

SS-50EP-50B LED Driver



Features:

- Efficiency > 90%
- High Power Factor
- Over Temperature Protection
- Over Current Protection
- Over Voltage Protection
- Short Circuit Protection

Description:

SS-50EP-50B is 50W constant current LED driver with high efficiency, high PF, high reliability, compact housing, good cooling, all-around protections. LED driver for design luminaries and reduce cost.

Model List

SS-50EP-50B LED Driver

Input Characteristics:

Parameter	Min.	Typ.	Max.	Remark
Rated AC Input Range	120Vac		277Vac	
AC Input Range	108Vac		305Vac	
Input Frequency Range	47Hz		63Hz	
Max Input Current			0.55A	120Vac, Full load
Max Input Power			66W	120Vac, Full load
Max Inrush Current(120Vac)			50A	Cold start
Max Inrush Current(220Vac)			85A	Cold start
Max Inrush Current(277Vac)			120A	Cold start
Standby Power			1W	220Vac/50Hz, Dim to off
Power Factor	0.95	0.97		220Vac/50Hz, Full load
	0.90			120-277Vac/50Hz, 70-100% load
THD			15%	220Vac/50Hz, Full load
			20%	120-277Vac/50Hz, 70-100% load

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Other Characteristics:

0-10V Dimming (Optional)	Dim Vmax	0V		12V	
	Dim Range	10%Iomax		100%Ioset	
	Rec.Dim Range	0V		10V	
PWM Dimming (Optional)	PWM High	9.8V		10.2V	
	PWM Low	0V		0.3V	
	Frequency	1KHz		2KHz	
	PWM Duty	0%		100%	
Resistor Dimming (Optional)	Resistance	0Kohm		100Kohm	
	Dim Range	10%Iomax		100%Ioset	

Life	262,000 hours	220Vac, Full load, Ta=25°C (MIL-HDBK-217F)
Tc	80°C	
Warranty	5 years	
Net Weight		
Dimension	27.5mm	L x W x H

NOTE: All values are at full load, unless specified.

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Environmental Requirements

Parameter	Min.	Typ.	Max.	Remark
Operating Temperature(Tcase)	-40°C	25°C	+80°C	
Storage Temperature	-40°C	25°C	+90°C	
Operation Humidity	10%RH		90%RH	
Storage Humidity	5%RH		95%RH	
Altitude	-65m		4000m	

Safety and EMI/EMS Standards

Certification	Standard	Status	Remark
UL/cUL	UL8750	✓	
TUV	EN 61347-2-13:2014/A1:2017 EN61347-1:2015 EN62493:2015	✓	
RCM	AS/NZS61347.2.13		
CCC	GB 19510.14-2009		
CE	EN 61347-2-13:2014 EN61347-1:2008+A1:2011+A2:2013	✓	

EMI/EMS	Criterion	Remark
Conduction Emission	EN55015:2013+A1:2015 FCC Part 15 Subpart B; ANSI C63.4:2014	Class B
Radiation Emission	EN55015:2013+A1:2015 FCC Part 15 Subpart B; ANSI C63.4:2014	Class B
Harmonic Current Emissions	IEC/EN 61000-3-2	Class C
Surge	IEC/EN61000-4-5	DM: 6kV,CM: 6kV,Criterion B
Ring Wave	IEC/EN 61000-4-12	DM: 6kV,CM: 6kV,Criterion B

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Safety Test Items:

