

Features

- . European AC input / (220-240VAC)
- . Built-in active PFC function
- . IP44
- . Protections: Short circuit / Over temperature / Over voltage
- . Comply with the world lighting equipment safety standards
- . Lifetime: 30,000 hours



Description

The SS60 series is an indoor constant voltage LED driver with an input voltage range of 220-240Vac, whose efficiency is up to 88%, fanless design and it's working in the temperature range of - 20 ° C to + 45° C under free air convection. It has a high power factor, ultra-low total harmonic distortion, low standby power consumption, with all-round protection functions,, which not only greatly improve the reliability of the product, but also guarantee the product life cycle. This series of products is designed for LED lighting, suitable in almost all kinds of indoor applications where LED lamps can be installed. They comply with the World Safety standard for lighting equipment and ensure the safety of the user and the luminaire system during installation.

Model

Model	Rated output voltage	Rated output current	Max. output power	Output voltage tolerance	Power Factor (Typ.)	Efficiency (Typ.)
SS60-12VFP	12V	0-5A	60W	±5%	0.97	87%
SS60-24VFP	24V	0-2.5A	60W	±5%	0.97	88%

Remark: All parameters NOT specially mentioned are measured at 230VAC input, full load and 25 °C of ambient temperature

Indoor LED Power Supply

Input

Parameter	Min. value	Typical value	Max. value	Note
Rated input voltage	220 Vac		240Vac	The derating curve is shown in the figure
Input voltage	198 Vac		264Vac	
Input frequency	47Hz		63Hz	
Max. Input current			0.37A	198Vac, Full Load
Input inrush current			50A	230Vac/50Hz, Cold Start
Power factor	0.95	0.97		230Vac, Full Load
Total harmonic input		7%	10%	230Vac, Full Load
Leakage current			0.7mA	230Vac/50Hz, Full Load
Stand-by power consumption		0.4W	0.5W	230Vac/50Hz, No Load

Output

Parameter	SS60-12VFP	SS60-24VFP	Note
Output voltage	12.0VDC	24.0VDC	Max. Output power should compliance to Po=Vo*Io=60W
Rated output current	5A	2.5A	
Output current	0-5A	0-2.5A	
Rated output power	60W	60W	
Rated output efficiency	87%	88%	230Vac
Output voltage tolerance	±5%		
Output voltage ripple (PK-PK)	±2%	±1%	Full load (Test under 20M bandwidth)
Output current ripple (PK-PK)	---		Full load (Test under 20M bandwidth) 230Vac
Rise time	100mS		
Startup time	300mS		230Vac
Line regulation	±1%		Full load
Load regulation	±1%		

