

SPECIFICATION

150W LED Driver

Issued date: May.31.2016

Model: SS-150H

REV : V04

Description: 150W 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%
- ◆ 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)	Power factor (Vin=230 Vac)	Efficiency(typ.)
3.1	SS-150H-33	24-33V	4.55A	150.15W	±5%	35V	0.96	89%
3.2	SS-150H-36	24-36V	4.2A	151.2W	±5%	38V	0.96	89%
3.3	SS-150H-42	30-42V	3.6A	151.2W	±5%	44V	0.96	89%
3.4	SS-150H-48	36-48V	3.15A	151.2W	±5%	50V	0.96	90%
3.5	SS-150H-54	42-54V	2.8A	151.2W	±5%	56V	0.96	90%
3.6	SS-150H-72	43--72V	2.1A	151.2W	±5%	75V	0.96	90%
3.7	SS-150H-108	65--108V	1.4A	151.2W	±5%	112V	0.96	91%
3.8	SS-150H-143	86--143V	1.05A	150.2W	±5%	151V	0.96	91%
3.9	SS-150H-175	105-175V	0.86A	150.5W	±5%	182V	0.96	91.5%
3.10	SS-150H-215	129-215V	0.7A	150.5W	±5%	225V	0.96	91.5%

【4. Model naming rules】

SS-150H-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 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 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	45Hz		63Hz	
5.4	Max input current			2.0A	Vin=90Vac
5.5	Inrush current			40A	Vin=230Vac/50Hz, cold start
5.6	Power factor	0.95			Vin=230Vac/50Hz, full load
5.7	THD			20%	100-277Vac, 75-100% full load

【6. Output】

ITEM	Parameter		Min	Typ	Max	Remarks
6.1	Output current tolerance		-5%		+5%	
6.2	Current adjustable range		70%		100%	
6.3	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
6.4	Efficiency	SS-150H-33	88%	89%		Vin=230Vac/50Hz, full load, Ta=25°C
		SS-150H-36	88%	89%		
		SS-150H-42	88%	89%		
		SS-150H-48	89%	90%		
		SS-150H-54	89%	90%		
		SS-150H-72	89%	90%		
		SS-150H-108	90%	91%		
		SS-150H-143	90%	91%		
		SS-150H-175	90%	91.5%		
		SS-150H-215	90%	91.5%		
6.5	Efficiency	SS-150H-33	86%	87%		Vin=100Vac/60Hz, full load, Ta=25°C
		SS-150H-36	86%	87%		
		SS-150H-42	86%	87%		
		SS-150H-48	87%	88%		
		SS-150H-54	87%	88%		
		SS-150H-72	87%	88%		
		SS-150H-108	87.5%	88.5%		
		SS-150H-143	87.5%	88.5%		
		SS-150H-175	88%	89%		
		SS-150H-215	88%	89%		
6.6	Overshoot / Undershoot		-10%		+10%	Test with lamp, Ta=25°C
6.7	Turn - on Delay Time			1.0S	2.0S	Vin=100Vac
				0.5S	1.0S	Vin=230ac

【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: ≤3W			Auto-recovery, hiccup
7.3	Over Temperature Protection	90°C	100°C	110°C	Case temperature, Auto-recover

【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 4 hours at 40°C			
9.2	MTBF Estimation	50,000hours			Full load, Ta:50°C, testing
9.3	Temperature coefficient	-0.03%/°C		+0.03%/°C	
9.4	Weight		1000g		
9.5	Case temperature			90°C	
9.6	Size	218mm*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 / 60 seconds	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±2KV, common mode ±4KV Criterion B	

