SNAPPY Optoelectronics Co., Ltd.

IP20 LED Power Supply



Features

European AC input / (198-264VAC)

. Built-in active PFC function

. IP20

. Suitable for dry environment

. Protections: Short circuit / Over voltage / Over temperature

. Adopt plastic case and internal glue potting

. Built-in lightning protection device, it can satisfy DM 1kV

. Comply with the world lighting equipment safety standards

. 5 years warranty

Description:

SL100 series is an indoor CV LED power supply, rated input voltage AC198-264Vac ,with the high efficiency up to 93% and fan free design, working temperature range of - 20 ° C to + 45 ° C under free air convection. It has a super high PF and ultra-low THD, and total harmonic distortion, Low standby power consumption, all-round protection function, it not only greatly improves the reliability of products but also ensures the life cycle of products. This series for LED Lighting design, applied to indoor lighting design. Suitable for almost any indoor location where LED Lighting can be installed in a variety of applications.Comply with the world lighting equipment safety specifications, at the same time to ensure the safety of users and lighting system in the installation process.

Model

Model	Output voltage	Output current	Max. Output power	Output voltage precision	Total harmonic distortion (Typ.)	Power factor (Typ.)	Efficiency (Typ.)
SL100-12VF-1	12V	0-8.33A	100W	±5%	4%	0.95	93%
SL100-24VF-1	24V	0-4.17A	100W	±5%	4%	0.95	93%
SL100-48VF-1	48V	0-2.08A	100W	±5%	4%	0.95	93%

Remark: All the parameters are measured at 230VAC input, full load and 25 ℃ of ambient temperature if they are not specially mentioned.

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Input

Parameter	Min. value	Typical value	Max. value	Note
Rated input voltage	220 Vac		240Vac	Derating curve is shown in figure
Input voltage	198 Vac		264Vac	
Input frequency	47Hz		63Hz	
Max. Input current			0.7A	230Vac,Full Load
Input inrush current			60A	230Vac/50Hz,cold start
Power factor	0.96	0.97		230Vac,Full Load
Total harmonic input		4%	5%	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	SL100-12VF-1	SL100-24VF-1	SL100-48VF-1	Note
Output voltage	12.0VDC	24.0VDC	48.0VDC	
Rated output current	8.33A	4.17A	2.08A	
Output current	0-8.33A	0-4.17A	0-2.08A	
Rated output power	100W	100W	100W	
Rated output efficiency	93%	93%	93%	230Vac
Output voltage precision	±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%			

