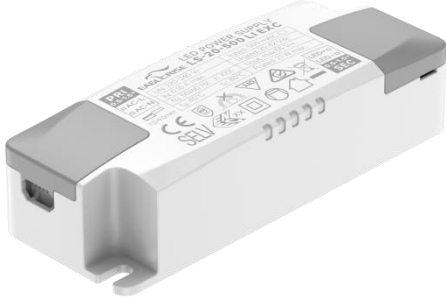


## 20W Constant Current power supply



### Features

- Class II, SELV, independent
- Input Voltage 220-240VAC
- Protections: SCP/OLP/OVP
- Power Factor : 0.95
- Efficiency : 85%
- 5 years warranty

### Applications

- LED panel, LED down light
- LED spot light

### Approve

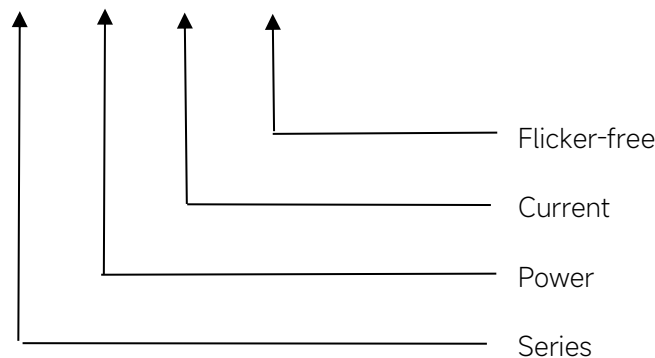


### ◆ Description

LS-20-XXX LI EXC is a 20W constant current LED driver that operates from 198-264Vac input with 350mA to 700mA output current. With it's compact dimensions from 100 x 38.2 x 25mm it is easy to integrate in LED Panel, spot and down light products. To ensure trouble-free operation, protection is provided against output short circuit and over Load.

### ◆ Model code

#### LS-20-XXX LI EXC



## ◆ Specification

Output	Constant Current	350mA	400mA	450mA	.....	700mA
	Voltage Range	40-60	24-42	24-42	.....	18-30
	Unload voltage Max.	75	55		.....	45
	Current Accuracy	±5%				
	Output HF current ripple(≥1KHz)	±5%				
	Output LF current ripple(≤120Hz)	±5%				
	SVM	≤0.4				
	P <sub>st</sub>	≤1				
	Efficiency(Typ.)	85%@Full load,230V				
Input	Rated input voltage	220-240VAC				
	Range of input voltage	198-264VAC				
	Maximum voltage	300VAC@1 h maximum,unit might not operate in this abnormal condition				
	Frequency(Hz)	50/60 Hz				
	Displacement factor	≥0.7				
	Power Factor	0.95@Full load,230V				
	Input Current max	0.16A MAX				
	Start-up time	< 0.5S				
	No Load Power	≤0.5W				
	THD (Typ.)	< 20%@Full load,230V				
Protection	Over Load Protection	103-120%				
		YES/Auto Resume				
	Over Voltage Protection	75VDC	55VDC	.....	45VDC	
Short circuit Protection	YES/Auto Resume					
Environment	Operating Temperature	-20°C~+45°C				
	Humidity	20%-90%RH				
	Tc	80°C				
	Storage Temperature	-25°C~+60°C				
	Life time	> 50000h@Tc=80°C,230VAC				
Surface	Dimension	100X38.2X25(LXWXH)mm				
Standards	EN 61547;EN 61347-1,EN 61347-2-13;IEC 61347-1,IEC 61347-2-13;GB 19510.1,GB 19510.14; GB/T 17743,GB 17625.1;EN 62384;EN IEC 55015,EN IEC 61000-3-2,EN 61000-3-3;IS 15885 (Part 2/Sec13)					
Others	ErP	EU 2019/2020				
	RoHS	RoHS (2011/65/EU) (EU)2015/863				

