

# SPECIFICATION

## 200W LED DRIVER

Issued date: May.31.2016

Model: SS-200H

REV : V02

Description: 200W AC to DC LED POWER SUPPLY

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

Customer Approval	SHENZHEN SOSEN ELECTRONICS CO LTD		
	WRITTEN	CHECKED	APPROVED
Signature			

**SHENZHEN SOSEN ELECTRONICS CO LTD**

## 【1. Applications】

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



图 1

## Features

- ◆ Built-in Active PFC Function
- ◆ High efficiency up to 93%
- ◆ Optional dimming function: resistor or 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

## 【2. Model Listing】

ITEM	MODEL	Output Voltage	Output rated current	Output power	Output current tolerance	Output voltage (No load)	Power factor ( Vin=230Vac)	Efficiency (typ.) ( Vin=230Vac)
3.1	SS-200H-33	24--33V	6.1A	201.3W	±5%	38V	0.98	92%
3.2	SS-200H-36	24--36V	5.6A	201.6W	±5%	38V	0.98	92.5%
3.3	SS-200H-38	24--38V	5.3A	201.4W	±5%	40V	0.98	93%
3.4	SS-200H-42	30--42V	4.8A	201.6W	±5%	45V	0.98	92.5%
3.5	SS-200H-48	36--48V	4.2A	201.6W	±5%	56V	0.98	92%
3.6	SS-200H-54	42--54V	3.7A	199.8W	±5%	56V	0.98	92.5%
3.7	SS-200H-95	57---95V	2.1A	199.5W	±5%	100V	0.98	93%
3.8	SS-200H-143	86--143V	1.4A	200.2W	±5%	148V	0.98	93.5%
3.9	SS-200H-190	95--190V	1.05A	199.5W	±5%	198V	0.98	93.5%
3.10	SS-200H-233	116-233V	0.86A	200.38	±5%	240V	0.98	93%
3.11	SS-200H-285	142-285V	0.7A	199.5W	±5%	295V	0.98	93.5%

**【3. Model naming rules】**

SS-200H-33■	■ : 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, resistor and 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.

**【4. 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			2.7A	Vin=90Vac, full load
5.5	Inrush current			60A	Vin=230Vac/50Hz,cold start
5.6	Power factor	0.97	0.98		Vin=230Vac/50Hz, full load
		0.95			100-277Vac, 70-100% full load
5.7	THD			10%	Vin=230Vac/50Hz,full load
				15%	100-277Vac, 70-100% full load

**【5. 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-200H-33	91.5%	92%		Vin=230Vac/50Hz, full load, Ta=25°C
		SS-200H-36	92%	92.5%		
		SS-200H-42	92.5%	93%		
		SS-200H-38	91.5%	92%		
		SS-200H-48	92%	92.5%		
		SS-200H-54	92.5%	93%		
		SS-200H-95	93%	93.5%		
		SS-200H-143	93%	93.5%		
		SS-200H-190	93%	93.5%		
		SS-200H-233	92.5%	93%		
		SS-200H-285	93%	93.5%		
6.5	Efficiency	SS-200H-33	89%	89.5%		Vin=120Vac/60Hz, full load, Ta=25°C
		SS-200H-36	89.5%	90%		
		SS-200H-38	90%	90.5%		
		SS-200H-42	89.5%	90%		
		SS-200H-48	90%	90.5%		
		SS-200H-54	80.5%	91%		
		SS-200H-95	91%	91.5%		
		SS-200H-143	91%	91.5%		
		SS-200H-190	91%	91.5%		
		SS-200H-233	90.5%	91%		
		SS-200H-285	91%	91.5%		
6.6	Overshoot / Undershoot		-10%		+10%	LED load, Ta=25°C
6.7	Turn - on Delay Time			1.0S	2.0S	Vin=120Vac
				0.5S	1.0S	Vin=230Vac

**【6. PROTECTION FUNCTION】**

ITEM	parameter	Min	Typ	Max	Remarks
7.1	Over Voltage Protection	108%	115%	120%	latch off
7.2	Short Circuit Protection	A long time short circuit is not damaged, Pin: ≤20W NO bounce			Auto-recover, hiccup
7.3	Over Temperature Protection	90°C	100°C	110°C	Case temperature, Auto-recovery

**【7. Environment requirement】**

ITEM	parameter	Min	Typ	Max	Remarks
8.1	Operating Temperature	-40°C	25°C	+60°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			

**【8. 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		500,000 hours		230Vac, Ta=25°C, 100% on load (MIL-HDBK-217F)
9.3	Temperature coefficient	-0.03%/°C		+0.03%/°C	
9.4	Case temperature			90°C	
9.5	Weight		1240g		
9.6	Size	222.2mm*69mm*42.2mm			

