

20W Constant Current power supply



■ Approve



Features

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

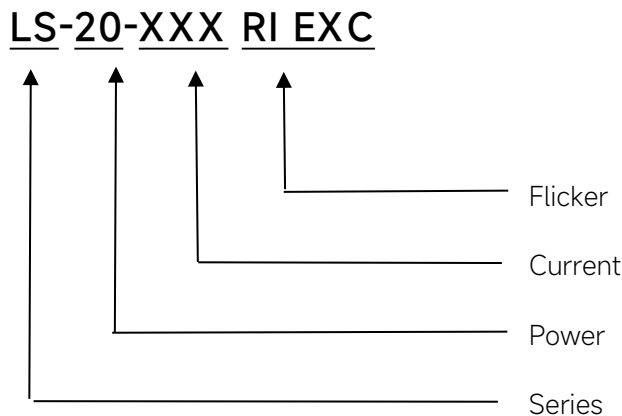
Applications

- LED panel, LED down light
- LED spot light

◆ Description

LS-20-XXX RI EXC is a 20W constant current LED driver that operates from 198-264Vac input with 350mA to 500mA 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



◆ Specification

	Constant Current	350mA	400mA	450mA	500mA	
Output	Voltage Range	40-60	24-42			
	Unload voltage Max.	72	59			
	Current Accuracy	±6%				
	Output HF current ripple(≥1KHz)	±5%				
	Output LF current ripple(≤120Hz)	±70%	±50%			
	SVM	NA				
	P _{st}	NA				
	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	72VDC	59VDC			
Short circuit Protection	YES/Auto Resume					
Environment	Operating Temperature	-20°C~+45°C				
	Humidity	20%-90%RH				
	T _c	80°C				
		85°C@500mA				
	Storage Temperature	-25°C~+60°C				
	Life time	> 50000h@T _c =70°C,230VAC > 50000h@T _c =85°C,230VAC,500mA				
Noise	≤20dB(A)@10cm					
Surface	Dimension	100X38.2X25(LXWXH)mm				
	material	PP				
Standards	Safety	EN61347- 1, EN61347-2- 13;EN62384				
	EMC	EN55015, EN61000-3-2, EN61000-3-3, EN61547;EN61000-4-5				
	ErP	Erp2.0 EU 2019/2020				

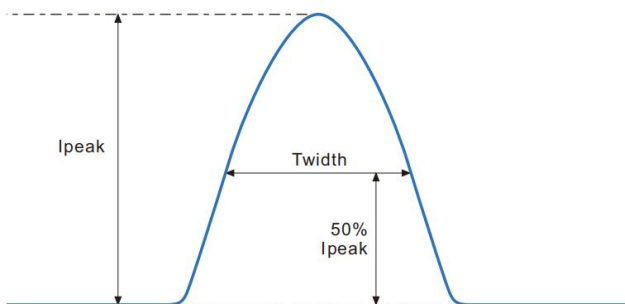
	RoHS	RoHS (2011/65/EU) (EU)2015/863
Note	<p>1.All parameters not specially mentioned are measured at 230VAC input , full load and 25°C of ambient temperature.</p> <p>2.Ripple & Noise are measured at 20MHz of bandwidth by using a 300mm twisted pair-wire terminated with a 0.1uF & 47 uF parallel capacitor.</p> <p>3.Data are typical values obtained from test samples</p> <p>4.Switch and dimmer are not recommended to connect between this product output and luminaries.</p>	

◆ 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 RI EXC	220-240	0.16	50/60	350	40-60	72	21
2	LS-20-400 RI EXC				400	24-42	59	16.8
3	LS-20-450 RI EXC				450	24-42	59	18.9
4	*LS-20-500 RI EXC				500	24-42	59	21

