

IP20 LED Power Supply

Ultra Thin Constant Voltage LED Driver | 8W | 12/24V

- Compliance to EN IEC 6100-3-2 (<25W) standard
- IP20
- Protections: Short circuit / Overload/ Over Voltage
- Compliance to worldwide safety regulations for lighting



SE8-12VL/24VL is a indoor ultra-thin constant voltage LED power supply. Its input voltage range is 180-264Vac, with the high efficiency up to 81%, working in the temperature range of -20°C~+45°C. ambient temperature range. It has ultra-high power factor, low THD, low standby power consumption, full protection function, which not only greatly improves the reliability of the product, but also ensures the life cycle of product. The product completely in accordance with EN IEC 61000-3-2 THD standard. This series is designed for LED lighting, suitable in indoor lighting use.

Model	Rated output Voltage	Rated Output Current	Max. Output power	Output Voltage tolerance	Total harmonic distortion (Typ.)	Power factor (Typ.)	Efficiency (Typ.)
SE8-12VL	12V	0-0.67A	8W	±5%	73%	0.66	81%
SE8-24VL	24V	0-0.33A	8W	±5%	73%	0.66	82%

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

Input

Parameter	Min value	Typical Value	Max. Value	Note
Rated input voltage	200 Vac		240 Vac	The derating curve is shown in the figure
Input Voltage	180 Vac		264 Vac	
Input Frequency	47Hz		63Hz	
Max. Input Current			--	110Vac, Full Load
			0.085A	180Vac, Full Load
Input inrush current			60A	230 Vac/50Hz, Cold Start
Power factor	0.64	0.66		230Vac, Full Load
Total harmonic input		73%	78%	230Vac, Full Load
Leakage current			0.7mA	230Vac/50Hz , Full Load
Stand-by power consumption		0.15W	0.5W	230Vac/50Hz , Full Load

Output

Parameter	SE8-12VL	SE8-24VL	Note
Rated output Voltage	12VDC	24VDC	Max. Output power should compliance to $P_o = V_o \cdot I_o = 8W$
The min. output voltage (CC mode)	--	--	
Rated output current	0-0.67A	0-0.33A	
Output current ADJ. range	--	--	
Rated output power	8W	8W	
Rated output efficiency	81%	82%	230Vac
Output current tolerance	±2%		Full load (Test under 20M bandwidth)
Output voltage ripple (PK-PK)	--		
Rise time	100mS		230Vac
Startup time	400mS		230Vac
Line regulation	±1		Full Load
Load regulation	±1		