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

10.1 Safety Standards			
certification	Safety Standards	State	Remarks
CE	EN 61347-2-13:2014 EN61347-1:2008+A1:2011+A 2:2013	■	
TUV	EN 61347-2-13:2014 EN61347-1:2008+A1:20 11+A2:2013 EN62493:2010	■	
UL/CUL	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	500Vdc Testing Voltage: 500Vdc
Ground resistor		≤0.1Ω	40A/2min
Leakage current		≤0.75mA	Vin=277Vac
10.3 EMI/EMS Requirements			
ITEM	Standards	Criterion	
CE	EN55015:2006+A1:2007+A2: 2009	CLASS B	
RE	EN55015:2006+A1:2007+A2: 2009	CLASS B	
Harmonic current emissions		IEC/EN 61000-3-2	
SURGE		IEC/EN61000-4-5 Difference mode±4KV, common mode ±6KV Criterion B	

【10. Characteristics of figure】

图 2: Derating Curve

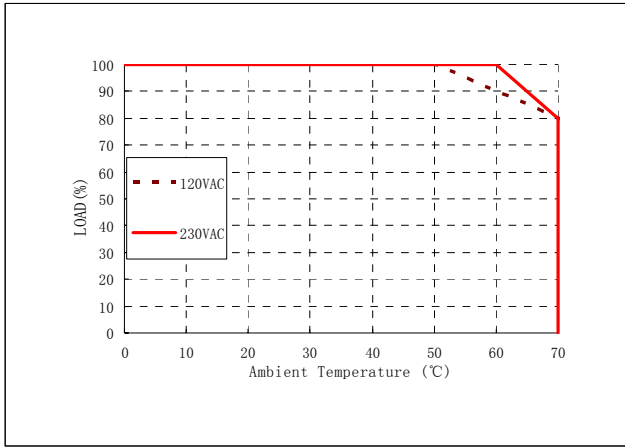


图 3: Static Characteristics

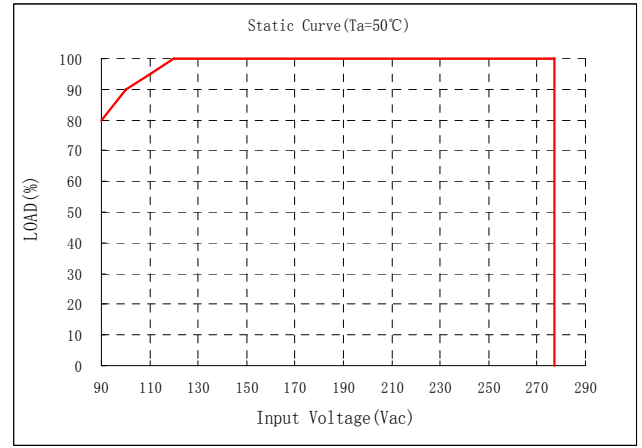


图 4: PF Curve(full load)

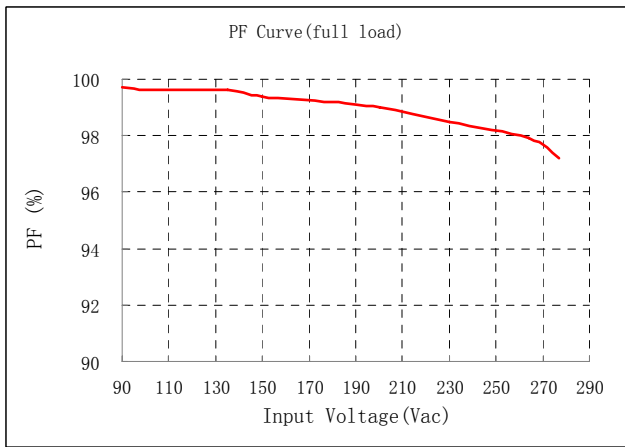


图 5: Efficiency Curve (full load)

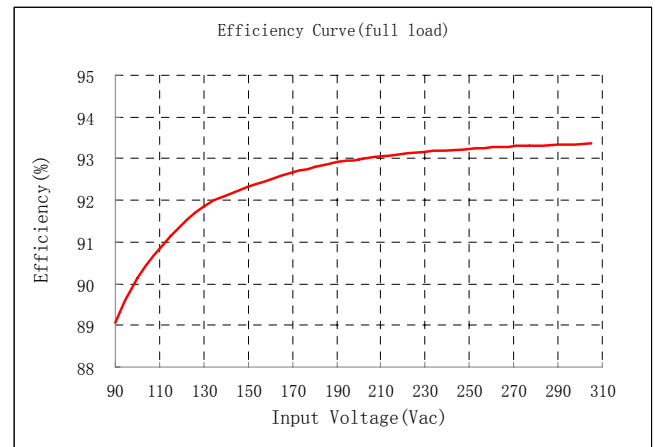
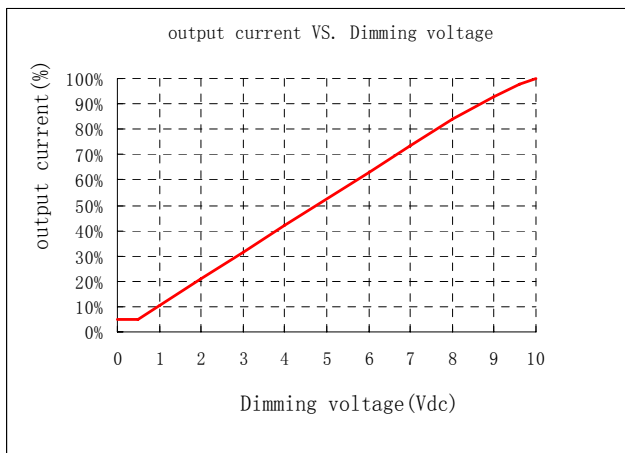


