

# SPECIFICATION

## 120W LED DRIVER

Issued date: May.31.2016

Model: SS-120H

REV : V03

Description: 120W AC to DC LED DRIVER

Customer :

Customer Approval	<b>SHENZHEN SOSEN ELECTRONICS CO LTD</b>		
Signature	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 90%
- ◆ Optional dimming function: 1-10Vdc or PWM
- ◆ IP67 design for indoor or outdoor installations
- ◆ Protections: short circuit/over temperature/over voltage
- ◆ 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)Max	Power factor (Vin=230Vac)	Efficiency (typ.)
3.1	SS-120H-33	24-33V	3.65A	120.5W	±5%	36V	0.95	89%
3.2	SS-120H-36	24-36V	3.35A	120.6W	±5%	39V	0.95	89%
3.3	SS-120H-42	30-42V	2.85A	119.7W	±5%	44.5V	0.95	90%
3.4	SS-120H-48	36-48V	2.5A	120.0W	±5%	51V	0.95	90%
3.5	SS-120H-54	42-54V	2.25A	121.5W	±5%	56.5V	0.95	91%
3.6	SS-120H-115	69-115V	1.05A	120.4W	±5%	119V	0.95	91%
3.7	SS-120H-140	84-140V	860mA	120.4W	±5%	145V	0.95	91%
3.8	SS-120H-171	103-171V	700mA	119.7W	±5%	177V	0.95	91%

**【4. Model naming rules】**

SS-120H-48■	■ : Stands for the last letter
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The last letter	Based model, Through external potentiometer to adjustable output current, output current adjusting range is 70% to 100%.
The last letter for B	DIM the lighting, 1-10V dimming and PWM signal dimming by the outer DIM .
The last letter for C	Timing dimmer, through the preset program timing dimmer.
The last letter for D	Remote control dimmer, adjusting the output current through an external remote control.
The last letter for T	A single timing dimmer, the product internal timer, time has eight kinds of optional: such as 2 hours, 3 hours, 4 hours , 5 hours, 6 hours, 7 hours, 8 hours, 10 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			1.6A	Vin=90Vac
5.5	Inrush current			60A	Vin=230Vac/50Hz, cold start
5.6	Power factor	0.97			Vin=230Vac/50Hz, full load
		0.95			100-277Vac, 80-100% full load
5.7	THD			10%	Vin=230Vac/50Hz, full load
				20%	100-277Vac, 80-100% full load

### 【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	Ripple current			5%IO	Vin=230Vac/50Hz, full load
6.4	Efficiency	88%	90%		Vin=230Vac/50Hz, full load
6.5	Overshoot / Undershoot	-10%		+10%	Test with lamp, Ta=25°C
6.6	Rise Time			500mS	
6.7	Turn - on Delay Time			1S	Vin=230Vac/50Hz, full load Ta=25°C
				3S	Vin=100Vac/50Hz, full load Ta=-25°C

**【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: $\leq 3W$			Auto-recovery, hiccup
7.3	Over Temperature Protection	90°C	100°C	110°C	Case temperature; shall be restarted if over-temperature

**【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	Burn-in	Burn-in for 8 hours at 40°C			
9.2	MTBF Estimation	50,000hours			Full load, Ta:50°C, testing
9.3	Temperature coefficient	-0.04%/°C		+0.04%/°C	
9.4	Weight		910g		
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 GB 19510.14-2009 GB 7000.0-2007	■	
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 / 60 seconds	Based 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