【11. Characteristics of figure】

Figure 2: Derating Curve

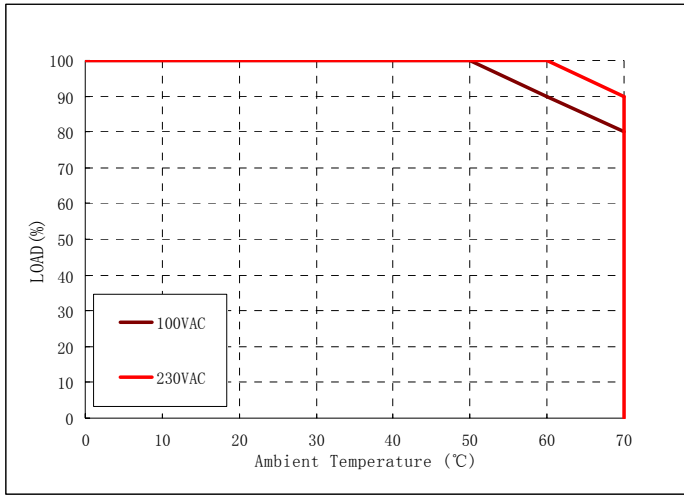


Figure 3: Static Characteristics

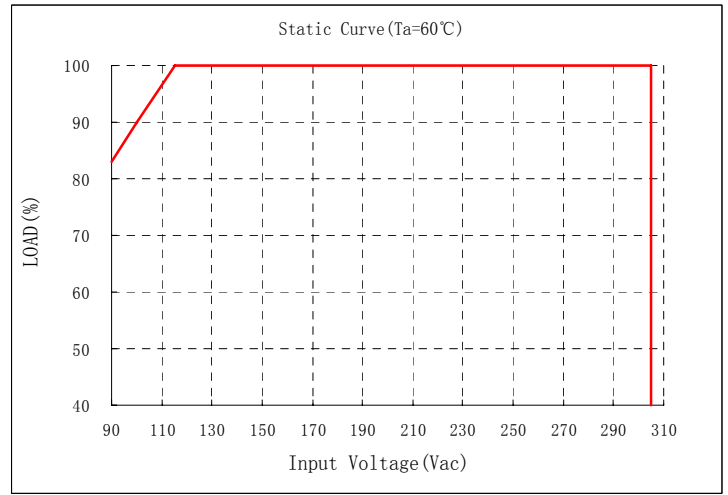


Figure 4: PF Curve(full load)

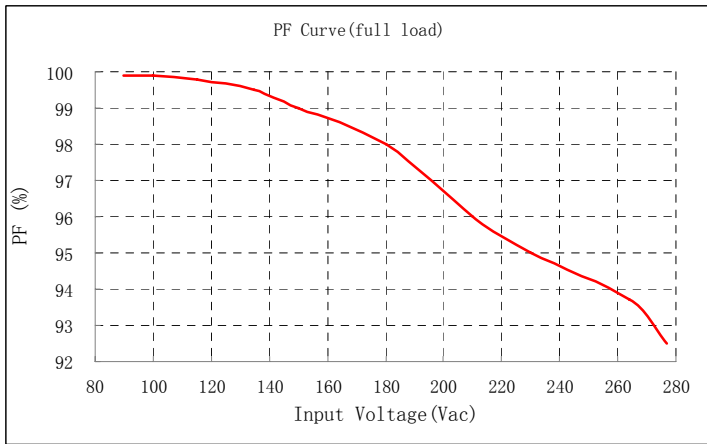


Figure 5: Efficiency Curve (full load)

