

## Indoor LED Power Supply



### Features:

- . European AC input / (220-240VAC)
- . Built-in active PFC function
- . IP44
- . Protections: Short circuit / Over voltage / Over temperature
- . Compliance to worldwide safety regulations for lighting
- . Lifetime: 30,000 hours



### Description:

SS30 series is an indoor constant voltage power supply. Its input voltage range is 220-240Vac, with the high efficiency up to 87%, fanless design, working in the temperature range of - 20 ° C to + 45 ° C under free air convection. It has ultra-high power factor, ultra-low total harmonic distortion, low standby power consumption, with all-round protection functions, which not only greatly improves the reliability of the product, but also ensures the life cycle of product. This series is designed for LED lighting, suitable in almost all kinds of indoor applications where LED lamps can be installed. The product designed completely in accordance with world's lighting equipment safety regulations to ensure the safety of both user and luminaire system during installation.

### Model

Model	Rated output voltage	Rated output current	Max. output power	Output voltage tolerance	Total harmonic distortion (Typ.)	Power factor (Typ.)
SS30-12VFP	12V	0-2.5A	30W	±5%	0.97	86%
SS30-24VFP	24V	0-1.25A	30W	±5%	0.97	87%

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

## Indoor LED Power Supply

### Input

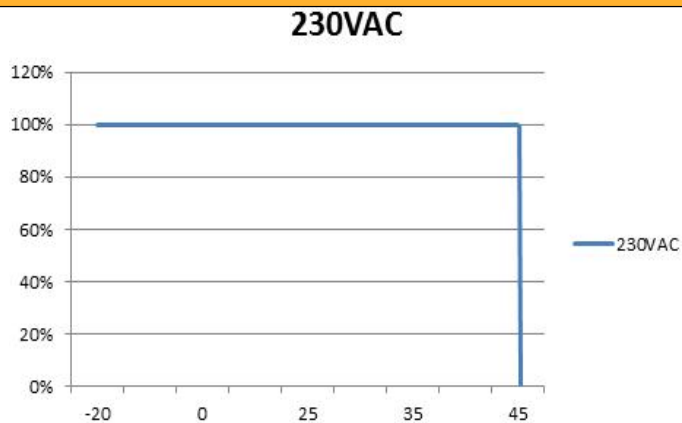
Parameter	Min. value	Typical value	Max. value	Note
Rated input voltage	220Vac		240Vac	The derating curve is shown in the figure
Input voltage	198 Vac		264Vac	
Input frequency	47Hz		63Hz	
Max. Input current			0.19A	198Vac, Full Load
Input inrush current			30A	230Vac/50Hz, Cold Start
Power factor	0.95	0.97		230Vac, Full Load
Total harmonic input		8%	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

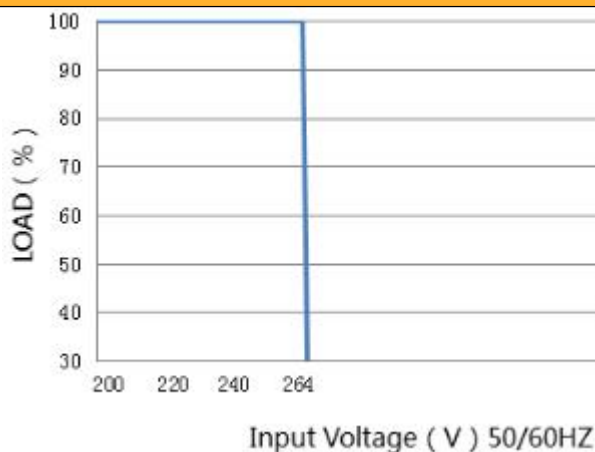
Parameter	SS30-12VFP	SS30-24VFP	Note
Output voltage	12.0VDC	24.0VDC	Max. Output power should compliance to Po=Vo*Io=30W
Rated output current	2.5A	1.25A	
Output current	0-2.5A	0-1.25A	
Rated output power	30W	30W	
Rated output efficiency	86%	87%	230Vac
Output voltage tolerance	±5%		
Output voltage ripple (PK-PK)	±3%		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