Characteristic Curve

Fig. 1 Output load-Temperature curve

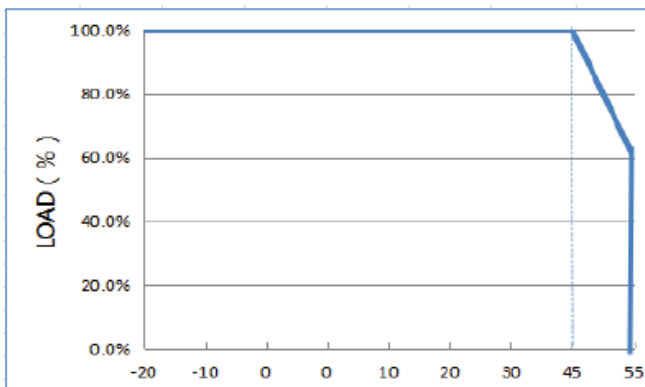


Fig. 2 Static characteristic curve

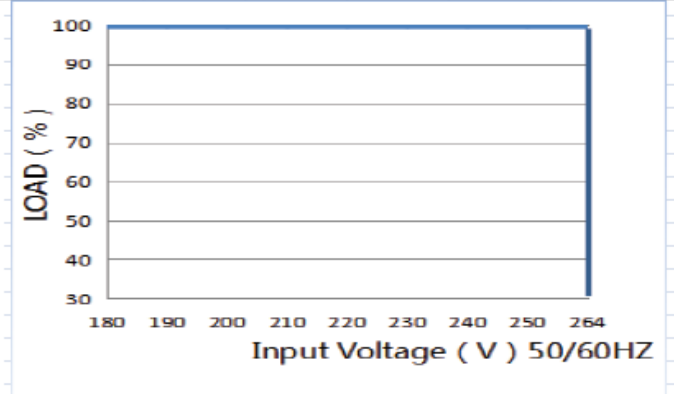


Fig. 3 I-V curve

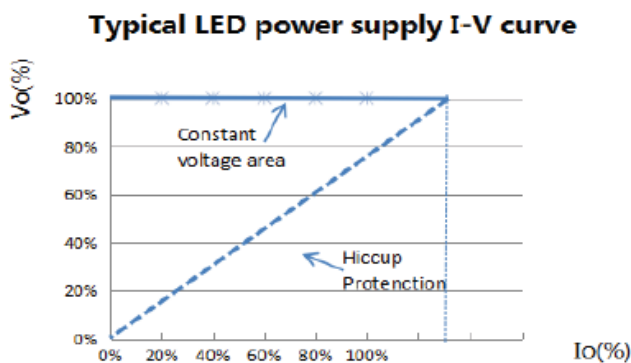
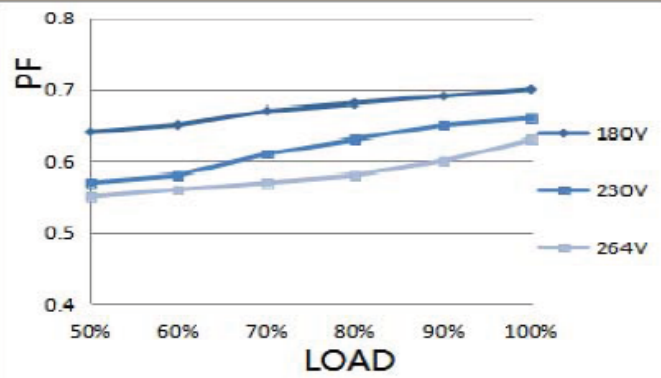
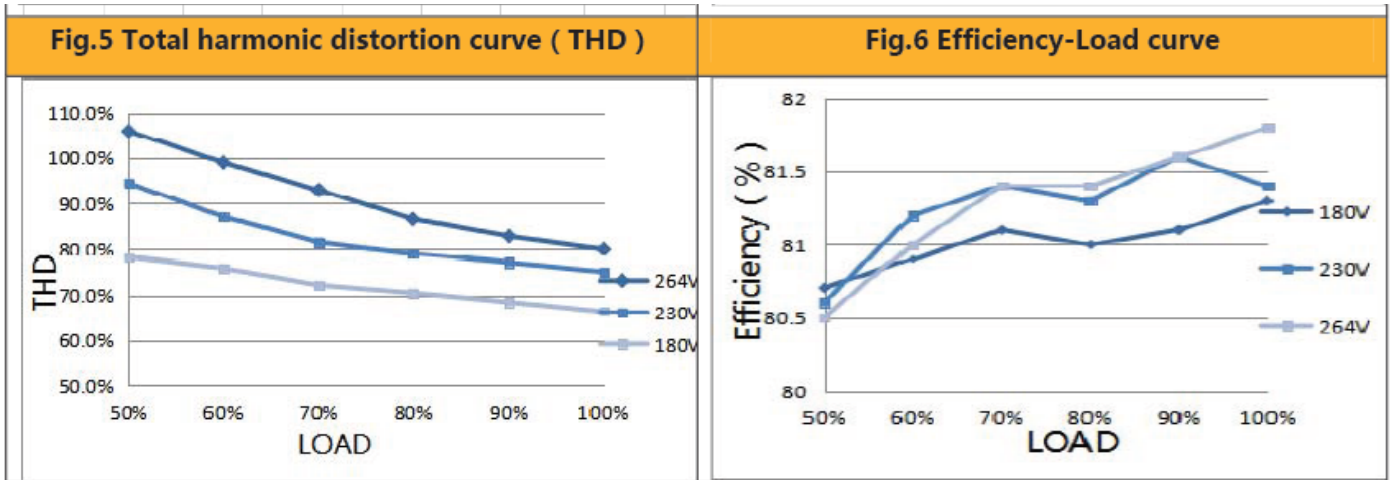