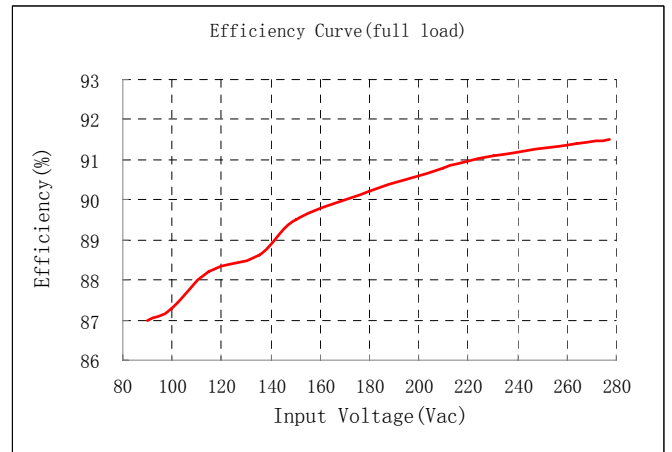


Figure6: dimming Curve

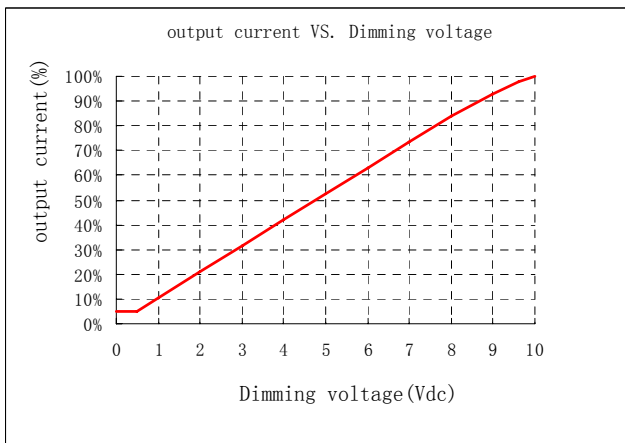
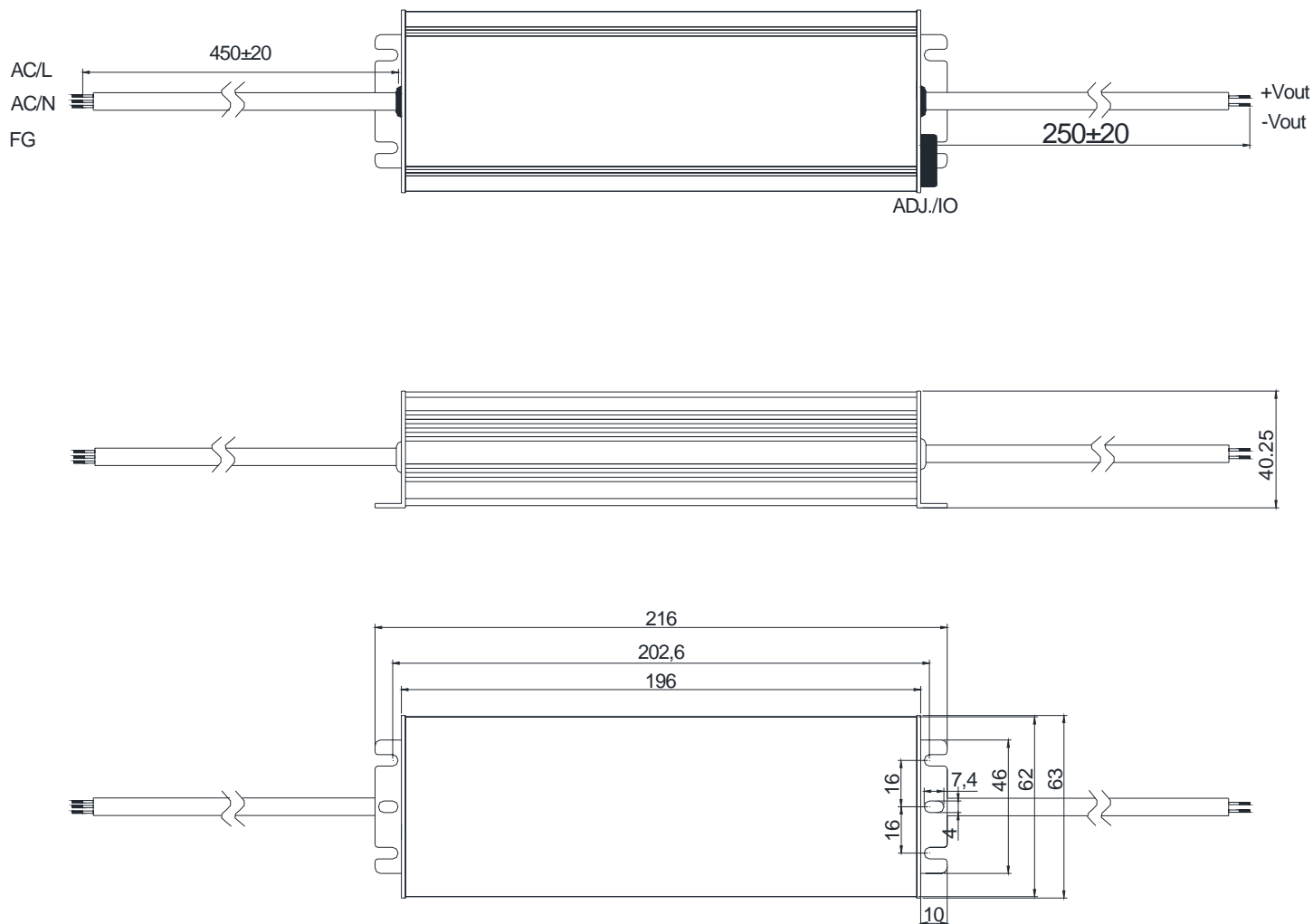


Figure 8: Based model



Remarks:

AC input cable	<ol style="list-style-type: none"> American standard cable: UL SJTW #18AWG $3 \times 0.824 \text{mm}^2$, Outer diameter: 7.8mm; Green: PE, Black: L, White: N 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	<ol style="list-style-type: none"> American standard cable: UL SJTW #18AWG $2 \times 0.824 \text{mm}^2$, Outer diameter: 7.3mm; Red: V+, Black: V- European standard cable: VDE H05RN-F $2 \times 1.0 \text{mm}^2$, Outer diameter: 7.0mm; Brown: V+, Blue: V-
DIM	<ol style="list-style-type: none"> SJTW #18AWG $2 \times 0.824 \text{mm}^2$, Outer diameter: 7.3mm, White: DIM+, Black: DIM-
Auxiliary +DIM	<ol style="list-style-type: none"> SJTW #18AWG $3 \times 0.824 \text{mm}^2$, Outer diameter: 7.8mm, Green: VCC, White: DIM+, Black: DIM-