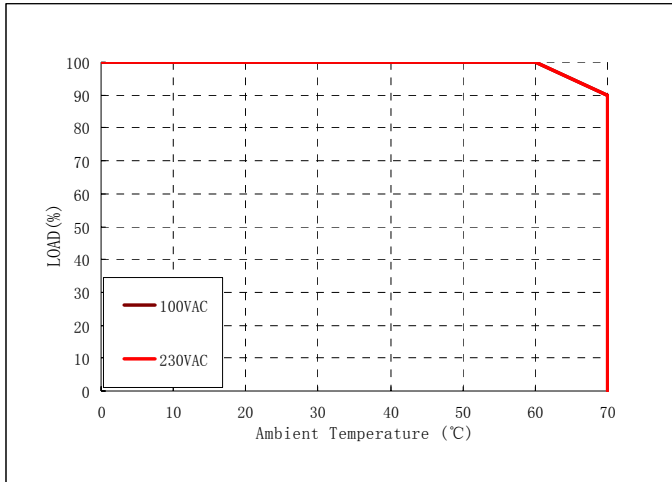


Figure 3 Static Characteristics

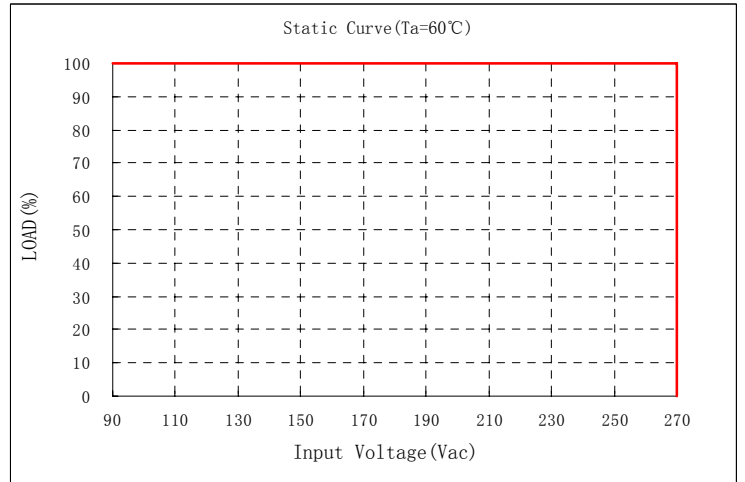


Figure 4: PF Curve(full load)

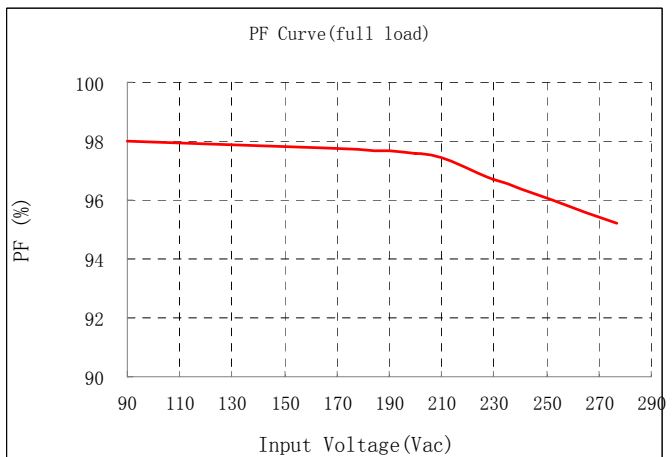


Figure 5: Efficiency Curve (full load)

