

Constant Voltage LED Power Supply

SN100-12/24/48VLW



Standards

FCC PART 15B
UL8750
EN61347-1
EN61347-2-13
EN61547
EN55015
EN61000-3-2
EN61000-3-3
EN62384
EN62493

Product description

The SN100 series is a constant-voltage LED driver designed for non-outdoor applications, with an input voltage range of 108–305 VAC. It achieves up to 94% conversion efficiency and features a fanless design, operating within a case temperature range of -20°C to $+45^{\circ}\text{C}$ under natural convection cooling. This series offers high power factor, ultra-low total harmonic distortion, low standby power consumption, and comprehensive protection functions, significantly enhancing product reliability and ensuring long-term performance throughout its lifecycle. Designed specifically for LED lighting, the SN100 series is suitable for a wide variety of indoor and sheltered environments where LED luminaires can be installed, and it complies with CLASS 2 safety standards.

Characteristics

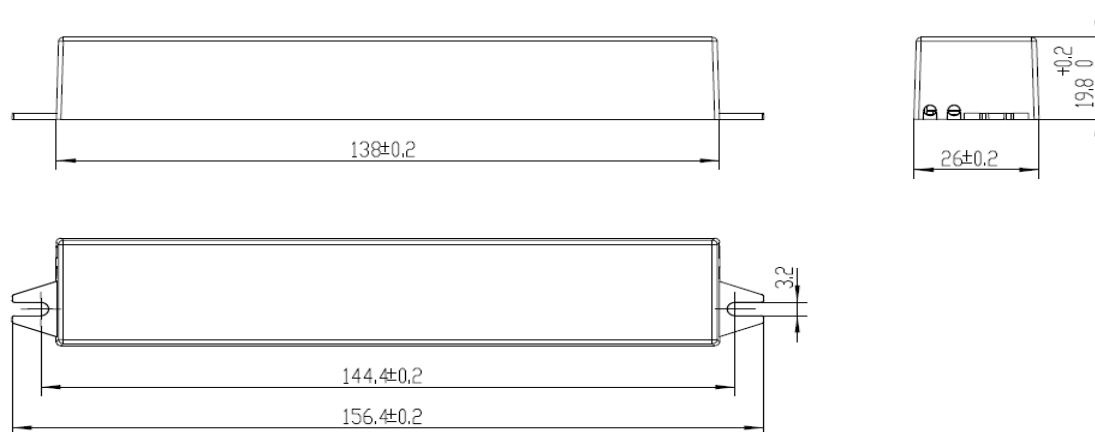
- AC rated input: 120-277VAC
- With active PFC function
- Waterproof rating: IP65
- Suitable for indoor environment
- Protection type: short circuit/over temperature/over voltage protection
- Plastic housing
- Complies with world lighting equipment safety regulations
- Warranty 5 years

