

Features

- . Compliance to EN IEC 61000-3-2 (<25W) standard
- . IP20
- . Protections: Short circuit / Over load/ Over voltage
- . Compliance to worldwide safety regulations for lighting
- . Lifetime: 30,000hrs
- . Meet the lightning surge voltage of 500V



Description :

SEA8-12/24VL is an indoor ultra-thin constant voltage LED power supply. Its input voltage range is 180-264Vac, with the high efficiency up to 84%, 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, with high cost performance ratio.

Model

Model	Output voltage	Output current	Max. Output power	Current tolerance	Total harmonic distortion (Typ.)	Power factor (Typ.)	Efficiency (Typ.)
SEA8-12VL	12V	0-0.67A	8W	±5%	42%	0.79	82.5%
SEA8-24VL	24V	0-0.333A	8W	±5%	42%	0.79	84.0%

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

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Indoor LED Power Supply

Input

Parameter	Min. value	Typical value	Max. value	Note
Rated input voltage	200 Vac		240Vac	The derating curve is shown in the figure
Input voltage	180 Vac		264Vac	
Input frequency	47Hz		63Hz	
Max. Input current			--	110Vac , Full Load
			0.07A	180Vac , Full Load
Input inrush current			60A	230Vac/50Hz , Cold Start
Power factor	0.75	0.79		230Vac , Full Load
Total harmonic input		42%	45%	230Vac , Full Load
Leakage current			0.7mA	230Vac/50Hz , Full Load
Stand-by power consumption		0.20W	0.5W	230Vac/50Hz , No Load

Output

Parameter	SEA8-12VL	SEA8-24VL	Note
Rated output voltage	12V	24V	The maximum output power $P_o = V_o \cdot I_o = 8W$
Rated output current	0.67A	0.333A	
Output current	0-0.67A	0-0.333A	
Rated output power	8W	8W	
Rated output efficiency	82.5%	84%	230Vac
Output voltage tolerance	±5%		
Output voltage ripple (PK-PK)	3%	2%	Full load (Test under 20M bandwidth)
Output current ripple (PK-PK)	--		
Rise time	---		230Vac
Startup time	600mS		230Vac
Line regulation	2%		Full load
Load regulation	4%		
Recommended frequency for PWM dimming	> 500HZ		The actual dimming effect is related to the LEDs and dimmers, and the specific situation is subject to the customer's test