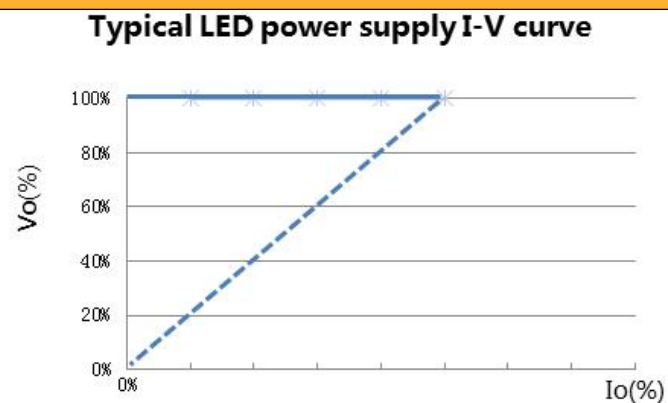
**Fig. 1 Output load-Temperature curve**



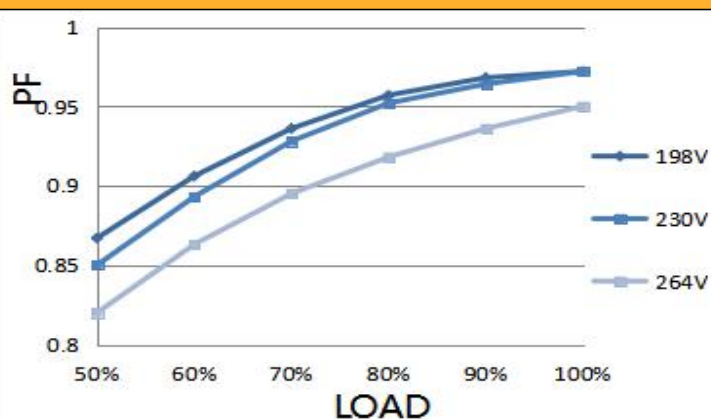
**Fig. 2 Static characteristic curve**



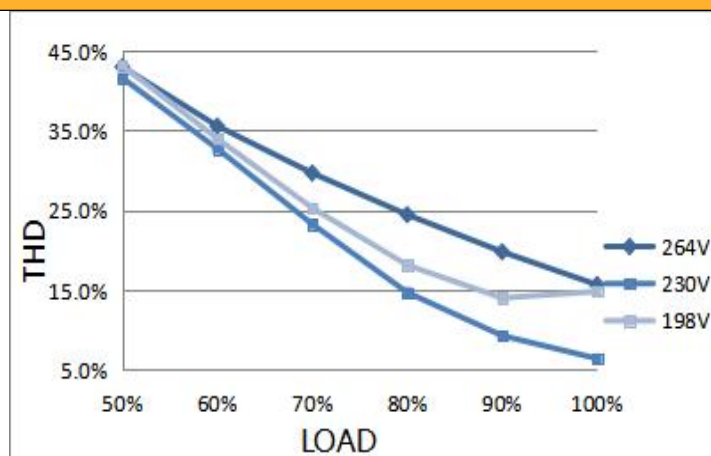
**Fig. 3 I-V curve**



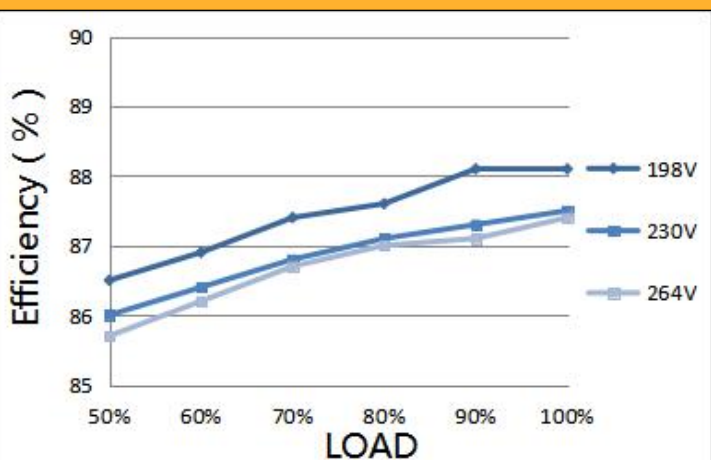
**Fig. 4 Power factor characteristic curve**