Specifications

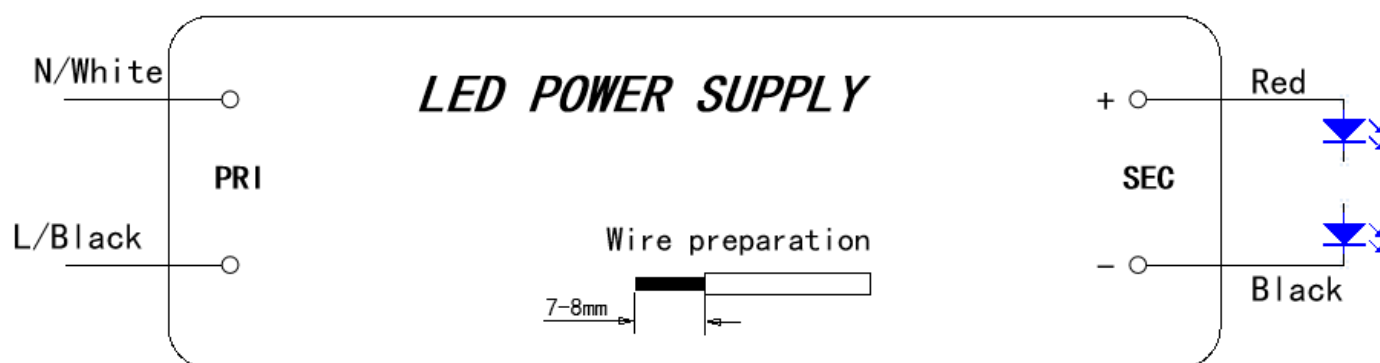
Model		SN100-12VLW	SN100-24VLW	SN100-48VLW
Output	turn on time(S)	<0.5	<0.5	<0.5
	output power(W)	80W@220-277VAC/64W@120VAC	96W@220-277VAC/80W@120VAC	96W@220-277VAC/80W@120VAC
	output voltage(V)	12	24	48
	output voltage tolerance	≤±5%	≤±5%	≤±5%
	ripple voltage(mV)	120	240	480
	Line Regulation	1%	1%	1%
	Load Regulation	2%	1%	1%
	working current range(A)	0-6.66A (198-305V) 0-5.33(108-132V)	0-4A (198-305V) 0-3.33(108-132V)	0-2A (198-305V) 0-1.66(108-132V)
	SVM	<0.4		
	Pst	<1.0		
	dimming type	NA		
	dimming range	NA		
	rated DC supply voltage(Vdc)	170-390		
Input	rated supply voltage(Vac)	120-277		
	voltage range(Vac)	108-305		
	line frequency(Hz)	50/60		
	input current(A)	0.45@230V/0.85@120V	0.5@230V/1@120V	0.5@230V/1@120V
	efficiency(TYPE)	92%@full load	94%@full load	94%@full load
	average efficiency(TYPE) 3	91%	93%	93%
	no load power consumption(W)	≤0.3W		
	power factor	0.95@full load		
	Displacement factor	0.95		
	THD(typ.)	6%		
	inrush current(lpk)	75A/220uS		
	Leakage current (mA)	0.7@240Vac 60Hz		
	short circuit protection	hiccup mode, restart automatically after fault correction.		
Protection	over load protection	hiccup mode, restart automatically after fault correction.		
	Over voltage protection	hiccup mode, restart automatically after fault correction.		
	Over temperature protection	hiccup mode, restart automatically after fault correction.		
	surge capacity	L-N: 1KV		
	Withstand voltage	Input-Output:3000V/5mA/1min		
	Ta(°C)	-20...45		
	Tc max.(°C)	max.90		

Ambient and Life	Storage Temperature(°C)	-30...80
	ambient humidity range	5%...85%RH, Not condensing
	nominal life-time(hrs)	50'000@Ta35 °C
Other	dimensions (L×W×H)(mm)	156*26*19.8
	weight(g)	140
	casing material	plastics
	housing colour	White
	type of protection	IP65
	protection class	Class II
	certificate	CE,ENEC,UL
Note	1.Tolerance:includes set up tolerance, line regulation and load regulation. 2.Tested at full load,230Vac.Refer to"Power Factor" and "EFFICIENT"curve graphs. 3.Calculate the model's average efficiency for each test voltage by testing at 100%, 75%, 50%, and 25% of rated current and then computing the simple arithmetic average of these four values. 4.All parameters NOT specially mentioned are measured at nominal voltage input, rated load and 25 of ambient temperature. 5.The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.	

Dimensions(mm)



