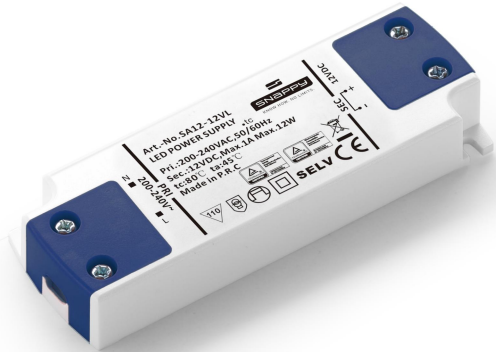


IP20 LED Power Supply



Features :

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



Description :

SEA12-12VL/24VL is an indoor ultra-thin constant voltage LED power supply. The input voltage range is 180-264Vac, with the high efficiency up to 84%, working in the temperature range of -20°C~+45°C. It has ultra-high power factor, low THD, completely in accordance with EN61000-3-2 THD standard, 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. This series is designed for indoor LED lighting, and 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.)
SEA12-12VL	12V	0-1A	12W	±5%	43%	0.81	83%
SEA12-24VL	24V	0-0.5A	12W	±5%	43%	0.81	84%

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

**IP20 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
			0.1A	180Vac , Full Load
Input inrush current			60A	230Vac/50Hz , Cold Start
Power factor	0.75	0.81		230Vac , Full Load
Total harmonic input		43%	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	SEA12-12VL	SEA12-24VL	Note
Rated output voltage	12V	24V	Max. Output power should compliance to $P_o=V_o \cdot I_o=12W$
Rated output current	1A	0.5A	
Output current range	0-1A	0-0.5A	
Rated output power	12W	12W	
Rated output efficiency	83%	84%	230Vac
Output voltage tolerance	±5%		
Output voltage ripple (PK-PK)	5%	2%	Full load (Test under 20M bandwidth)
Output current ripple (PK-PK)	--		
Rise time	---		
Startup time	600mS		230Vac
Line regulation	2%		230Vac
Load regulation	4%		Full load
PWM recommended dimming frequency	> 500HZ		The actual dimming effect is related to lamp and dimmers, subject to the actual testing.



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IP20 LED Power Supply

Characteristic Curve:

