

## IP20 LED Power Supply



### Features:

- . European input voltage 220-240VAC
- . Short circuit / over load / open circuit protection
- . Plastic case, potting inside
- . Compliance to worldwide safety regulations for lighting
- . Compliance to latest European standard
- . Suitable for dry indoor environment



### Description:

SEA75-12VL/24VL is an indoor constant voltage LED driving power supply with an input voltage range of 220-240Vac, a conversion efficiency of up to 87%, operating in the ambient temperature range of - 20 ° C to +45 ° C, high power factor, low total harmonic distortion, 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 compliance to worldwide safety regulations, making sure the user and light fixture safety during the application.

### Model

Model	Rated output voltage	Rated output current	Max. output power	Output voltage tolerance	Power factor (Typ.)	Efficiency (Typ.)
SEA75-12VL	12V	0-6.25A	75W	±5%	0.95	86%
SEA75-24VL	24V	0-3.12A	75W	±5%	0.95	86%

**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	220 Vac		240Vac	Derating curve is shown in figure
Input voltage	198 Vac		264Vac	
Input frequency	47Hz		63Hz	
Max. Input current		0.36A		230Vac , Full Load
Input inrush current			75A	230Vac/50Hz , Cold Start
Power factor	0.9	0.92	0.96	230Vac , Full Load
Total harmonic input			10%	230Vac , Full Load
Leakage current			0.7mA	230Vac/50Hz , Full Load
Stand-by power		0.43W	0.5W	230Vac/50Hz , No Load

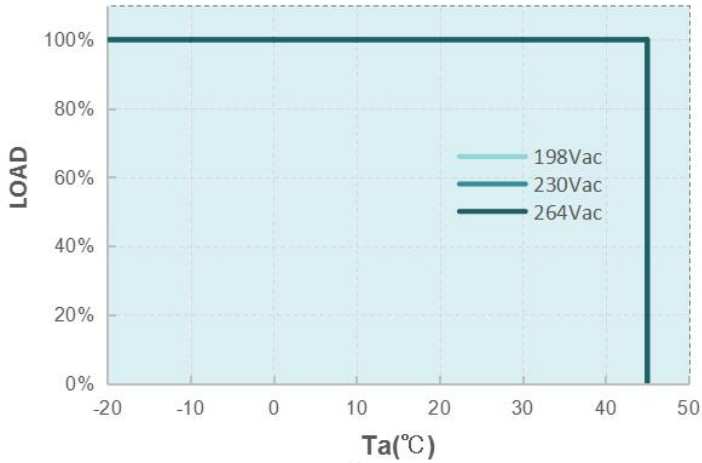
### Output

Parameter	SEA75-12VL	SEA75-24VL	Note
Rated output voltage	12V	24V	Max. Output power should compliance to $P_o=V_o \cdot I_o=75W$
Rated output current	6.25A	3.12 A	
Output current range	0-6.25A	0-3.12A	
Rated output power	75W	75W	
Rated output efficiency	86%	86%	230Vac
Output voltage accuracy	±5%		
Output voltage ripple ( PK-PK )	5%		Full load (Test under 20M bandwidth)
Output current ripple ( PK-PK )	--		
Rise time	---		230Vac
Startup time	350mS		230Vac
Line regulation	3%		Full load
Load regulation	3%		