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Characteristic curve

Fig. 1 Output load-Temperature curve

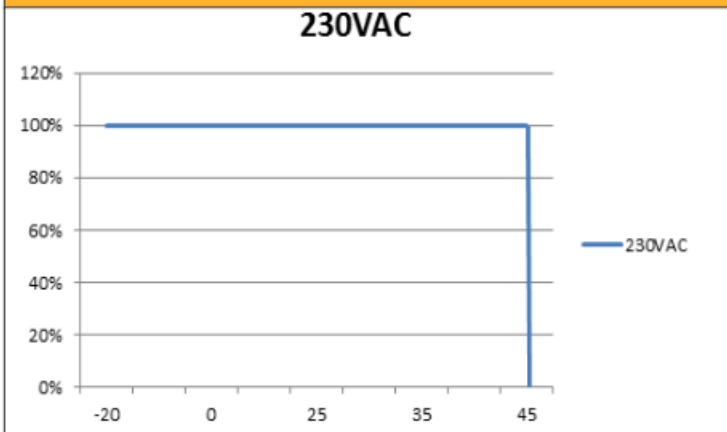


Fig. 2 Static characteristic curve

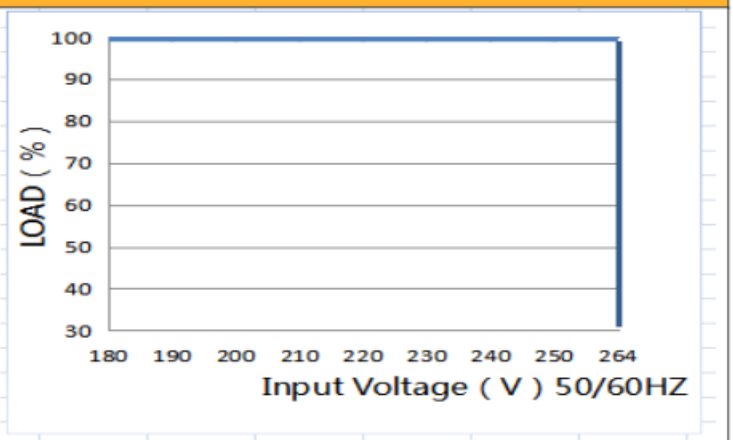


Fig. 3 I-V curve

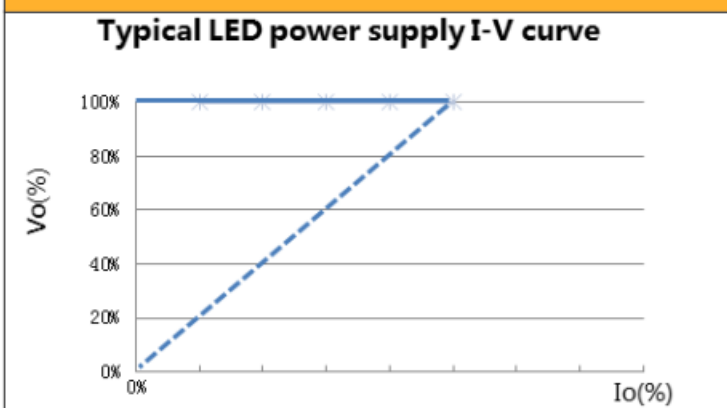


Fig. 4 Power factor characteristic curve

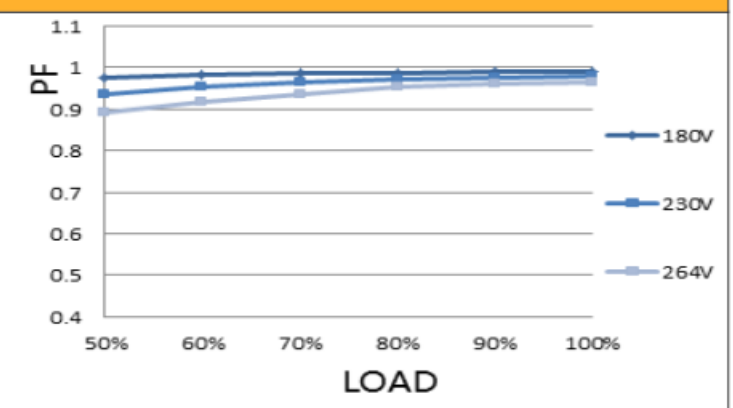


Fig.5 Total harmonic distortion curve (THD)

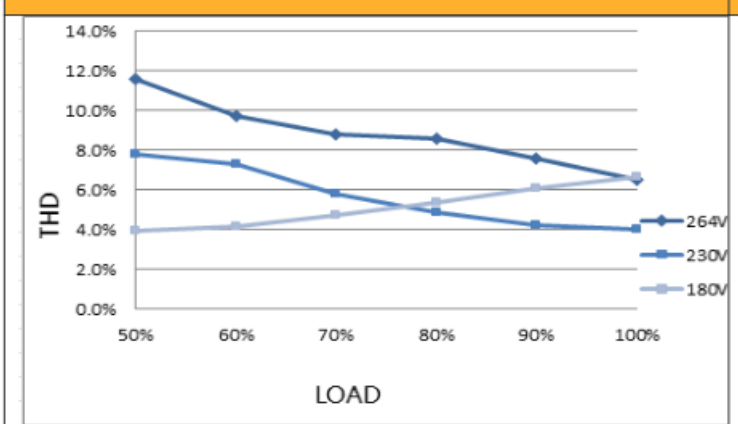
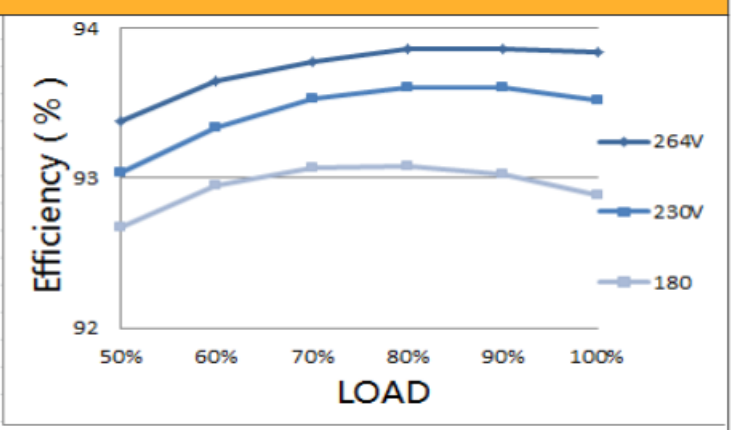


Fig.6 Efficiency-Load curve



Leakage current	≤0.75mA	264Vac
EMI/EMS item	**Standard/Level**	**Data**
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, Max Case Temp. 75℃
MTBF	200,000 hours	230Vac,full load, environment temperature 25℃ (MIL-HDBK-217F)
TC	90℃	
Warranty	5 years	---
Weight	520g	
Dimensions	320.6mm * 30mm * 18.2mm	L x Wx H