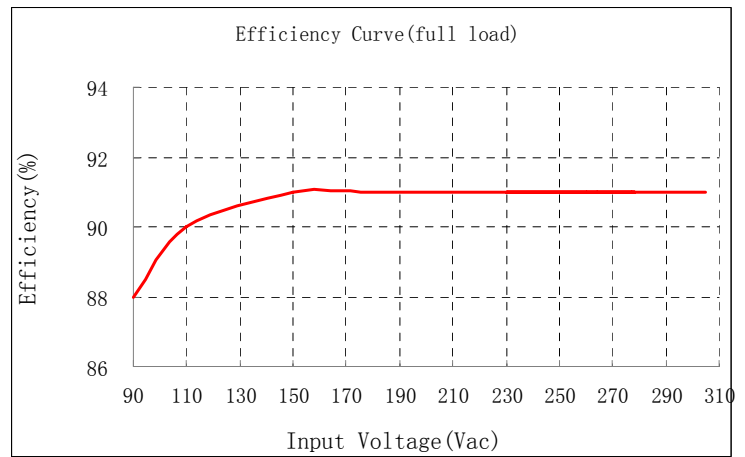


Figure 6: dimming Curve

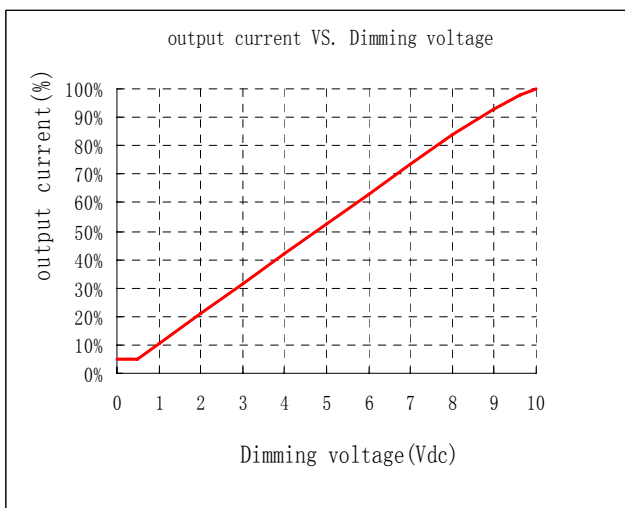
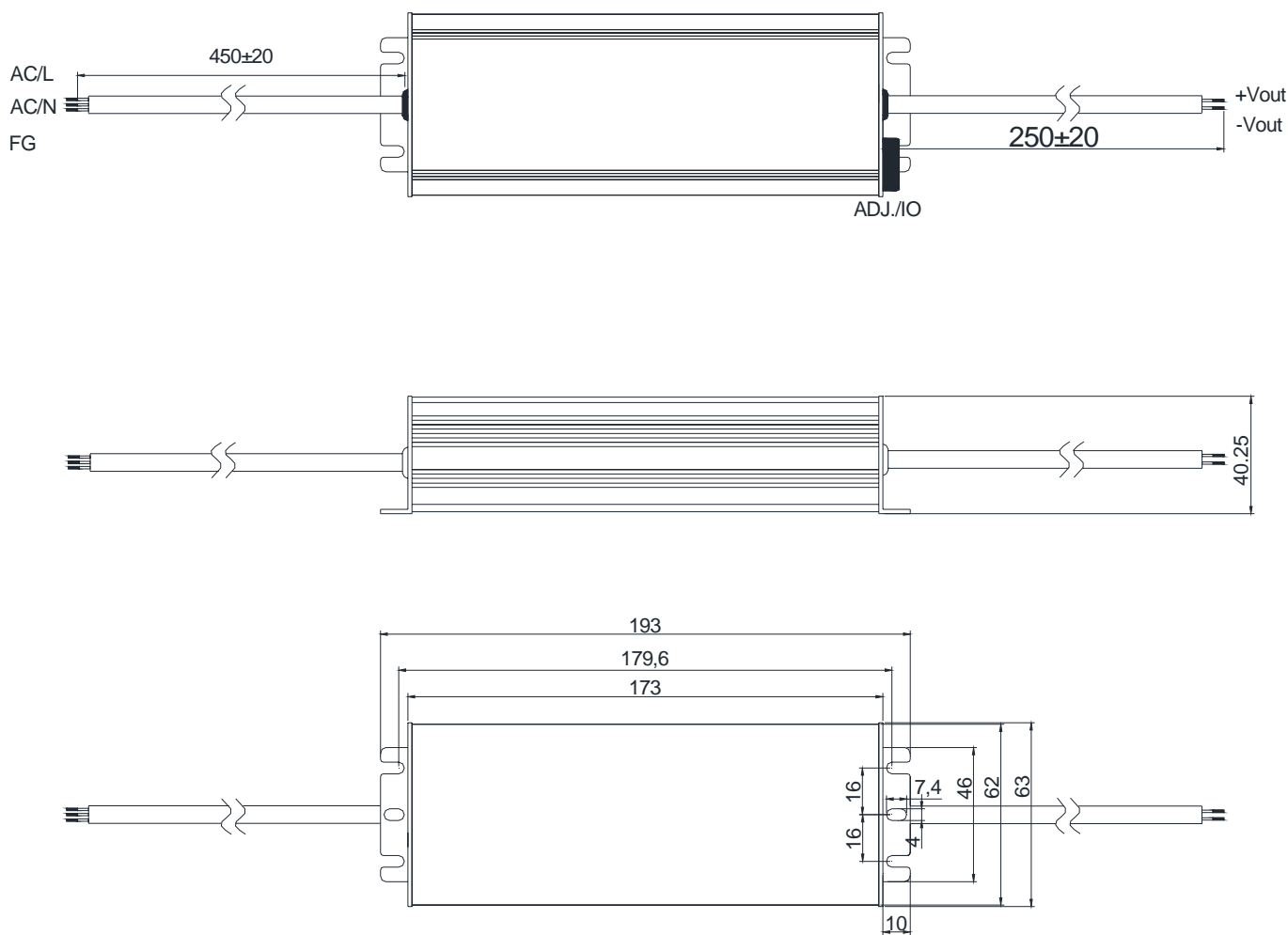


Figure 8 : Based model



Remarks:

AC input cable	<ol style="list-style-type: none"> <li>American standard cable: UL SJTW #18AWG 3*0.824mm<sup>2</sup>, Outer diameter:7.8mm; Green: PE Black: L, White: N</li> <li>European standard cable: VDE H05RN-F 3*1.0m m<sup>2</sup>, Outer diameter: 7.4mm, Brown: L, Blue: N, Yellow&amp; Green: PE</li> </ol>
DC output cable	<ol style="list-style-type: none"> <li>American standard cable: UL SJTW #18AWG 2*0.824mm<sup>2</sup>, Outer diameter:7.3mm; Red: V+, Black: V-</li> <li>European standard cable: VDE H05RN-F 2*1.0mm<sup>2</sup>, Outer diameter: 7.0mm; Brown: V+, Blue: V-</li> </ol>
DIM	<ol style="list-style-type: none"> <li>SJTW #18AWG 2*0.824 mm<sup>2</sup>, Outer diameter: 7.3mm, White: DIM+, Black: DIM-</li> </ol>
Auxiliary +DIM	<ol style="list-style-type: none"> <li>SJTW #18AWG 3*0.824mm<sup>2</sup>, Outer diamete:7.8mm, Green: VCC、 White: DIM+、 Black: DIM-</li> </ol>