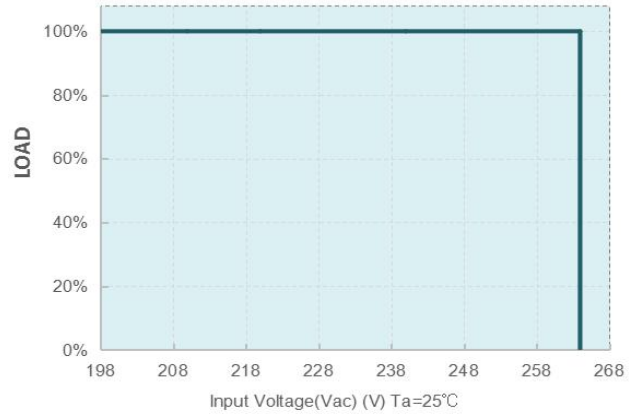
## IP20 LED Power Supply

### Characteristic curve

**Fig. 1 Output load-Temperature curve**

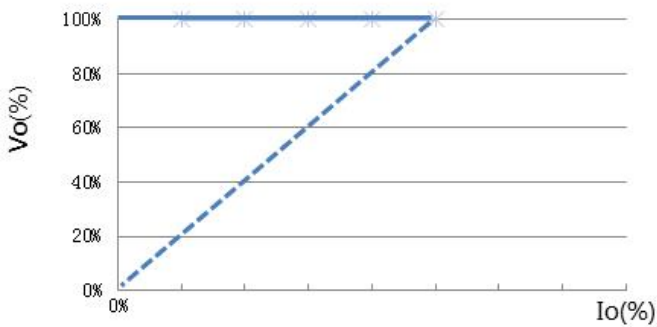


**Fig. 2 Static characteristic curve**

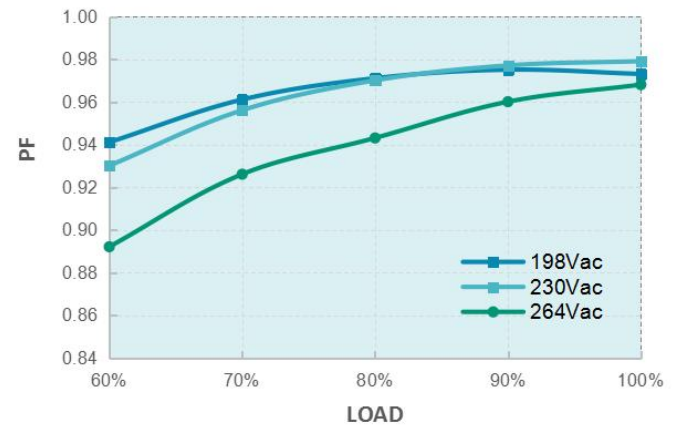


**Fig. 3 I-V curve**

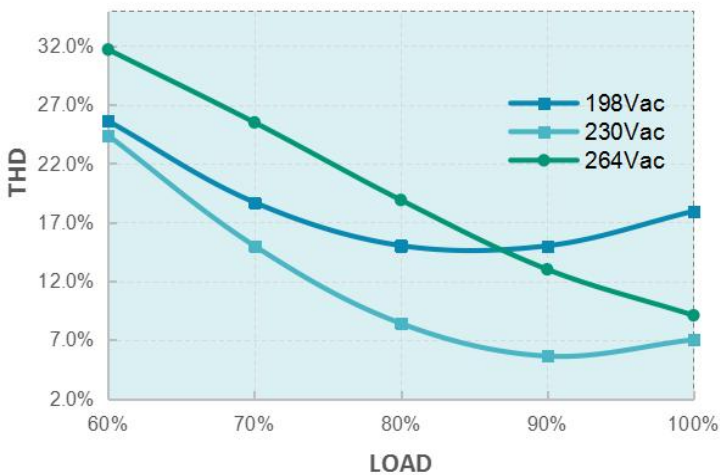
**Typical LED power supply I-V curve**



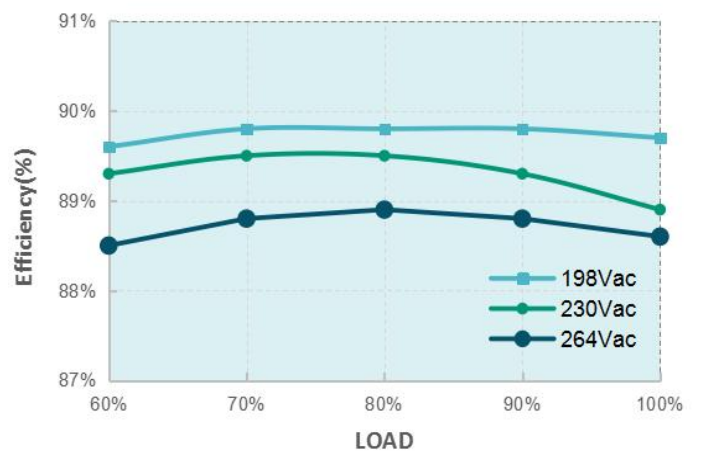
**Pic 4 Power factor characteristic curve**



**Fig.5 Total harmonic distortion curve ( THD )**



**Fig.6 Efficiency-Load curve**



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### Protection

Parameter		Conditions	Note
Protection	Over load	1.2 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 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 values measured at 25 °C of ambient temperature.

