEN LED DRIVER (LED模块用交流电子控制装置)</b> </div> <hr/> <p>MANUFACTURERS: SHENZHEN CITY SOSEN ELECTRONICS CO.,LTD                  制造商: 深圳市崧盛电子有限公司</p> <p>INPUT (输入): 100-240V~ 1.4A 50/60Hz <span style="float: right;">t<sub>c</sub>: 90°C</span>                  277V~ 0.45A 50/60Hz <span style="float: right;">t<sub>a</sub>: 60°C</span>                  (277V~只适用于北美)</p> <p>OUTPUT (输出): 24-33V  3.05A Max.35V 输出功率: 100W (LED模块)</p> <p style="text-align: right;">V+ --- BROWN ○ (棕) V- --- BLUE ○ (蓝)</p> <p style="text-align: right;">Io ADJ. (电流可调) ○</p> <div style="text-align: center;"> </div>
TUV	
<p>○ ACL --- BROWN INPUT</p> <p>○ ACN --- BLUE</p> <p>○  --- GREEN/YELLOW</p> <p>MADE IN CHINA</p>	<div style="text-align: center;"> <b>MODEL:SS-100H-33</b>  <b>SOSEN Constant Current LED Driver</b> </div> <hr/> <p>MANUFACTURERS: SHENZHEN CITY SOSEN ELECTRONICS CO.,LTD                  HTTP://www.szsofen.com</p> <p>INPUT: 100-277V~ 1.4A 50/60Hz <span style="float: right;">•t<sub>c</sub> t<sub>c</sub>: 90°C</span>                  OUTPUT: 24-33V  3.05A Max.35V Max.100.7W <span style="float: right;">t<sub>a</sub>: 60°C</span></p> <p>Suitable for use in Dry, Damp and Wet Locations</p> <p style="text-align: right;">V+ --- BROWN ○ V- --- BLUE ○</p> <p style="text-align: right;">Io ADJ. (电流可调) ○</p> <div style="text-align: center;"> </div>
UL	
<p>○ ACL --- BLACK INPUT</p> <p>○ ACN --- WHITE</p> <p>○  --- GREEN</p> <p>MADE IN CHINA</p>	<div style="text-align: center;"> <b>MODEL:SS-100H-33</b>  <b>SOSEN Constant Current LED Driver</b> </div> <hr/> <p>MANUFACTURERS: SHENZHEN CITY SOSEN ELECTRONICS CO.,LTD                  HTTP://www.szsofen.com</p> <p>INPUT: 100-277V~ 1.4A 50/60Hz <span style="float: right;">•t<sub>c</sub> t<sub>c</sub>: 90°C</span>                  OUTPUT: 24-33V  3.05A Max.35V Max.100.7W <span style="float: right;">t<sub>a</sub>: 60°C</span>                  Type TL 90/70°C</p> <p>Suitable for use in Dry, Damp and Wet Locations</p> <p style="text-align: right;">V+ --- RED ○ V- --- BLACK ○</p> <p style="text-align: right;">Io ADJ. (电流可调) ○</p> <div style="text-align: center;"> </div>



## **【14. Installation Precautions】**

- 14.1 If the driver is output current adjustable, please seal the adjustable hole by 704 silicon glue and cover the waterproof of rubber plug after adjusting the current
- 14.2 Lightning protection meet the IEC61000-4-5 standard requirements. If the driver is used in the lighting active areas or relatively complex power grid environment, it is suggested that the power supply of the AC input terminal shall be equipped with a professional lightning protection module.

## **【15. Package,Transportation & Storage】**

### 15.1 Package

- a、 Package outside carton dimension:  $L \times W \times H = 502 \times 279 \times 200$  (unit: mm);
- b、 Each carton: 20PCS;
- c、 Net weight of each driver: 0.8kg; Gross weight of a carton: 17kg;
- d、 There are product name, model, mark of manufacturer, certificate of safety approval and manufacturing date on the carton and packing list inside.

### 15.2 Transportation

Packaging is designed suitable for transportation by truck, ship, and plane. The products should be shielded from sunshine, and loaded and unloaded carefully.

### 15.3 Storage

The storage of products shall meet the standard of GB 3873—83.

Product should be rechecked of the period of storage is over 1 year before install.