Characteristic curve

Fig. 1 Output load-Temperature curve

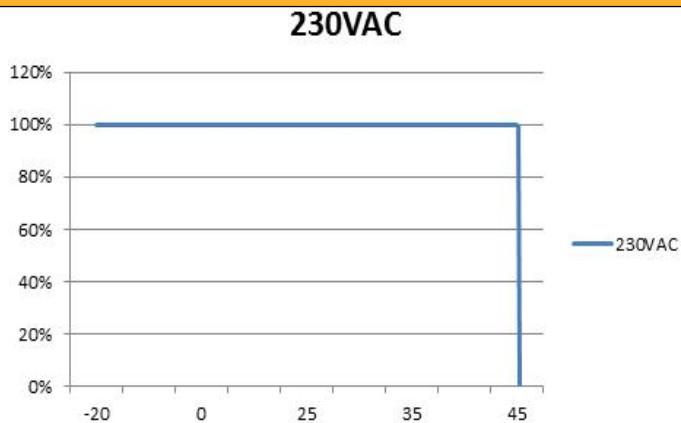


Fig. 2 Static characteristic curve

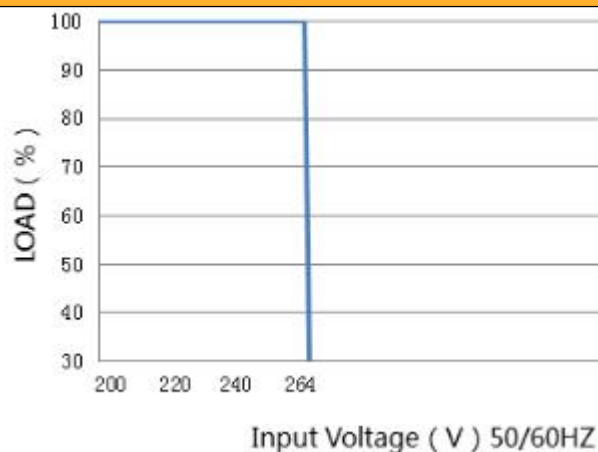


Fig. 3 I-V curve

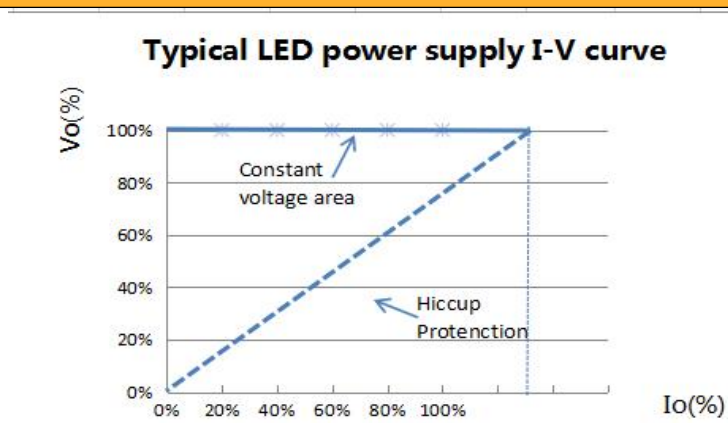


Fig. 4 Power factor characteristic curve

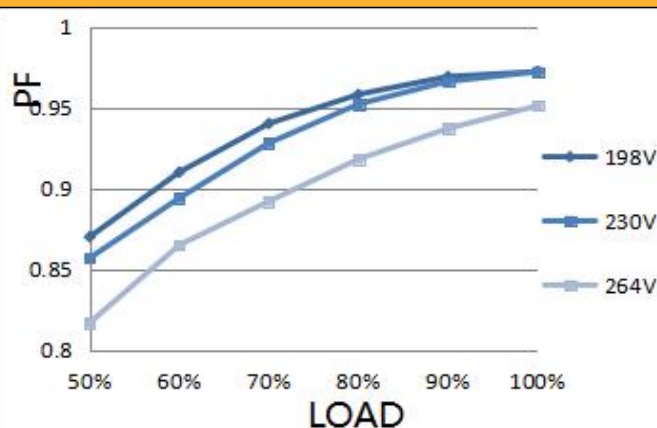


Fig.5 Total harmonic distortion curve (THD)

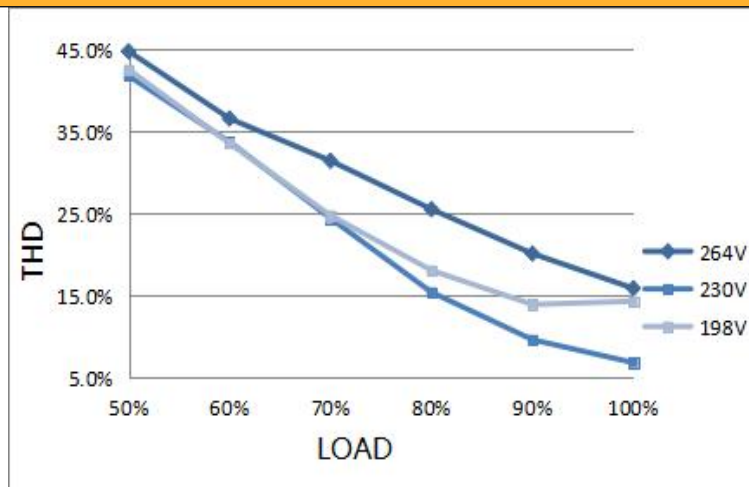
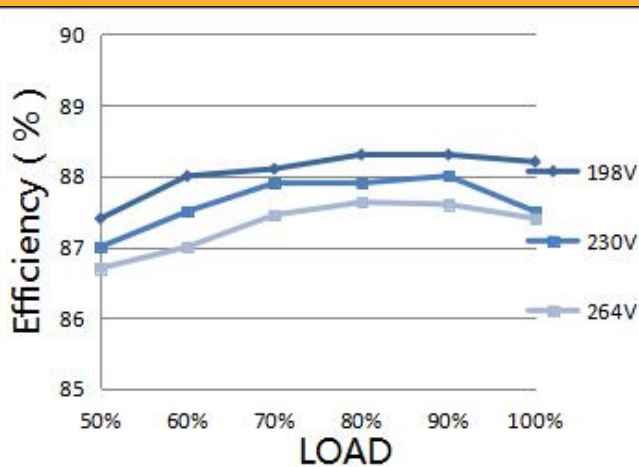


Fig.6 Efficiency-Load curve



Protection

Parameter		Conditions	Note
Protection	Over load	1.1 ~ 1.3 times rated load	Auto-recovery after overload removed
	Short circuit	Short circuit power $\leq 0.5W$	Hiccup mode, auto-recovery after short circuit removed
	Over voltage	1.5 times of rated output voltage	Turn off the input voltage, can be restored after restart.
	Over temperature	110°C	Turn off the input voltage, can be restored after the temperature returns to normal level.