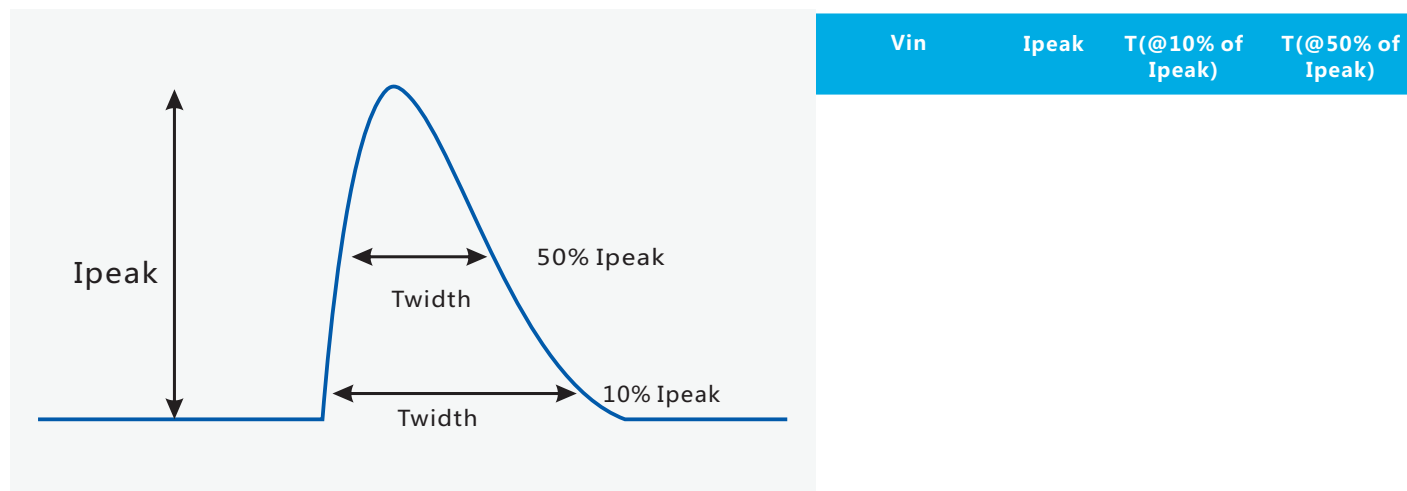
Safety Test Items	Technical Indicators	Remark
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NOTE:

1. 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 of components.
2. Please short (ACL and ACN), (V+ and V-), (Dim+ and Dim -) when Hi-pot test.
3. The CCC withstand voltage test needs to disconnect the built-in lightning protection

Performance Curves:

Input Inrush Current



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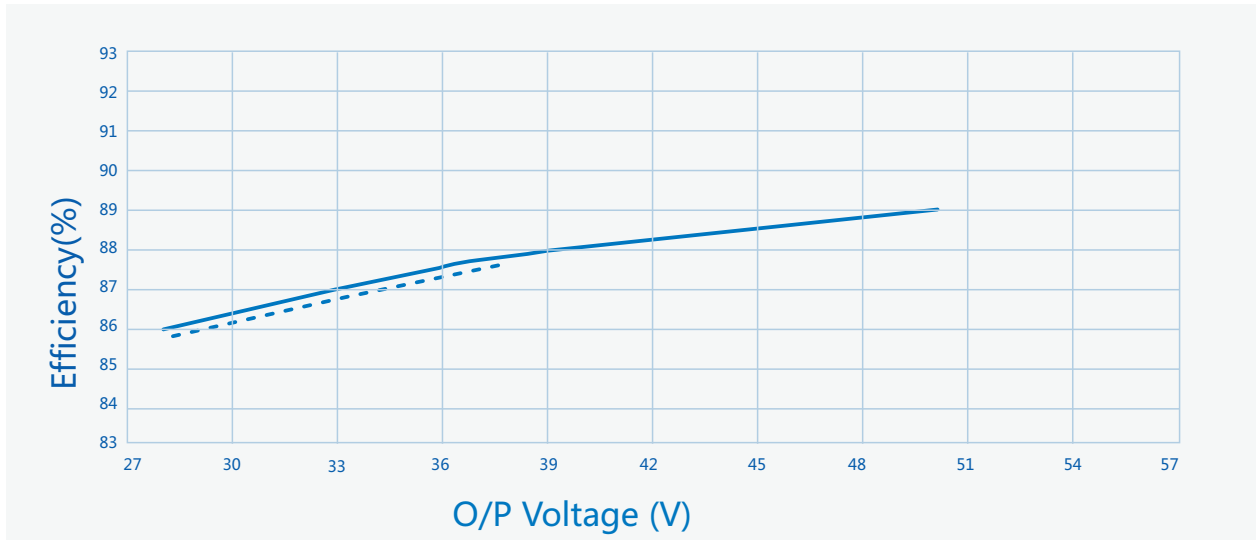
Current