Fig. 1 Output load-Temperature curve

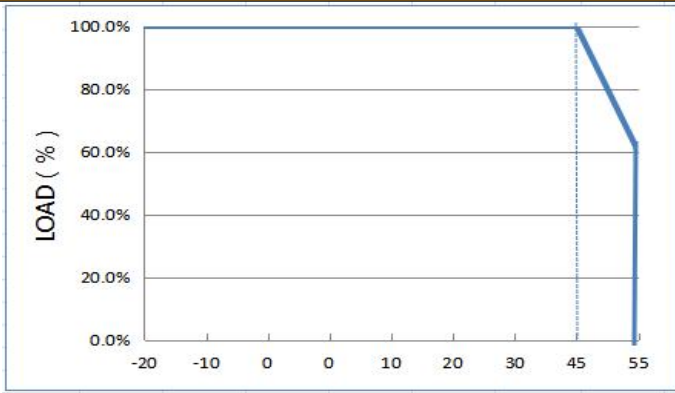


Fig. 2 Static characteristic curve

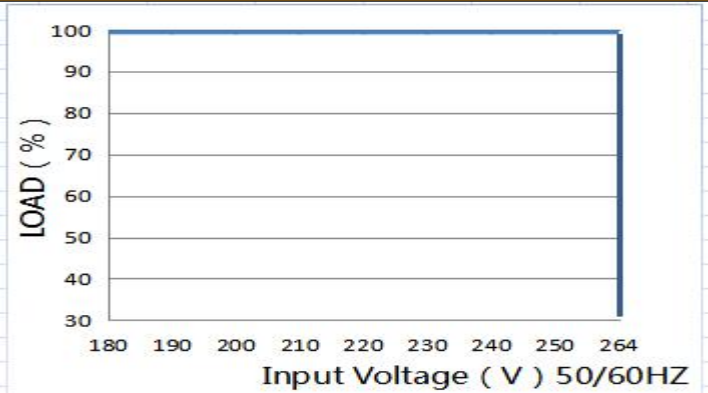


Fig. 3 I-V curve

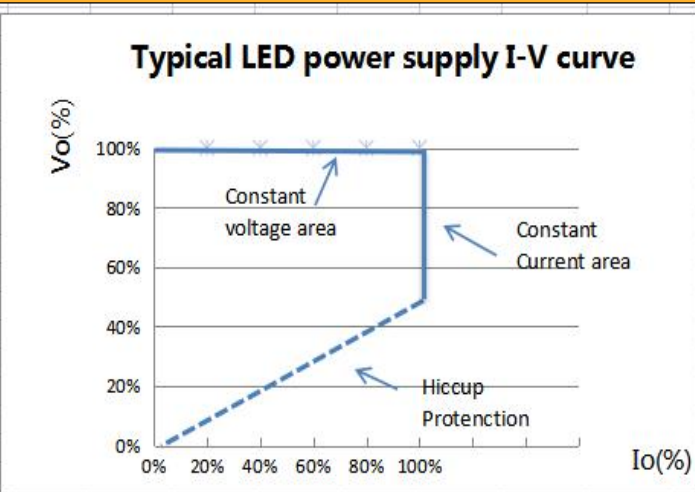


Fig. 4 Power factor characteristic curve

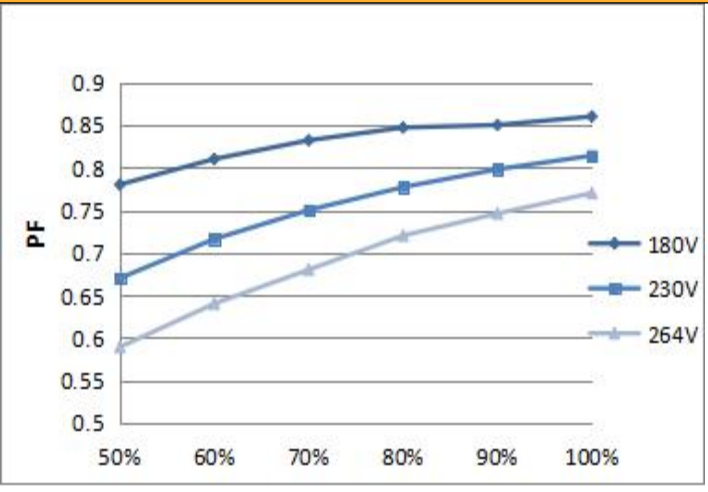


Fig.5 Total harmonic distortion curve (THD)

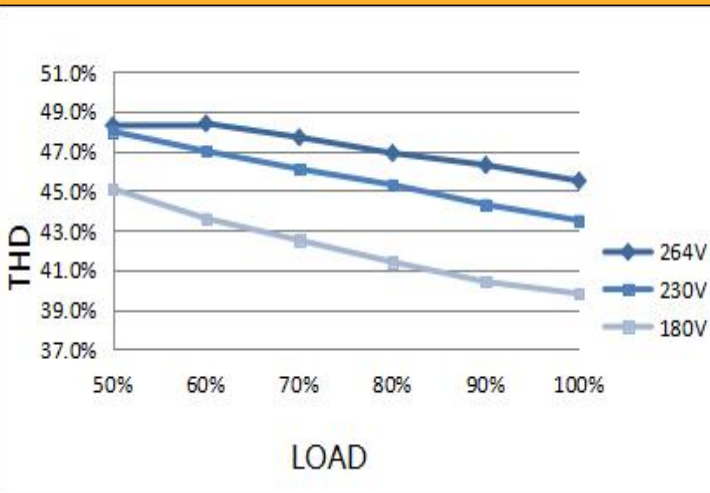
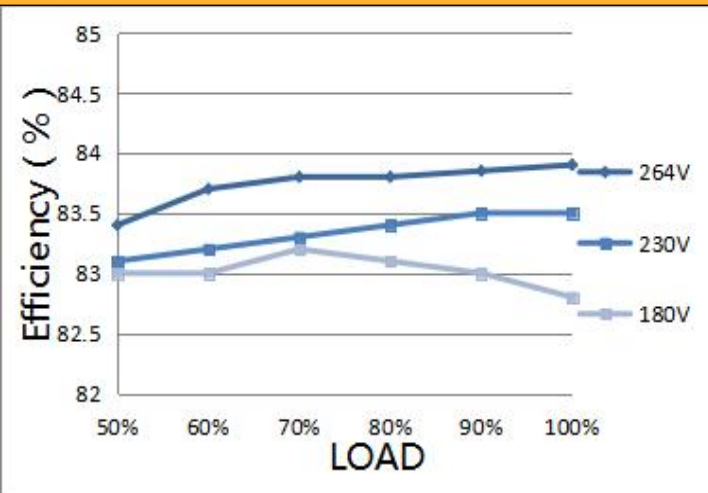