## IP20 LED Power Supply

### Safety&EMC Standard

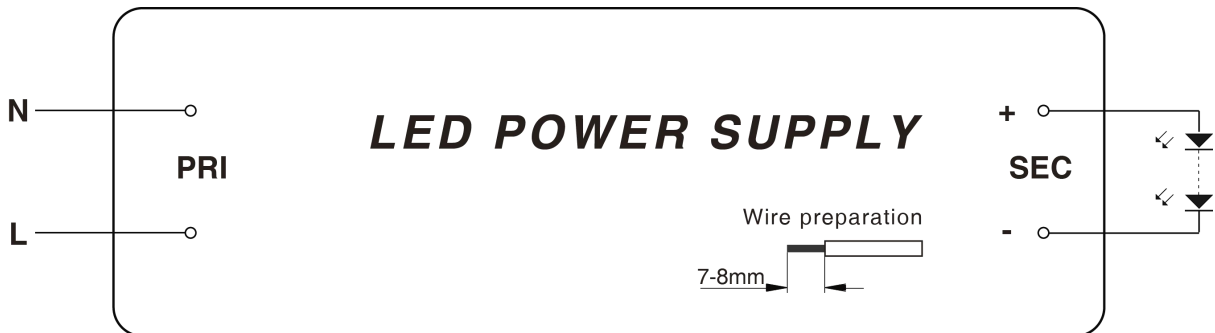
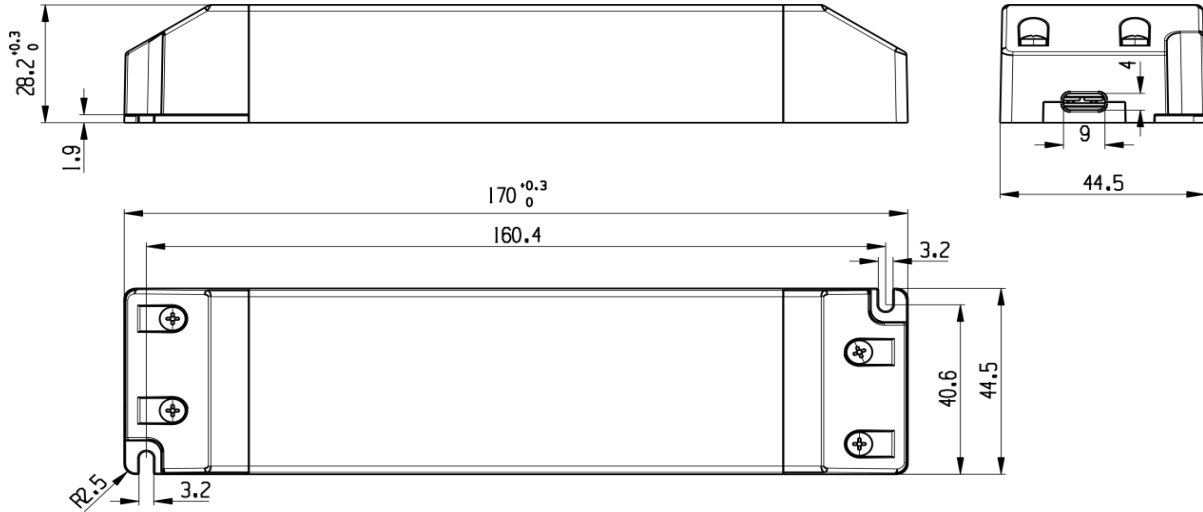
Certificate		Safety standards	Certification	Note
UL/CUL		---		
TUV		EN61347-1:2015 EN 61347-2-13:2014+A1 EN62493:2015	√	
SAA		AS/NZS 61347.2.13		
CCC		---		
CE		EN 61347-2-13:2014 +A1 EN61347-1:2015	√	
Safety test		Technical indexes	Note	
Dielectric strength	Input to output	3750Vac/5mA Max/60s	Reinforced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

### Others

Parameters	Condition	Note
Lifetime	50,000hours	230Vac, Full load environment temperature Ta:45°C
MTBF	200,000hours	230Vac, Full load environment temperature Ta:25°C (MIL-HDBK-217F)
TC	90°C	
Warranty	5 years	
Weight		
Dimensions	170*44.5*28.2 mm	L x W x H

## IP20 LED Power Supply

### Mechanical Specification ( Unit : mm )



#### Remark :

AC input cable	Terminal , H03VVH2-F 2×0.75mm <sup>2</sup>
DC output cable	Terminal , H03VVH2-F 2×0.75mm <sup>2</sup>