◆ Inrush Current

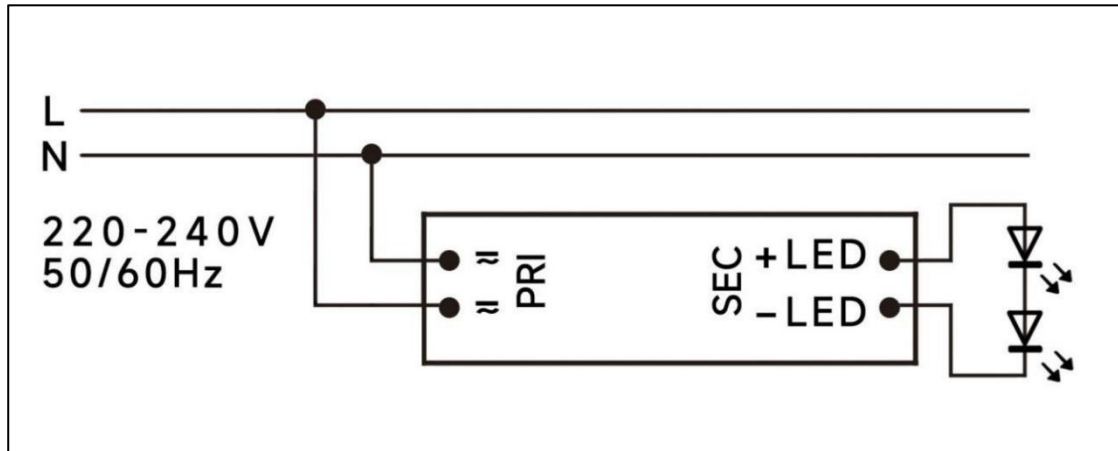
I _{peak}	T _{width}	B10	B16	B20	C10	C16	C20
4.18A	36μs	50pcs	80pcs	100pcs	50pcs	80pcs	100pcs