**Fig.5 Total harmonic distortion curve ( THD )**



**Fig.6 Efficiency-Load curve**



### Protection

Parameter		Conditions	Note
Protection	Over load	1.1 ~ 1.6 times rated load	Recover automatically when cancel overload
	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 input voltage, recover after restart
	Over temperature	110°C	Turn off input voltage and recovery when temp drop to normal

### 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

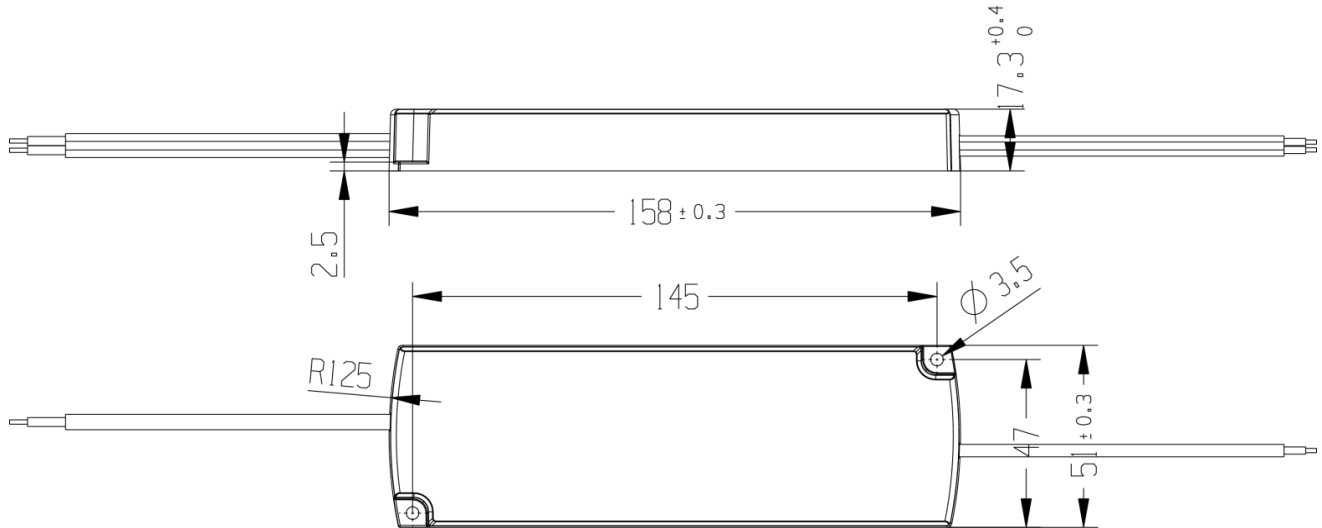
Certificate		Safety standards	Certification	Note
UL/CUL		---		
TUV		EN61347-1:2015 EN 61347-2-13:2014+A1 EN62493:2015	YES	
SAA		AS/NZS 61347.2.13		
CCC		---		
CE		EN 61347-2-13:2014 +A1 EN61347-1:2015	YES	
Safety test		Technical indexes	Note	
Dielectric strength	Input-Output	3750Vac/5mA Max/60s	Reinforced 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	120g	
Dimensions	158*51*17.3mm	L x Wx H

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### Mechanical Specification ( Unit : mm )



#### Remark :

AC input cable	Terminal block , H05VVH2-F $2 \times 1.0\text{mm}^2$
DC output cable	Terminal block, H03VVH2-F $2 \times 0.75\text{mm}^2$