Efficiency & O/P V

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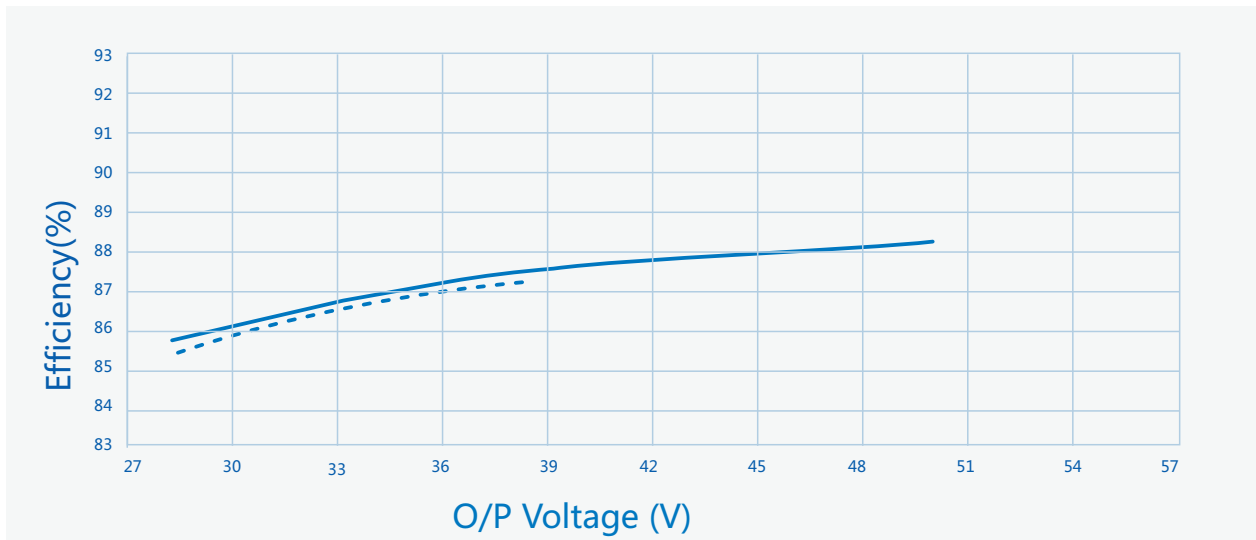
Performance Curves:

Efficiency Vs. O/P Voltage ($V_{in}=220V_{ac}$)



----- $I_o=1320mA$ ———— $I_o=1000mA$

Efficiency Vs. O/P Voltage ($V_{in}=277V_{ac}$)



----- $I_o=1320mA$ ———— $I_o=1000mA$

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Performance Curves:

Power Factor Vs. O/P Power

THD Vs. O/P Power

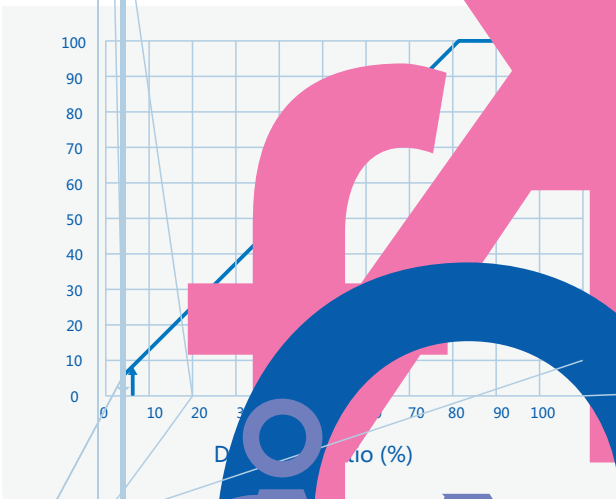
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Performance Curves:

O/P Power Vs. Input Voltage
(Ta Max.50°C)

Lifetime Vs. Case Temperature

O/P Power Vs. Dimming Ratio (%)