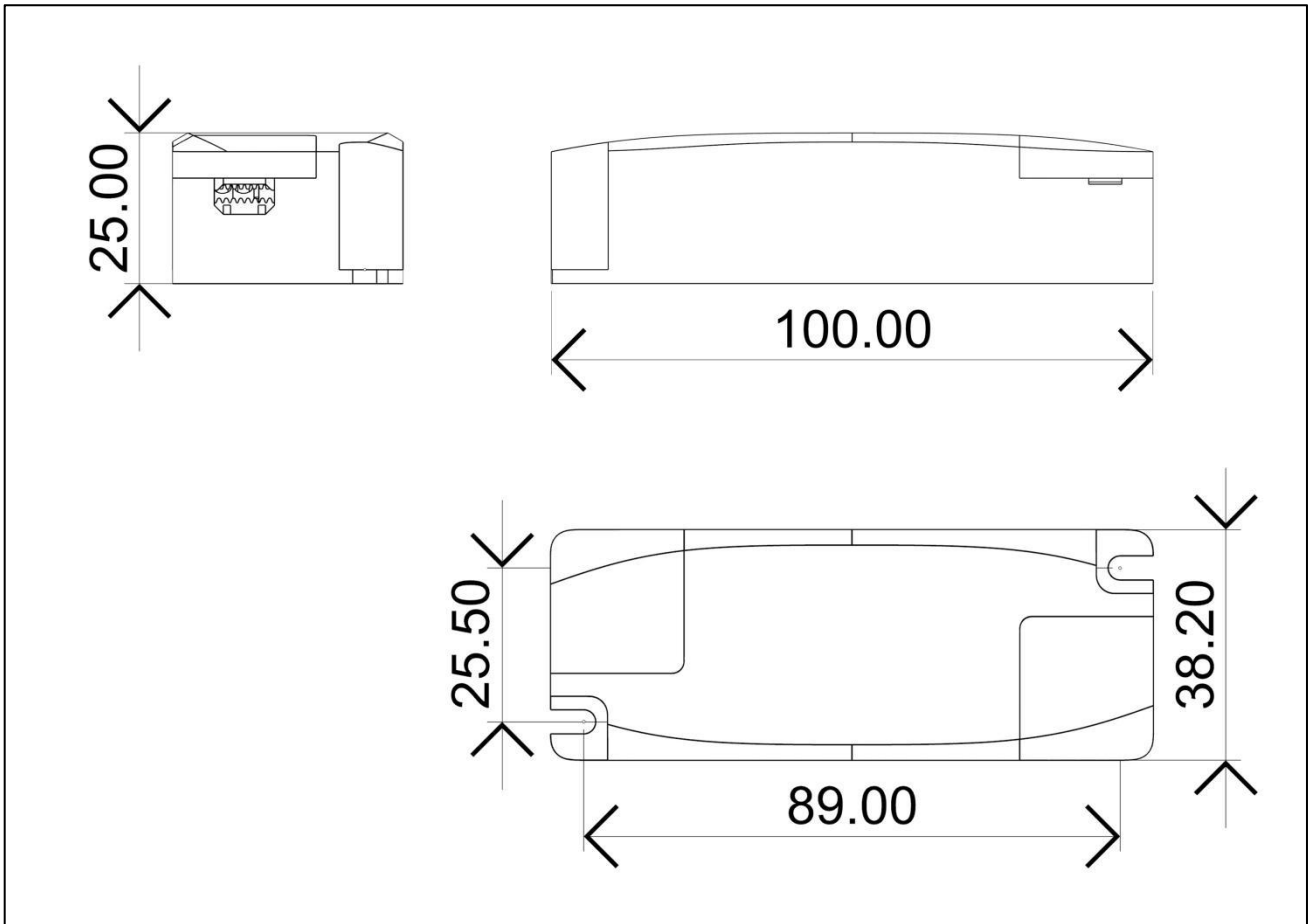


Remarks:

- 1.The number of drives mounted under different MCBs in the table is the maximum value. Please do not exceed this number during installation.
- 2.Different brands and models of miniature circuit breakers, the number of drives mounted will be slightly different.

