



SOSEN LED Driver, Your Smart Choice

Specifications

SS-60PV Series LED Driver

Model: SS-60PV-XX

Description: 60W LED Driver

Rev.: V00

Release Date: 2019-02-20

SS-60PV Series LED Driver

SOSEN
LED DRIVER



LED DRIVER

PV Series



Features:

- Efficiency up to 89%
- Constant Voltage output
- IP65 rated; Suitable for Dry and Damp Locations
- Class P
- Class II
- Protections: SCP/OTP/OCP
- Fully isolated plastic case
- Warranty: 3 years

CE RoHS Class P



Description :

SS-60PV is a 60W single output power supplies that specifically and perfectly work for LED lighting and LED moving sign applications. As a class II power unit, these two series are housed with the UL 94V-0 rated flame retardant plastic enclosure. The IP65 design allows every model to fit the use at dry and wet locations. constant voltage mode design. Input is 90~264VAC full range, compact housing and good thermal management, which greatly enhance the reliability and lifespan. Comprehensive protections, including Over Voltage Protection, Short Circuit Protection and Over Temperature Protection, ensure proper functioning.

Model List:

Model	AC Input Range	Max. Pin	Max. Pout	Output voltage accuracy	Output Voltage	Output Current	No Load Power	Eff.(Typ.)	Max.Tc
SS-60PV-12	90-264Vac	75W	60W	±5%	12V	5A	0.5W	85%	90°C
SS-60PV-24	90-264Vac	75W	60W	±5%	24V	2.5A	0.5W	89%	90°C

1.Default tested at 220Vac, full load, Ta 25°C.

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Input Characteristics:

Parameter	Min.	Typ.	Max.	Remark
Rated AC Input Range	100Vac		240Vac	
AC Input Range	90Vac		264Vac	
Input Frequency Range	47Hz	50/60Hz	63Hz	
Max Input Current			1.5A	90Vac, 80% load
Max Input Power	SS-60PV-12		75W	120Vac, Full load
	SS-60PV-24		75W	120Vac, Full load
Max Inrush Current(220Vac)			230A	Cold start
No Load Power		0.4W	0.5W	220Vac/50Hz, No load

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Output Characteristics(SS-60PV-12):

Parameter	Min.	Typ.	Max.	Remark
Rated Output Voltage		12V		
Rated Output Current		5A		
No Load Voltage			12.6V	
Efficiency @220Vac	84.0%	85.0%		Output 12V/5A
Output Voltage Tolerance	-5%		+5%	
Output Voltage Ripple(PK-AV)		1%	2%	Full load
Start-up Time			0.5S	120Vac
Line Regulation	-1%		+1%	Full load
Load Regulation	-3%		+3%	
Transient response	Overshoot range	-5%	+5%	di/dt=1A/us,25%-50%-25%
	Recovery Time		10mS	

Output Characteristics(SS-60PV-24):

Parameter	Min.	Typ.	Max.	Remark
Rated Output Voltage		24V		
Rated Output Current		2.5A		
No Load Voltage			25.2V	
Efficiency @220Vac	88.0%	89.0%		Output 24V/2.5A
Output Voltage Tolerance	-5%		+5%	
Output Voltage Ripple(PK-AV)		1%	2%	Full load
Start-up Time			0.5S	120Vac
Line Regulation	-1%		+1%	Full load
Load Regulation	-3%		+3%	
Transient response	Overshoot range	-5%	+5%	di/dt=1A/us,25%-50%-25%
	Recovery Time		10mS	

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Other Characteristics:

Parameter	Min.	Typ.	Max.	Remark
OCP	120% I _o		150% I _o	
OVP	110% V _o		150% V _o	
Short Circuit Protection			10W	Driver will not be damaged, Hiccup mode
OTP	110°C	115°C	120°C	V _{out} will be cut off and recover automatically when temperature drops.
Temperature Coefficient	-0.03%/°C		+0.03%/°C	T _c :0°C~90°C
Lifetime(T _c ≤75°C)	≥30,000 hours			80% load
MTBF	200,000 hours			220Vac, Full load, T _a =25°C (MIL-HDBK-217F)
T _c	90°C			
Warranty	3 years			Refer to life time drawing
Net Weight	354g			
Dimension	164.7mm*42.5mm*32mm			L x W x H

NOTE: All the parameters above are tested T_a 25°C, unless specified.