Figure 6: dimming Curve



【11. Mechanical characteristics】

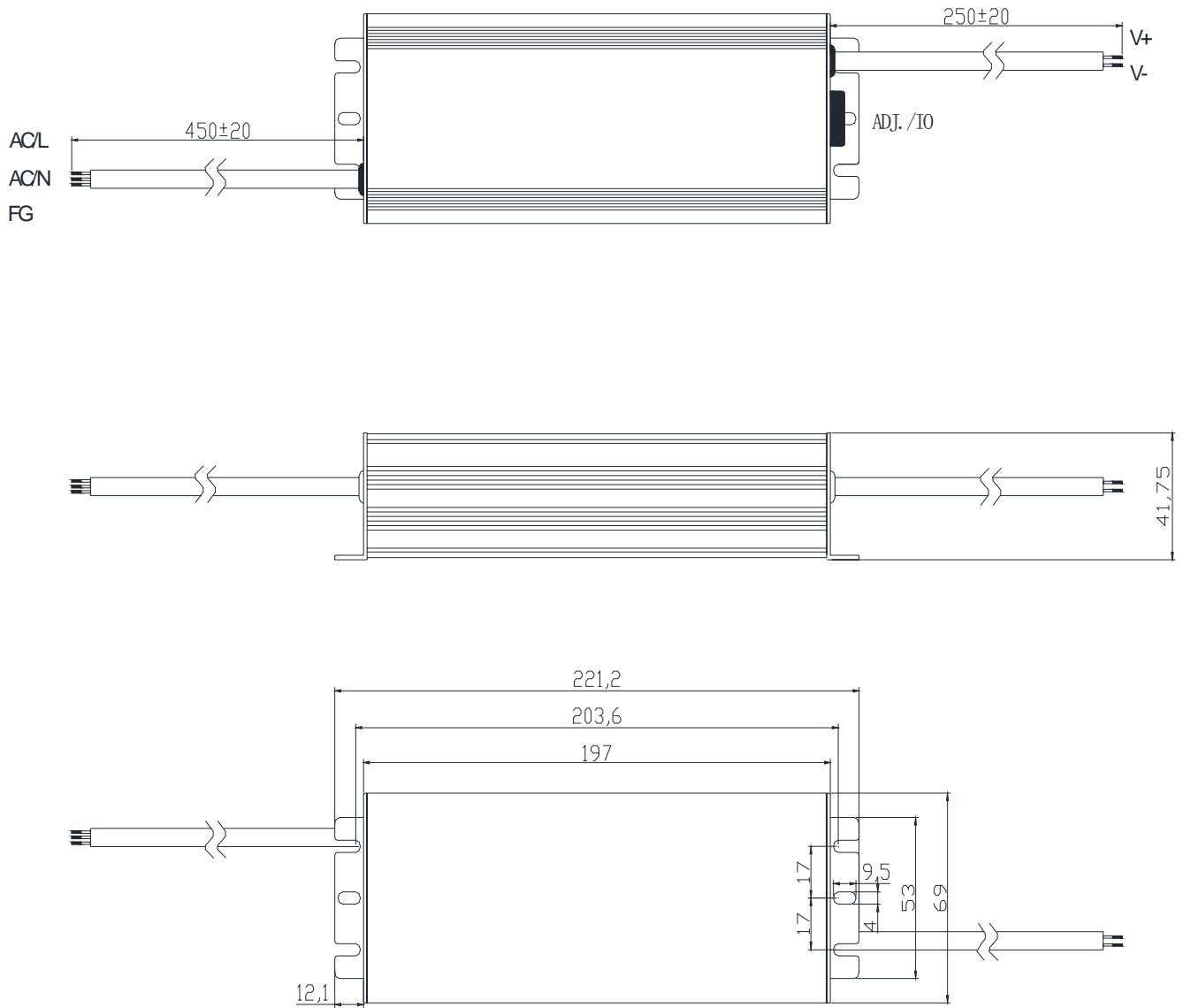


Figure 7 : Based model (SS-200H-XX)