**Note**

- 1.All parameters not specially mentioned are measured at 230VAC input , full load and 25°C of ambient temperature.
- 2.Ripple & Noise are measured at 20MHz of bandwidth by using a 300mm twisted pair-wire terminated with a 0.1uF & 47 uF parallel capacitor.
- 3.Data are typical values obtained from test samples
- 4.Switch and dimmer are not recommended to connect between this product output and luminaries.
- 5.The series BIS certification includes 350、400、450、500、600、700mA

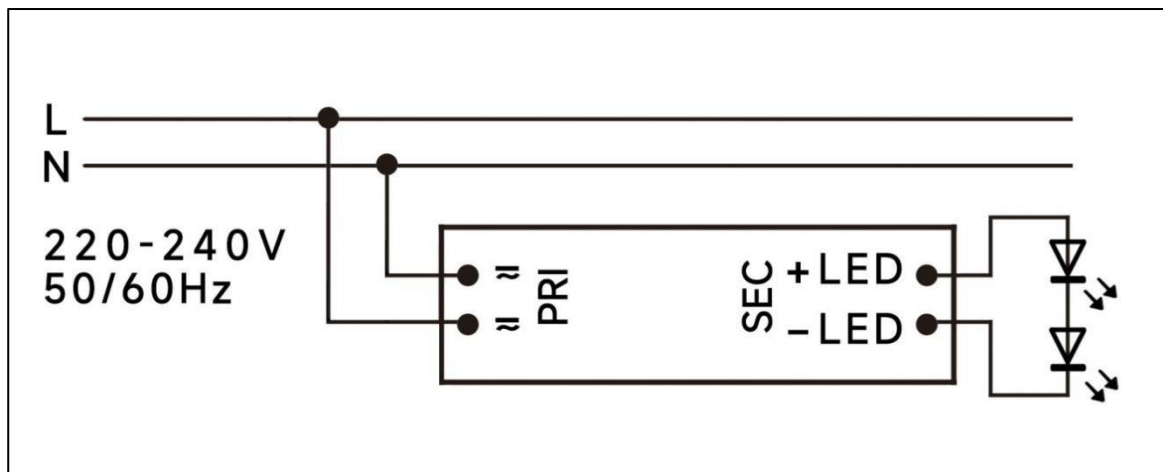
### ◆ Model list

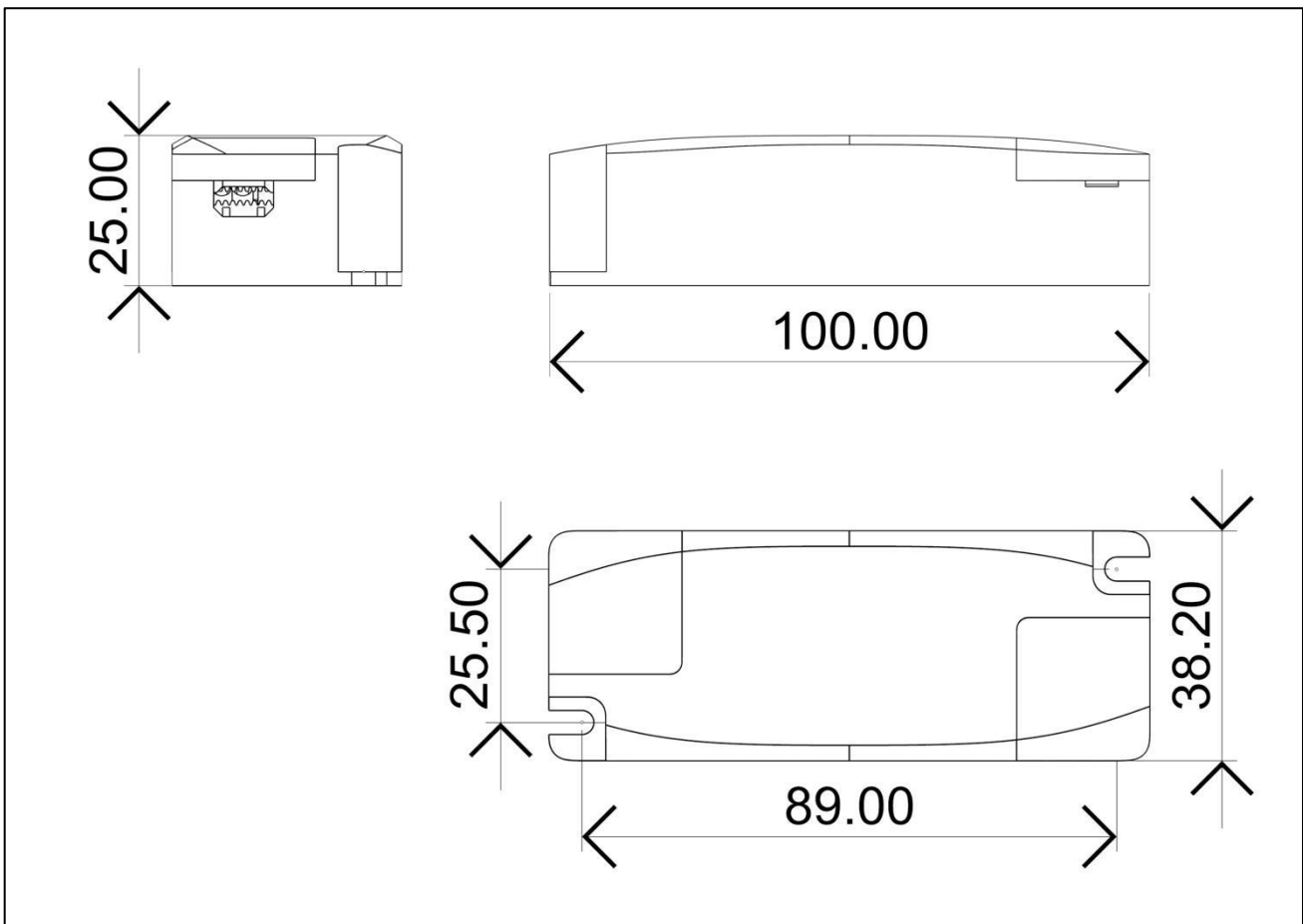
Number	Model number	Input			Output			
		Voltage (VAC)	Current (A)	Frequency (Hz)	Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)
1	*LS-20-350 LI EXC	220-240	0.16	50/60	350	40-60	75	21
2	*LS-20-400 LI EXC				400	24-42	55	16.8
3	*LS-20-450 LI EXC				450	24-42	55	18.9
4	*LS-20-500 LI EXC				500	24-42	55	21
5	LS-20-550 LI EXC				550	24-40	55	22
6	*LS-20-600 LI EXC				600	24-40	55	24
7	*LS-20-700 LI EXC				700	18-30	45	21

### ◆ Circuit Breaker

I <sub>peak</sub>	T <sub>width</sub>	B10	B16	B20	C10	C16	C20
11.9A	134μs	50pcs	80pcs	100pcs	50pcs	80pcs	100pcs

