

IP20 LED Power Supply



Features:

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



Description:

SEA15-12/24VL is an indoor constant voltage LED driving power supply with an input voltage range of 180-264Vac, a conversion efficiency of up to 85%, operating in the ambient temperature range of - 20 ° C to+45 ° C, high power factor, low total harmonic distortion, passing the EN61000-3-2 harmonic standard, low standby power consumption, and all-round protection functions, which not only greatly improve the reliability of the product, but also ensure the product life cycle. This series of products are designed for indoor LED lighting, with high cost performance ratio.

Model

Model	Rated output voltage	Rated output current	Max. output power	Output voltage tolerance	Total harmonic distortion (Typ.)	Power factor (Typ.)	Efficiency (Typ.)
SEA15-12VL	12V	0-1.25A	15W	±5%	42%	0.84	83%
SEA15-24VL	24V	0-0.625A	15W	±5%	42%	0.84	85%

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

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Input

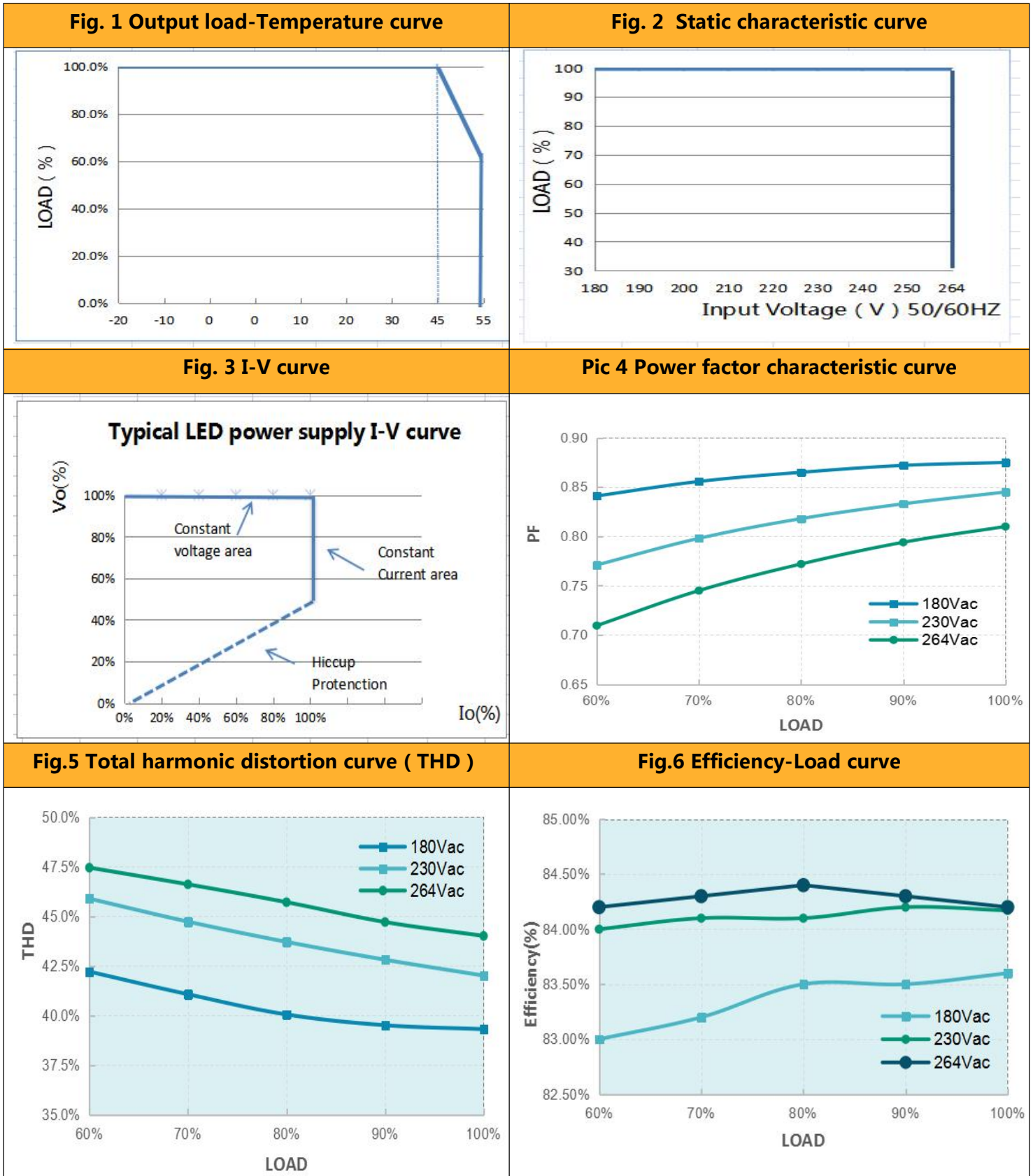
Parameter	Min. value	Typical value	Max. value	Note
Rated input voltage	200 Vac		240Vac	Derating curve is shown in figure
Input voltage	180 Vac		264Vac	
Input frequency	47Hz		63Hz	
Max. Input current			--	110Vac , Full Load
			0.12A	180Vac , Full Load
Input inrush current			60A	230Vac/50Hz , Cold Start
Power factor	0.80	0.84		230Vac , Full Load
Total harmonic input		42%	45%	230Vac , Full Load
Leakage current			0.7mA	230Vac/50Hz , Full Load
Stand-by power		0.20W	0.5W	230Vac/50Hz , No Load