Characteristic curve

Fig. 1 Output load-Temperature curve

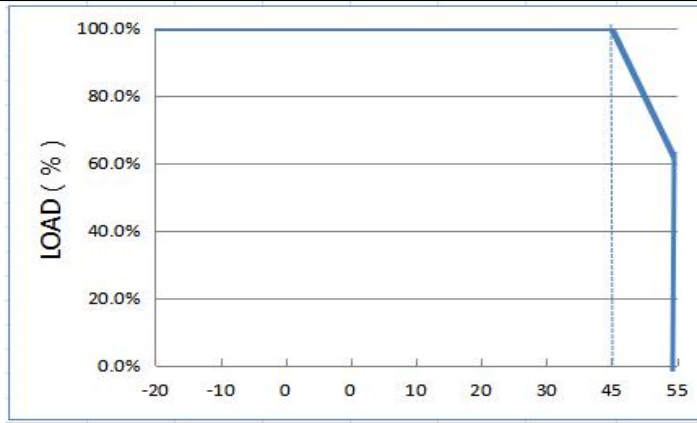


Fig. 2 Static characteristic curve

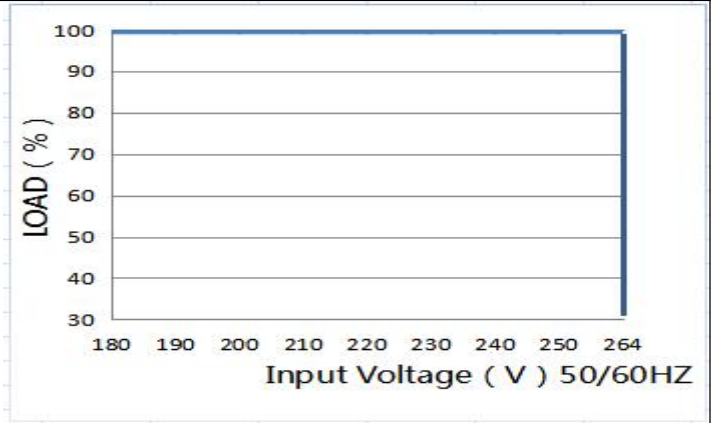


Fig. 3 I-V curve

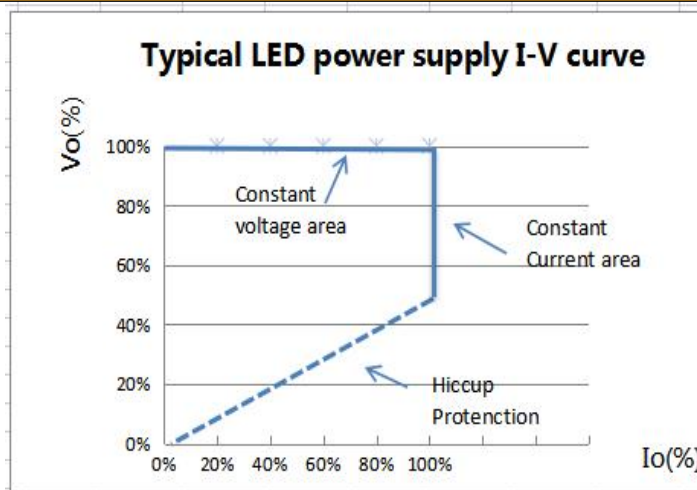


Fig. 4 Power factor characteristic curve

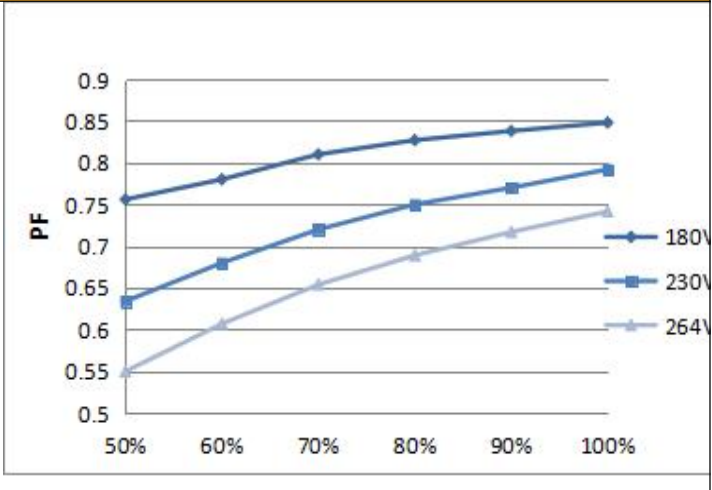


Fig.5 Total harmonic distortion curve (THD)

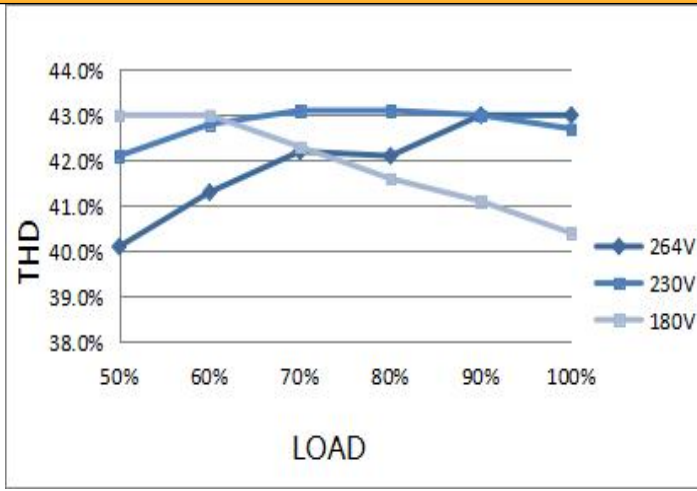
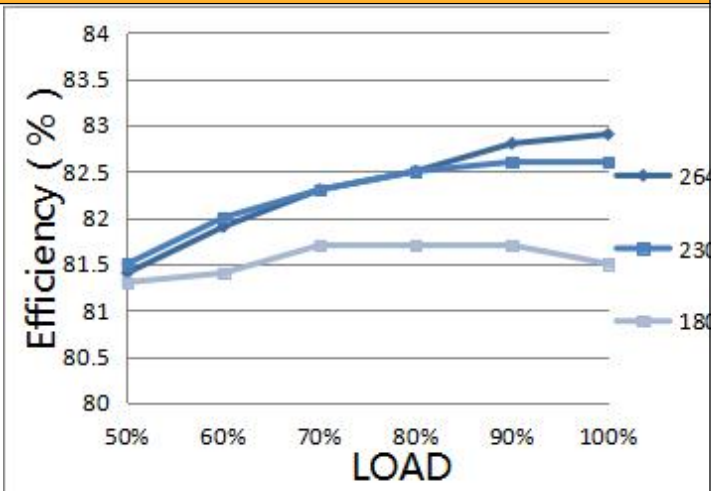