### ◆ Wiring diagram

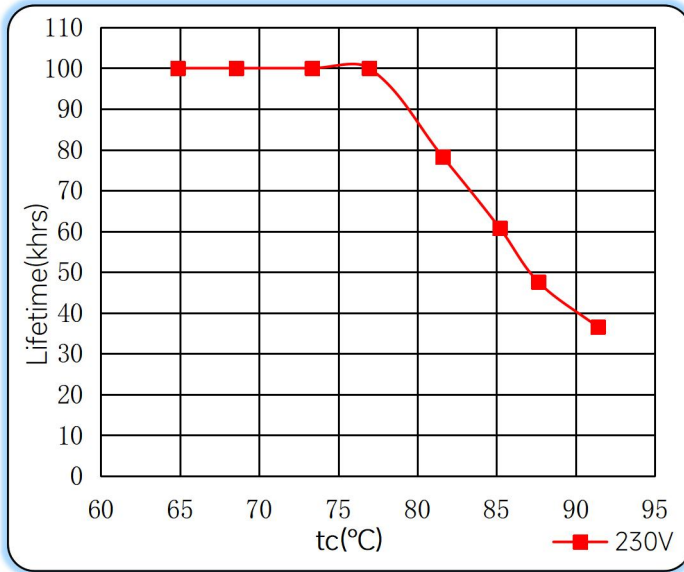


**◆ 2D diagram**

**◆ Wiring & Connections**

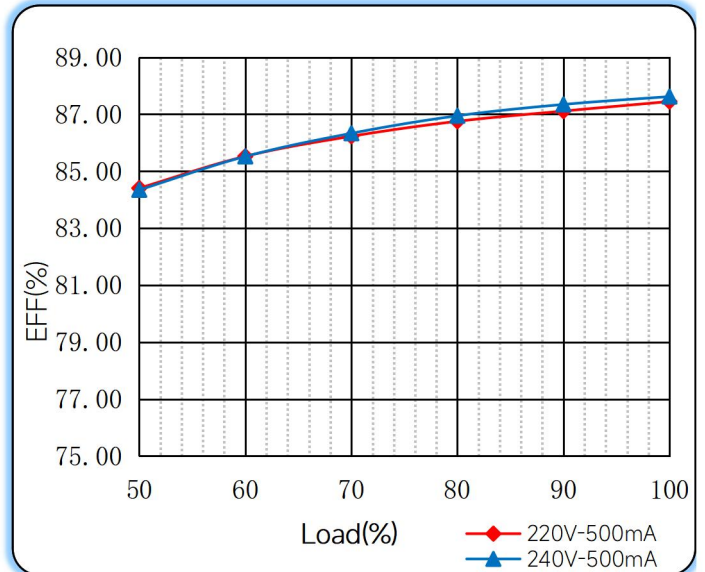
Specification item		Value (Unit )
Input	Input wire cross-section	0.5...1.5 mm <sup>2</sup>
	Input wire gauge.	16...20 AWG
	Input wire strip length	7...9mm
Output	Output wire cross-section	0.5...1.5 mm <sup>2</sup>
	Output wire gauge.	16...20 AWG
	Output wire strip length	7...9mm