Output

Parameter	SEA15-12VL	SEA15-24VL	Note
Rated output voltage	12V	24V	Max. Output power should compliance to $P_o=V_o \cdot I_o=15W$
Rated output current	1.25A	0.625A	
Output current range	0-1.25A	0-0.625A	
Rated output power	15W	15W	
Rated output efficiency	83%	85%	230Vac
Output voltage accuracy	±5%		
Output voltage ripple (PK-PK)	2%		Full load (Test under 20M bandwidth)
Output current ripple (PK-PK)	--		
Rise time	---		230Vac
Startup time	500mS		230Vac
Line regulation	2%		Full load
Load regulation	4%		
Recommended frequency for PWM dimming	> 500HZ		The actual dimming effect is related to the lamp beads and dimmers, and the specific situation is subject to the customer's test

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Characteristic curve



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Protection

Parameter		Conditions	Note
Protection	Over load	1.1-1.4 times rated load	Auto-recovery after overload Removed.
	Short circuit	Short circuit power \leq 0.5W	Hiccup mode, auto-recovery after short circuit removed.
	Over voltage	1.3 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			

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

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Safety&EMC Standard

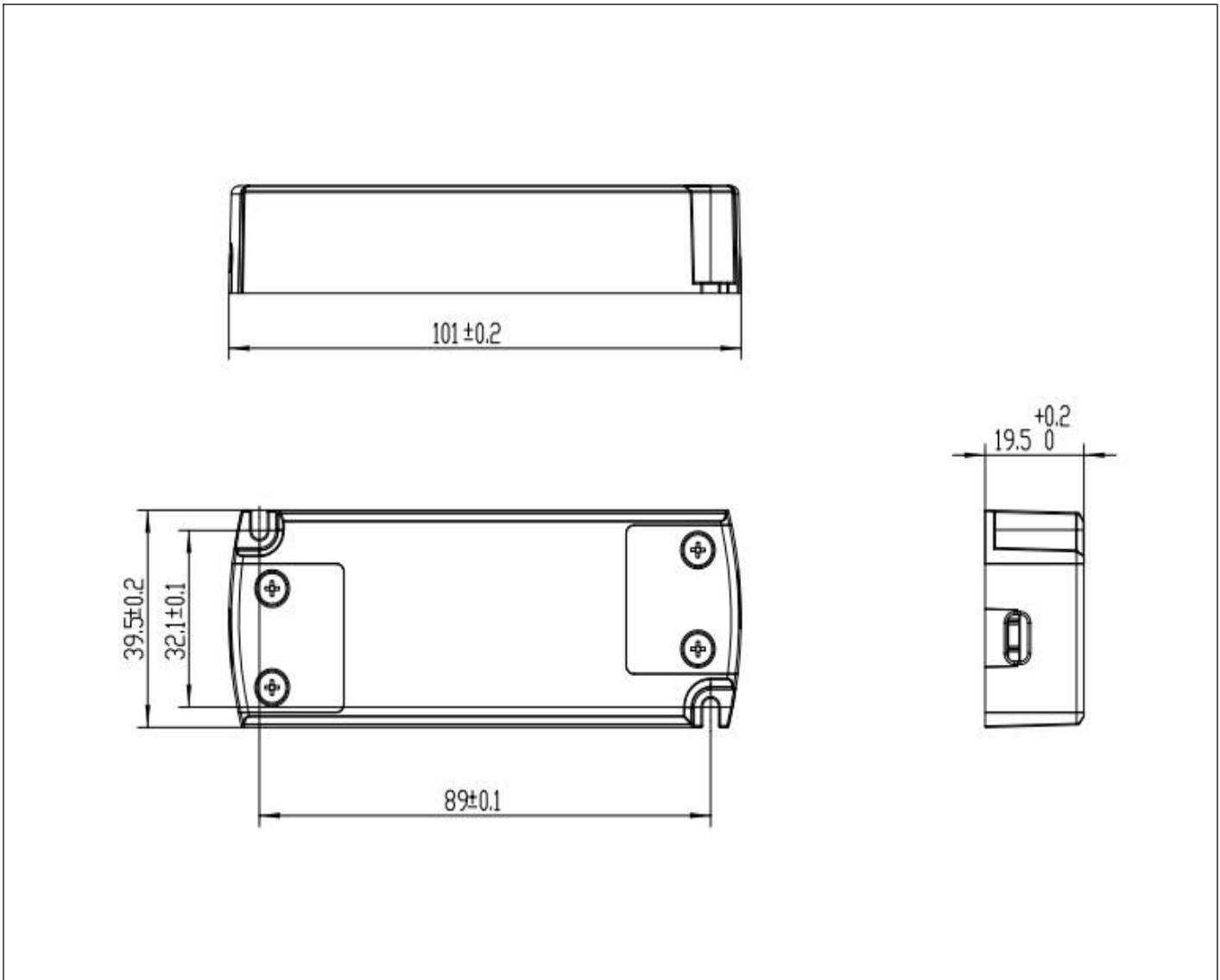
Certificate		Safety standards	Certification	Note
UL/CUL		---		
TUV		EN61347-1:2015 EN 61347-2-13:2014+A1 EN62493:2015	√	
SAA		AS/NZS 61347.2.13		
CCC		---		
CE		EN 61347-2-13:2014 +A1 EN61347-1:2015	√	
Safety test		Technical indexes	Note	
Dielectric strength	Input to output	3750Vac/5mA Max/60s	Reinforced 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		Standard	Note	
Conduction CE		EN55015		
Radiation RE		EN55015		
Harmonics		EN IEC 61000-3-2	Class C	

Others

Parameters	Condition	Note
Lifetime	30,000hours	230Vac, Full load , case Temp TC:75°C
MTBF	200,000hours	230Vac, Full load environment temperature Ta:25°C (MIL-HDBK-217F)
TC	85°C	
Warranty	5 years	Case Temp : 75°C
Weight	60g	
Dimensions	101*39.5*19.5	L x W x H

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Mechanical Specification (Unit : mm)



Remark :

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