Wiring Diagram



AC	1332 18AWG
DC	1569 18AWG

Electrical curves

Fig. 1 Output load-Temperature curve

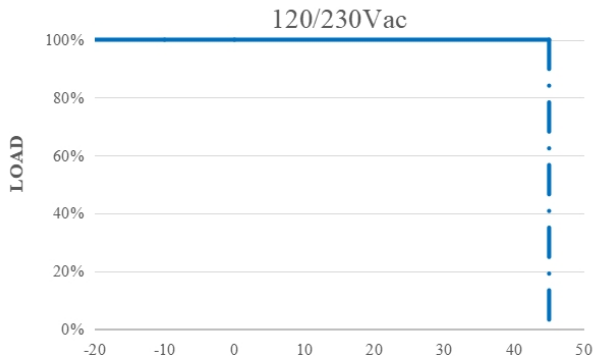


Fig. 2 Static characteristic curve

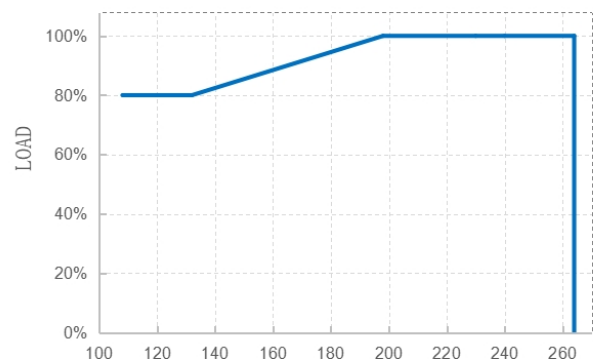


Fig. 3 I-V curve

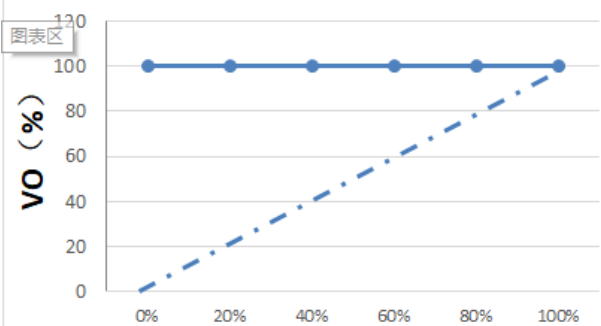


Fig. 4 Power factor characteristic curve

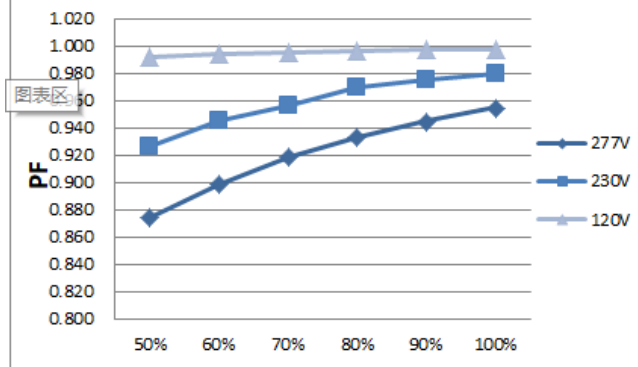


Fig.5 Total harmonic distortion curve (THD)

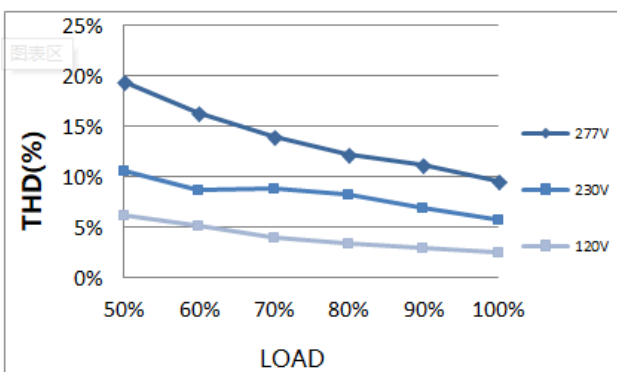
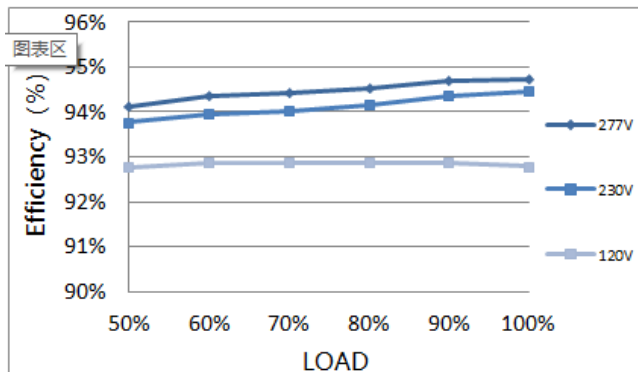


Fig.6 Efficiency-Load curve



MCBS

MCBS Model	B10	B13	B16	B20	C10	C13	C16	C20
SN100@277V	11	14	18	22	13	17	21	27
SN100@120V	5	6	8	10	6	8	10	12

Package

Model	Carton quantity(pcs)	Carton dimension(mm)	G.W./CTN(kg)
SN100-12/24/48VLW			

Revision history

Date	Rev.	Remark
2025.05.15	A0	Initial Release
2025.8.14	A1	Official Release
2026.1.13	A2	Change dimensions