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Environmental Requirements

Parameter	Min.	Typ.	Max.	Remark
Operating Temperature(Tcase)	-25°C	25°C	+90°C	
Storage Temperature	-40°C	25°C	+85°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 EN61347-1:2008+A1:2011+A2:2013 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	Class B
Radiation Emission	EN55015:2013+A1:2015	Class B
Surge	IEC/EN61000-4-5	Difference mode 2kV, Criterion A

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Safety Test Items:

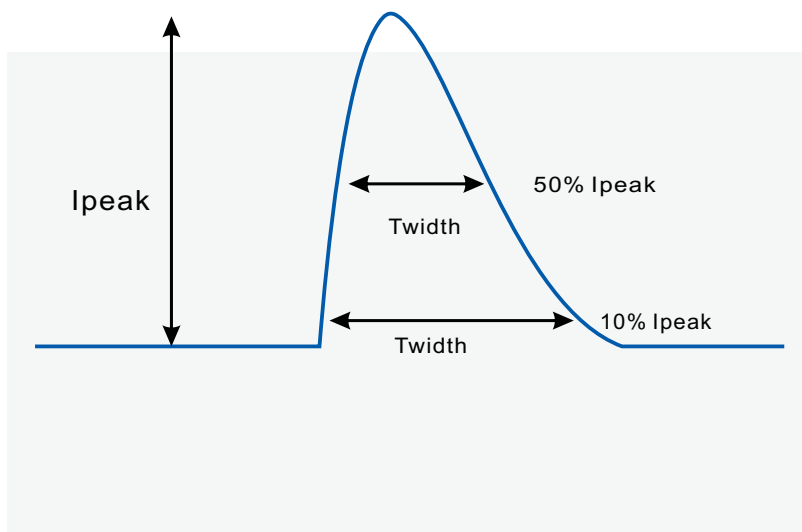
Safety test items	Technical Indicators			Remark
Insulation Requirements	UL Insulation Requirements	TUV Insulation Requirements	CCC Insulation Requirements	
Input-Output	1600Vac	3000Vac	3750Vac	Reinforced insulation
Insulation Resistance	$\geq 10M\Omega$			Input-Output, Test voltage:500Vdc
Ground Resistance	NA			
Leak Current	$\leq 0.75mA$			240Vac

NOTE:

1. SOSEN warrants the LED Driver itself meets with EMC standard. However, LED Driver's EMC should be re-checked when integrated into lighting systems due to unexpected interference as component.
2. Please short Line and Neutral, LED+ and LED- when Hi-pot test.

Performance Curves:

Input Inrush Current

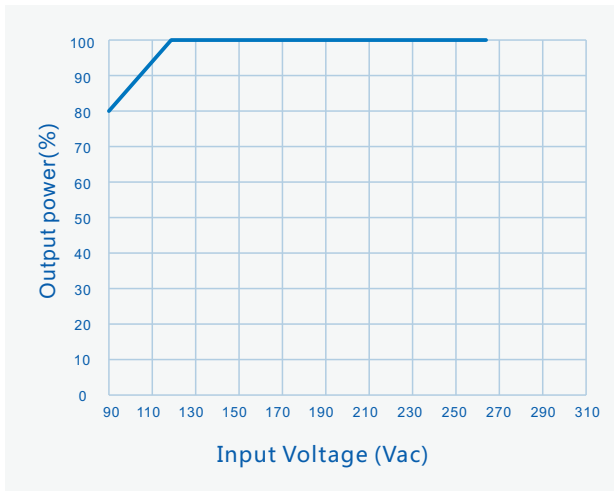


V _{in}	I _{peak}	T(@10% of I _{peak})	T(@50% of I _{peak})
220Vac	230A		0.15mS

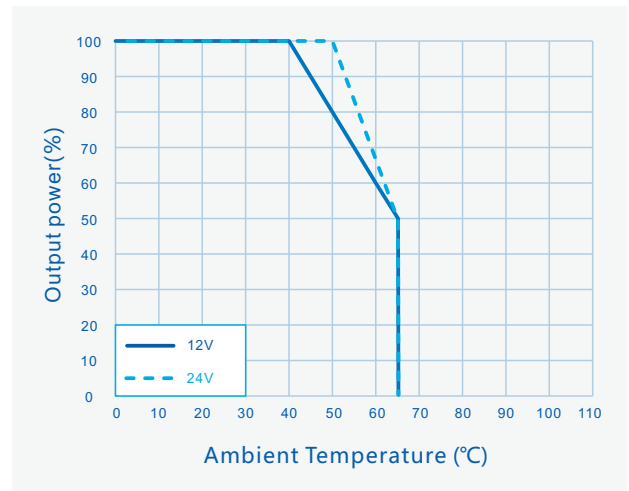
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Performance Curves:

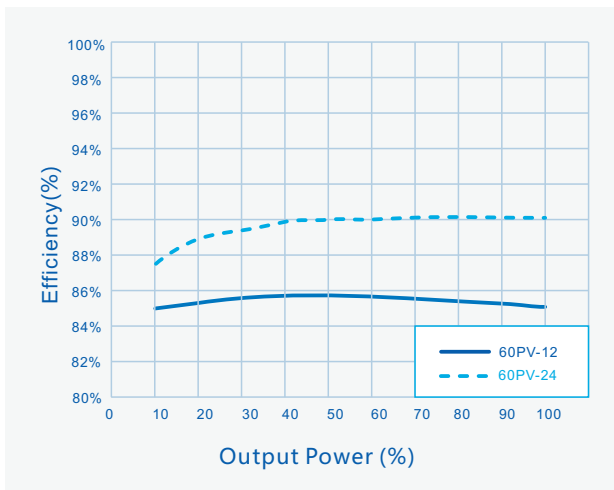
Output power Vs. Input Voltage (Ta Max.60°C)