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Protection

Parameter		Conditions	Note
Protection	Over load	1.1～1.6 times rated load	Overloading restores automatically
	Short circuit	Short circuit power≤0.5W	Hiccup mode, auto-recovery after short circuit removal
	Over voltage	1.5 times of rated output voltage	Turn off the input voltage and recover after restart
	Over temperature	110℃	Hiccup mode, auto-recovery after restore the temperature to normal value

Environment Requirement

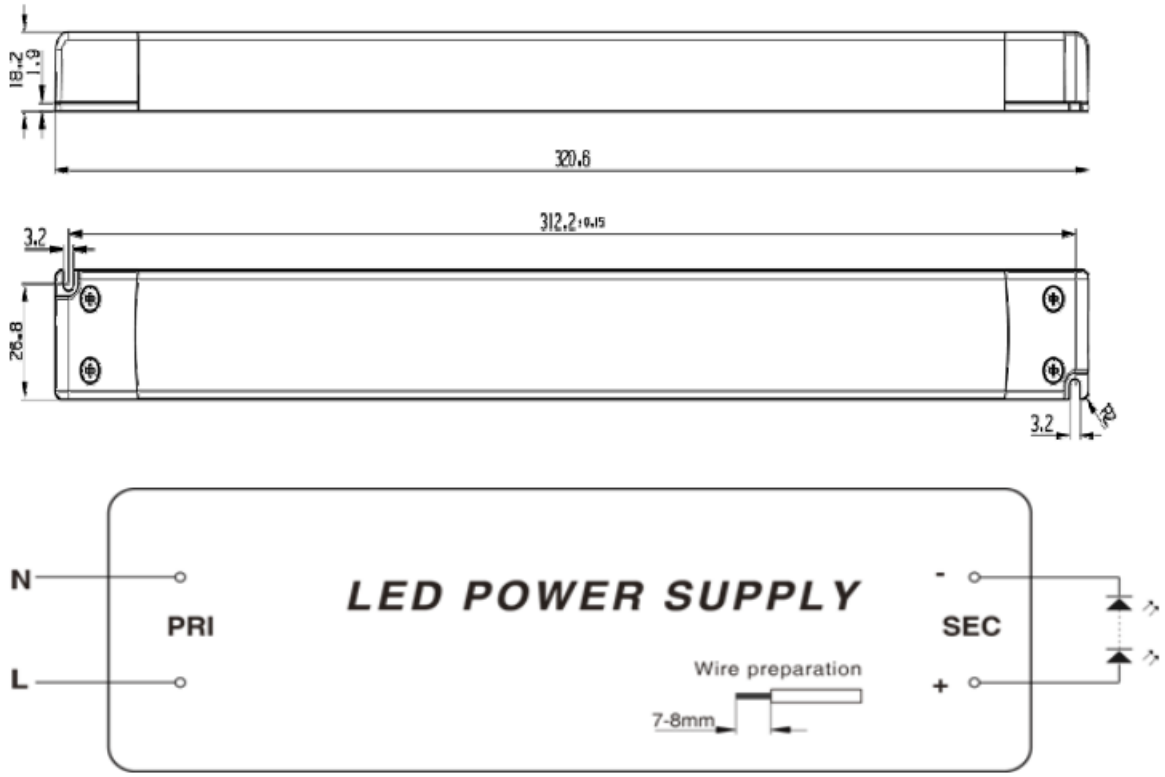
Parameter	Min.	Typ.	Max.	Note
Working temp.	-20℃	25℃	+45℃	See Fig.2
Storage temp.	-40℃	25℃	+85℃	
Working humidity	10%RH		90%RH	
Storagehumidity	5%RH		95%RH	
IP grade			IP20	
Cooling mode	Natural cooling			

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	YES	
CCC	---		
CE	EN 61347-2-13:2014 +A1 EN61347-1:2015	YES	

Safety test		Qualification	Note
Dielectric compressive strength	Input to output	3750Vac/5mA Max/60s	Strengthen insulation, no breakdown, no arc
	Primary to ground	---	Basic insulation, no breakdown, no arc
	Secondary to ground	---	Functional insulation, no breakdown, no arc
Insulation resistance	Input to output	≥10MΩ	Test voltage : 500Vdc

Mechanical Specification (Units : mm)



Remark :	
AC input cable	Terminal+ H03VVH2-F 2*0.75mm²
DC output cable	Terminal + H05VVH2-F 2*1.0mm2 (for 12V and 24V) H03VVH2-F 2*0.75mm²(for 48V)