Fig.6 Efficiency-Load curve





Protection

Parameter		Conditions	Note
Protection	Over load	1.1-1.4 times of rated load	Auto-recovery after over load removed
	Short circuit	Short circuit power \leq 0.5W	Hiccup mode, auto-recovery after short circuit removed
	Over voltage	1.2 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	
Cooling mode	Natural cooling			

Remark: All parameters NOT specially mentioned are typical value which are measured at 25 °C of ambient temperature



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Safety&EMC standard

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

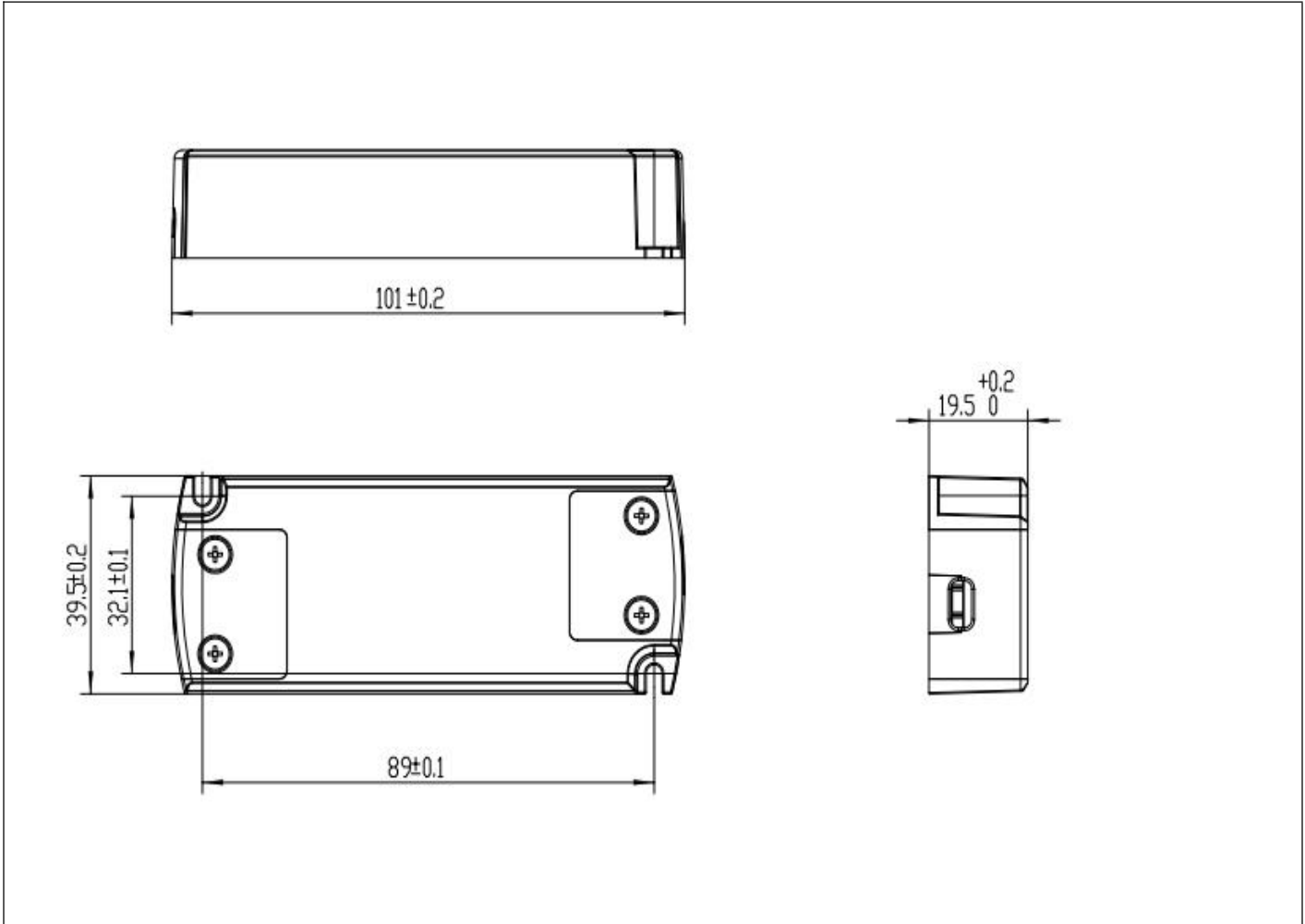
Others

Parameters	Condition	note
Lifetime	30,000 hours	230Vac , full load, TC 75°C
MTBF	200,000hours	230Vac, full load, 25°C(MIL-HDBK-217F)
TC	80°C	
Warranty	5 years	TC: 75°C
Weight	50g	
Dimensions	101mm*39.5mm*19.5mm	L x Wx H



Indoor LED Power Supply

Mechanical Specification (Unit : mm)



Remark :

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