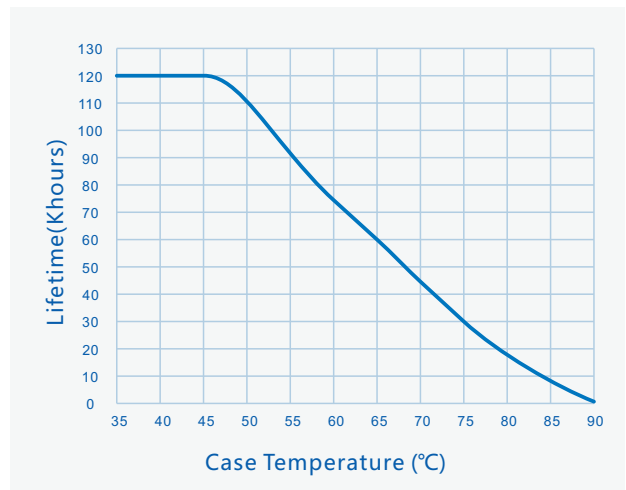
Output power Vs. Ambient Temperature



Efficiency Vs. Output Power

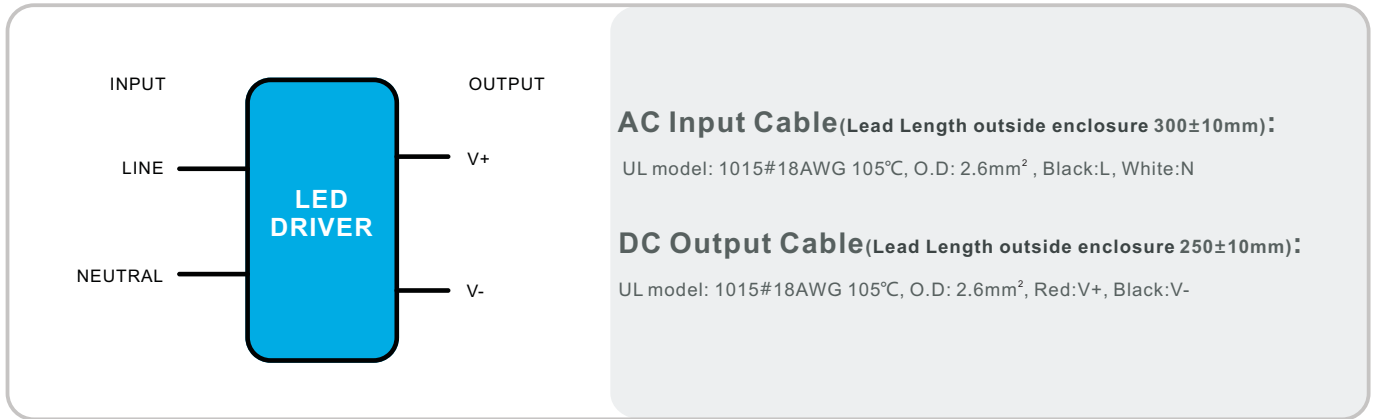


Lifetime Vs. Case Temperature

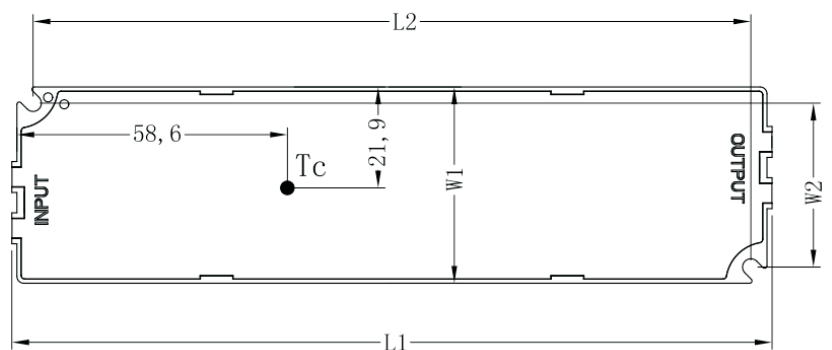


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Mechanical characteristics(Unit: mm)



Name Description	Standard Code	mm(In.)
Case Width	W1	52(2.04)
Case Height	H	37(1.46)
Overall Length	L1	190(7.48)
Mounting Hole Length	L2	180(7.09)
Mounting Hole Width	W2	42(1.65)



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Package

- Outside carton dimension: L×W×H =500mm×390mm×170mm;
- 20PCS/Carton;
- Net weight/PC: 0.354kg;Gross weight/Carton: 9.08kg;
- Please refer to the product name, model number, manufacturer identification, quality inspection certificate, manufacturing date Etc. on the package. and LED power supply instruction manual in the package.

Transportation

Packaging is designed suitable for transportation by trucks, vessels and flights. The products should be shielded from direct sunshine, loaded/unloaded with caution.

Storage

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

RoHS

Products comply with European directive 2011/65/EC.

REVISION HISTORY

Version	Description of Change	Changed Date	Remark
V00	Original release	2019/02/20	