Environment Requirement

Parameter	Min.	Typ.	Max.	Note
Working temp.	-20°C	25°C	+45°C	See Fig.2
Storage temp.	-40°C	25°C	+85°C	
Working humidity	10%RH		90%RH	
Storage humidity	5%RH		95%RH	
IP grade		IP44	IP44	
Cooling mode	Natural cooling			

Safety&EMC standard

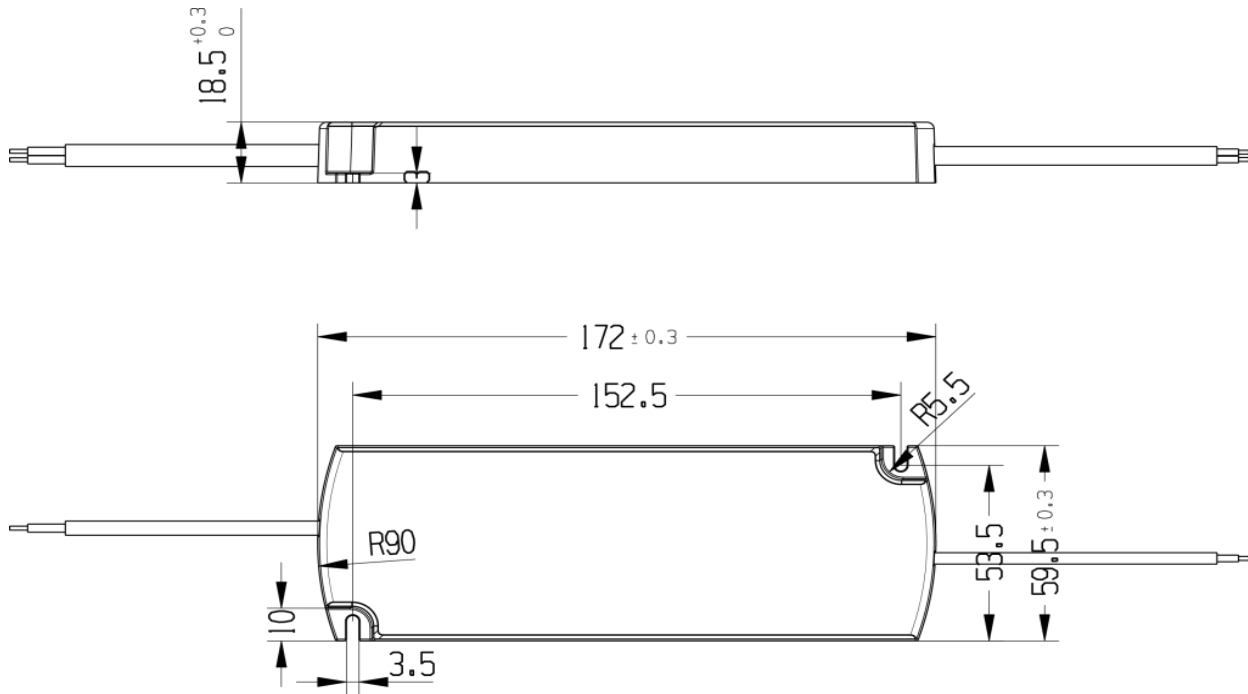
Certificate		Safety standards	Certification	Note
UL/CUL		---		
TUV		EN61347-1:2015 EN 61347-2-13:2014+A1 EN62493:2015	YES	
SAA		AS/NZS 61347.2.13		
CCC		---		
CE		EN 61347-2-13:2014 +A1 EN61347-1:2015	YES	
Safety test		Technical indexes	Note	
Dielectric strength	Input-Output	3750Vac/5mA Max/60s	Reinforced insulation, no breakdown, no flashover	
	Primary-Ground	---	Basic insulation, no breakdown, no flashover	
	Secondary - Ground	---	Functional insulation, no breakdown, no flashover	
Insulation resistance	Input-Output	$\geq 10M\Omega$	Test voltage : 500Vdc	
Ground resistance		---	25A/1min	
Leakage current		$\leq 0.75mA$	264Vac	
EMI/EMS item		Standards	Basis	
Conduction CE		EN55015		
Radiation RE		EN55015		
Harmonics		EN IEC 61000-3-2	Class C	

Others

Parameters	Condition	Note
Lifetime	30,000 hours	230Vac , full load, TC. 75°C
MTBF	200,000 hours	230Vac, full load, 25°C (MIL-HDBK-217F)
TC	85°C	
Warranty	3 years	---
Weight	260g	
Dimensions	172mm * 59.5mm * 18.5mm	L x W x H

Indoor LED Power Supply

Mechanical Specification (Unit : mm)



Remark :

AC input cable	Terminal block , H05VVH2-F 2×1.0mm ²
DC output cable	Terminal block, H03VVH2-F 2×0.75mm ²