**◆ Curve for LS-20-500 LI EXC, I<sub>o</sub>=500mA**

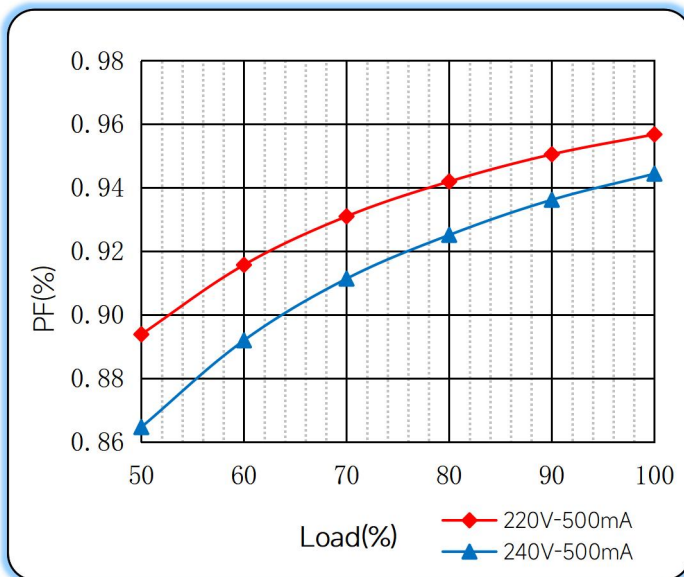
Lifetime vs. Temperature Curve



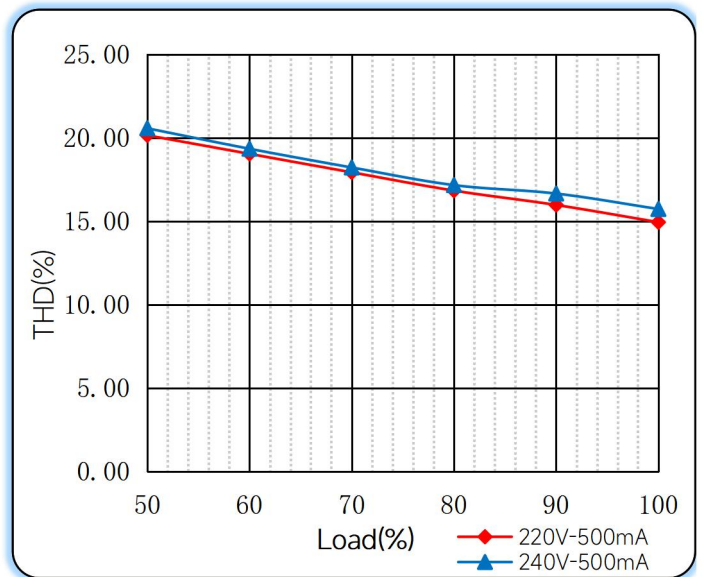
Efficiency vs. Load



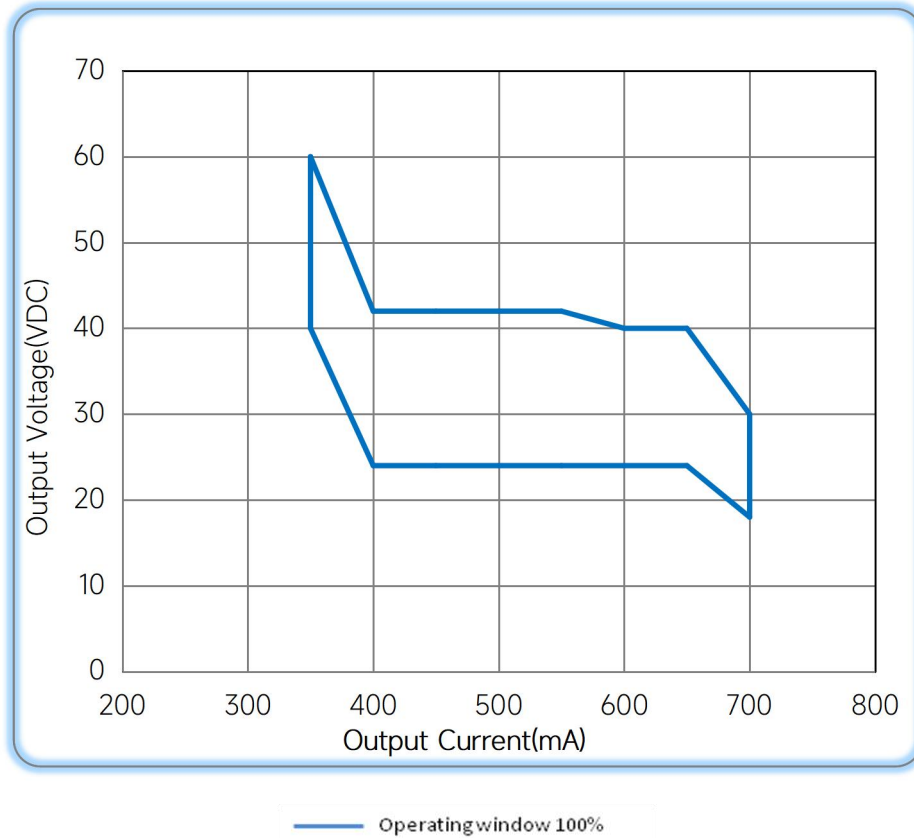
Power Factor Characteristics



THD vs. Load



### ◆ Operating window



### ◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2022/08/08
Model list		Added	B	2022/11/18

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Manual