Fig.6 Efficiency-Load curve



Protection

Parameter		Conditions	Note
Protection	Over load	1.1-1.4 times rated load	Recover automatically when cancel overload
	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	IP20	
Cooling mode	Natural cooling			

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

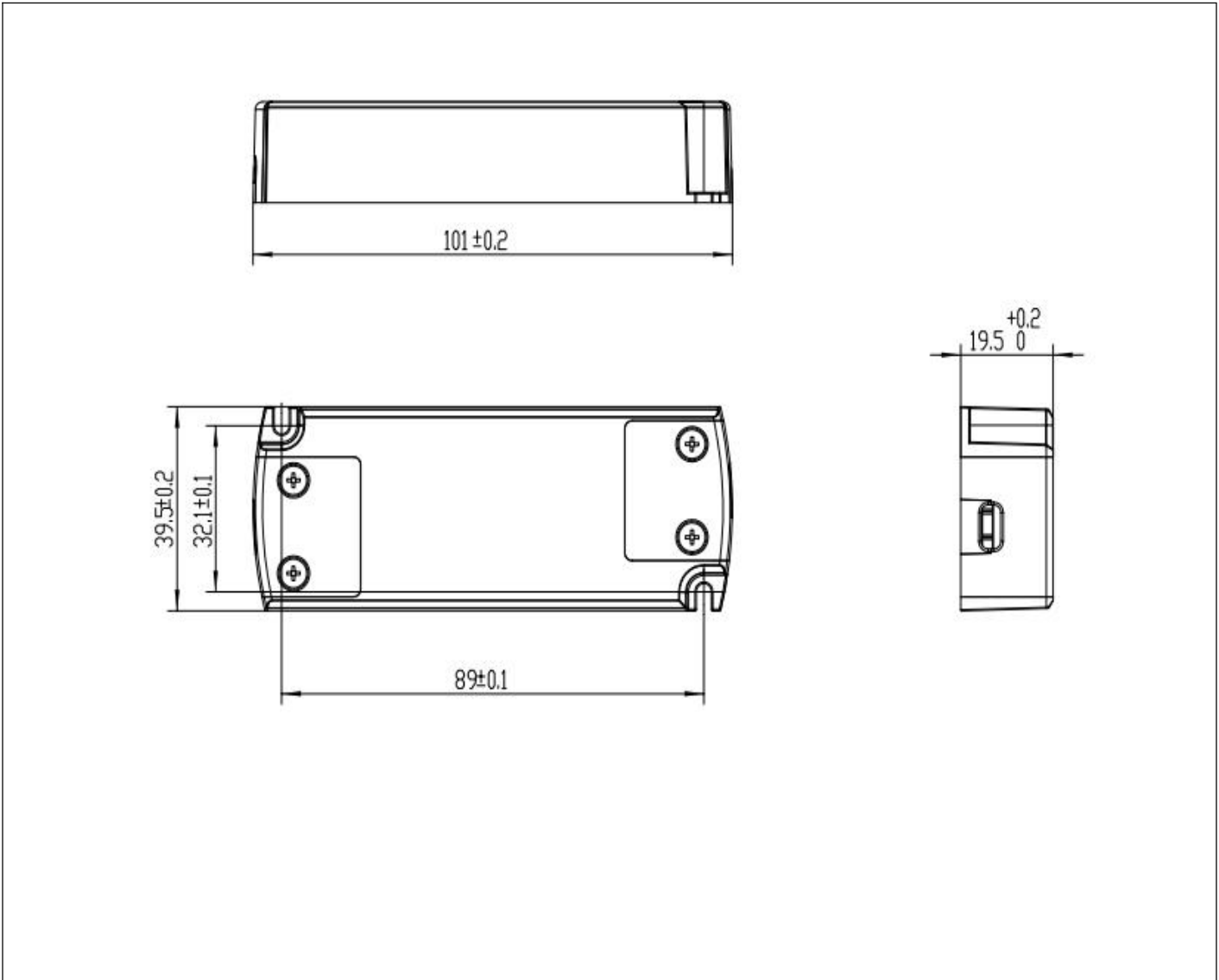
**IP20 LED Power Supply****Safety&EMC Standard:**

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, case Temp. 75°C
MTBF	200,000 hours	230Vac , Full load, environment temperature 25°C (MIL-HDBK-217F)
TC	80°C	
Warranty	5 years	TC : 75°C
Weight	50g	
Dimensions	101*39.5*19.5mm	L x W x H

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