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Mechanical Characteristics

AC Input Cable(Exposed Length 150±10mm):

UL model: 1672,18AWG , O.D: 2.7mm,Black:L,White:N
1015,18AWG , O.D: 2.7mm,Green:⊕

DC O/P Cable(Exposed Length 250±10mm):

UL model: 1015,18AWG , O.D: 2.7mm,Red:V+ , Black:V-

DIM Power Cable(Exposed Length 220±10mm):

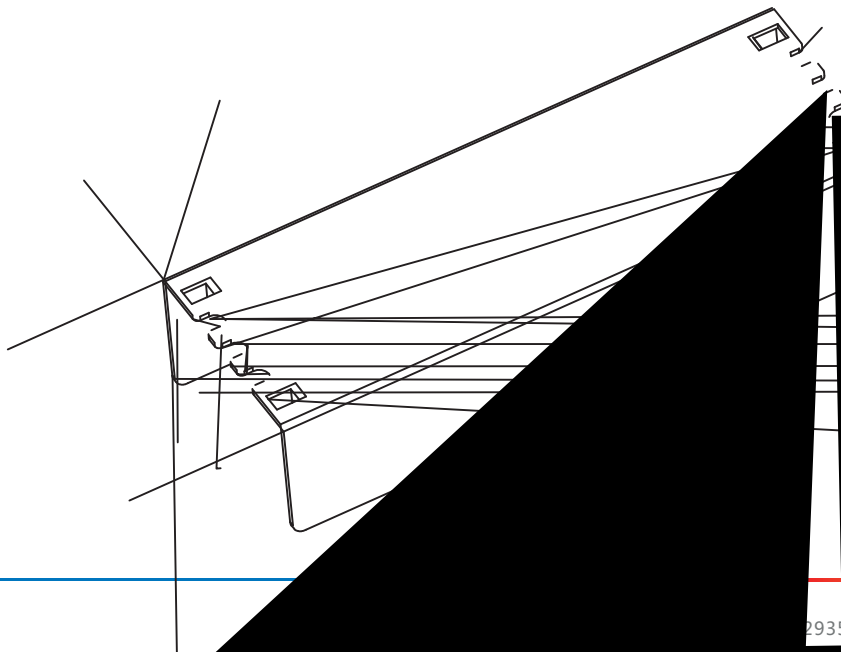
UL model: 1015,18AWG,O.D: 2.7mm , Purple : DIM+ , Pink: DIM-

Name Description	Standard Code	mm(In.)
Case Width	W1	
Case Height	H	
Overall Length	L1	
Mounting Hole Length	L2	
Mounting Hole Width	W2	
TC Point Position	X	
TC Point Position	Y	

Note :

1,Please follow the "LED Driver User Manual" obtained from SOSEN's official website for assembly.

2,AC Input Cable,DC O/P Cable,DIM/AUX Power/Programming Cable:
Tinned length of wire:10±2mm



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Assembly Tips

1. Highly recommended to seal the adjustable hole with silicon glue(#704 preferred) after adjusting the driver's O/P current. Torsion with proper strength to avoid permanent damage to the potentiometer inside.
2. Dimming tinned connectors should be capped if not used to avoid dimming parts damage from external signals.

Package

- Outside carton dimension: L×W×H =495mm×385mm×162mm;
- 60PCS/Carton;
- Net weight/Piece: 0.15kg;Gross weight/Carton: 10.5kg;
- Please refer to the product name, model number, manufacturer identification, QC PASS, manufacturing date on the package.

Transportation

Packaging is designed suitable for transportation by trucks, vessels and flights. The products should be avoided direct sunlight and rain, loaded/unloaded with caution.

Storage

The product storage meets the standard of the GB 3873 - 83.
Products should be rechecked if stored for over 1 year before assembly.

RoHS

Products comply with RoHS Directive (2011/65/EU) and amendment 2015/863/EU.

Revision History

Version	Description of Update	Updated Date	Remark
V00	Original release	2020/11/11	
V01	Update DIM Cable Color	2021/09/02	