Fig. 4 Power factor characteristic curve





Protection

Over Load	1.4 times rated load	Recover automatically when cancel overload
Short Circuit	Short Circuit power ≤0.5W	Hiccup mode, auto-recovery, after short circuit removed
Over Voltage	1.5 times of rated output voltage	auto-recovery after over voltage removed
Over temperature	---	---

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		IP20	IP20	
Cooling mode	Natural cooling			

Safety & EMC Standard

Certificate	Safety Standard	Certification	Note
UL/CUL	UL8750		
TUV	EN61347-1:2015 EN 61347-2-13:2014+A1 EN62493:2015		
SAA	AS/NZS 61347.2.13		
CCC	GB 19510.14-2009		
CE	EN 61347-2-13:2014+A1 EN61347-1:2015		

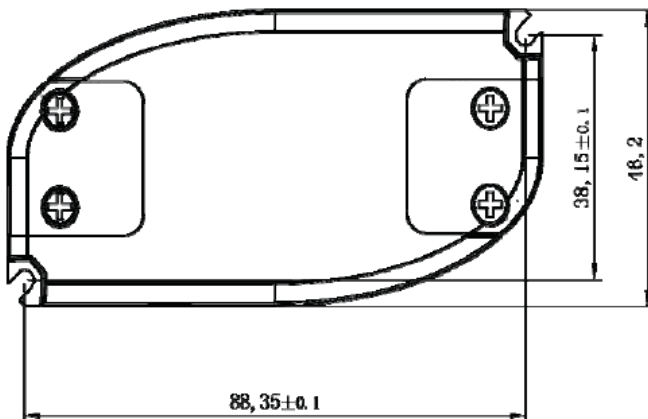
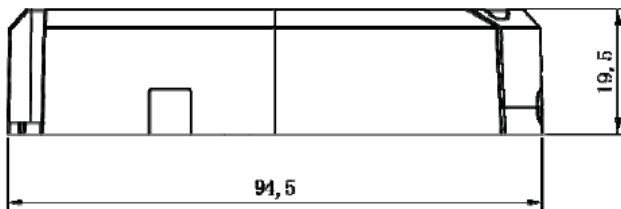
SE8-12 24 VL

Safety Test		Technical indexes	Note
Dielectric Strength	Input to output	3200Vac/5mA Max/60s	Reinforced insulation, no breakdown, no flashover
	Primary to ground	1600Vac/5mA Max/60s	Basic insulation, no breakdown, no flashover
	Secondary to ground	1000Vac/5mA Max/60s	Functional insulation, no breakdown, no flashover
Insulation resistance	Input to output	$\geq 10M\Omega$	Test voltage 500Vdc
Grounding resistance		$\leq 0.1\Omega$	25A/1min
Leakage Current		$\leq 0.75mA$	277Vac
EMI/EMS item		Standards	Basis
Conduction CE		EN55015	
Radiation RE		EN55015	
Harmonics		EN IEC 6100-3-2	Class C

Others

Parameters	Condition	Note
Lifetime	55,000 hours	230Vac, Full load, TC: 75°C
MTBF	200,000hours	230Vac, Full load, 25°C (MIL-HDBK-217F)
TC	75°C	TC: 75°C
Weight	g	
Dimensions	94.5 x 46.2 x 19.5mm	L x W x H

Mechanical Specification (Unit: mm)



Remark

AC input cable	Terminal H03VVH2-F 2x0.75mm ²
DC Output cable	Terminal H03VVH2-F 2x0.75mm ²