◆ Wiring diagram



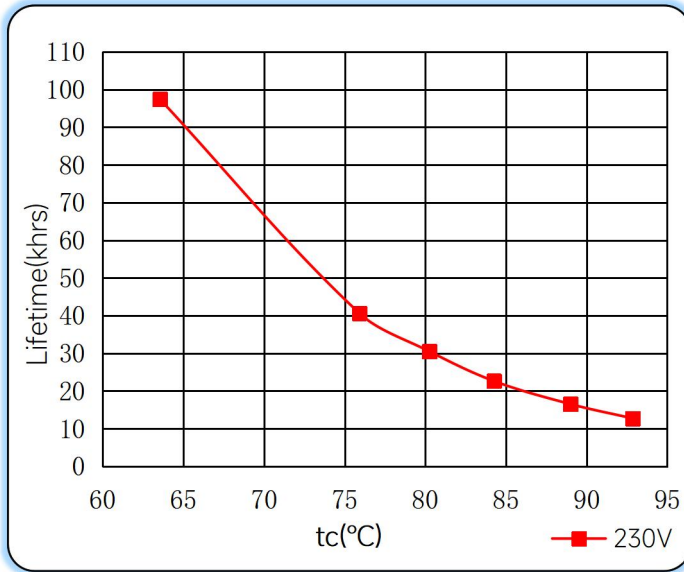
◆ 2D diagram

◆ Wiring & Connections

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

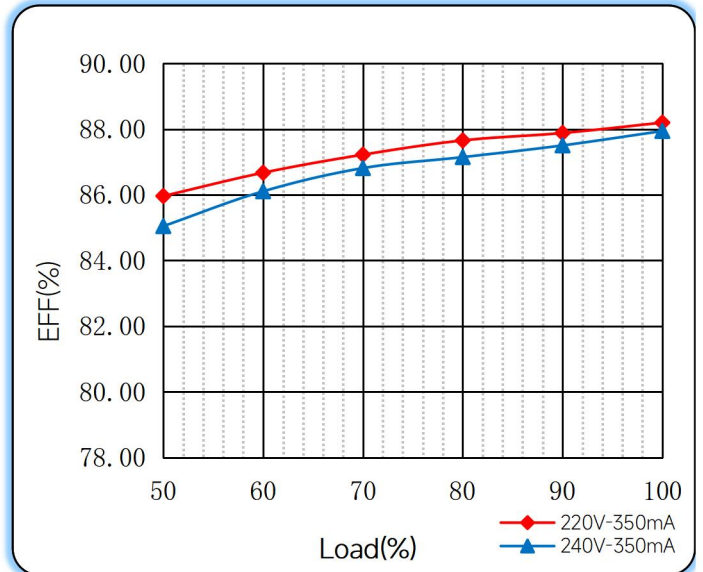
Note: Solid wire is risky to use on an angled terminal. Stranded wire is recommended for this kind of use.

◆ Curve for LS-20-350 RI EXC, I_o=350mA

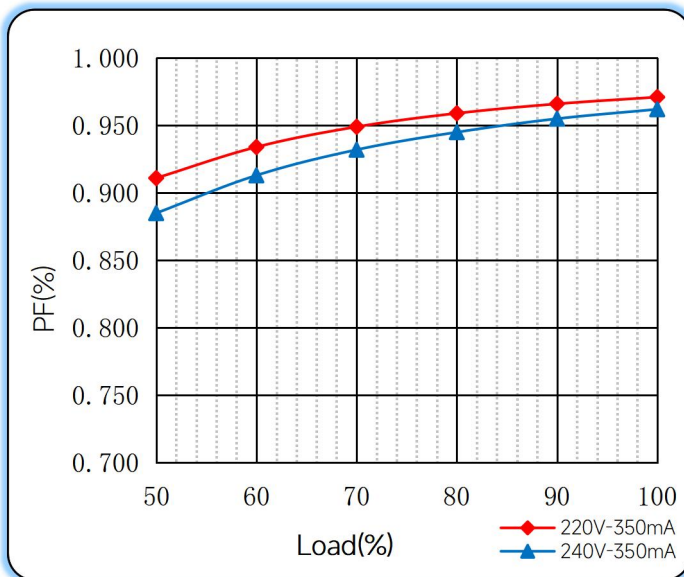
Lifetime vs. Temperature Curve



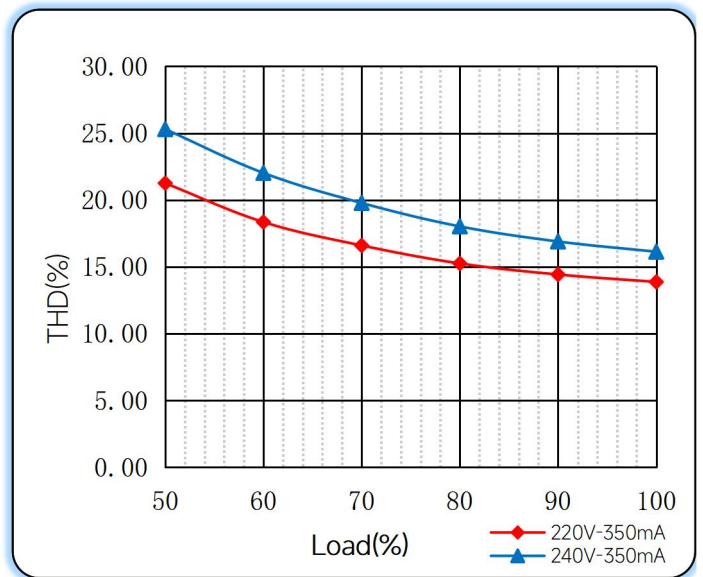
Efficiency vs. Load



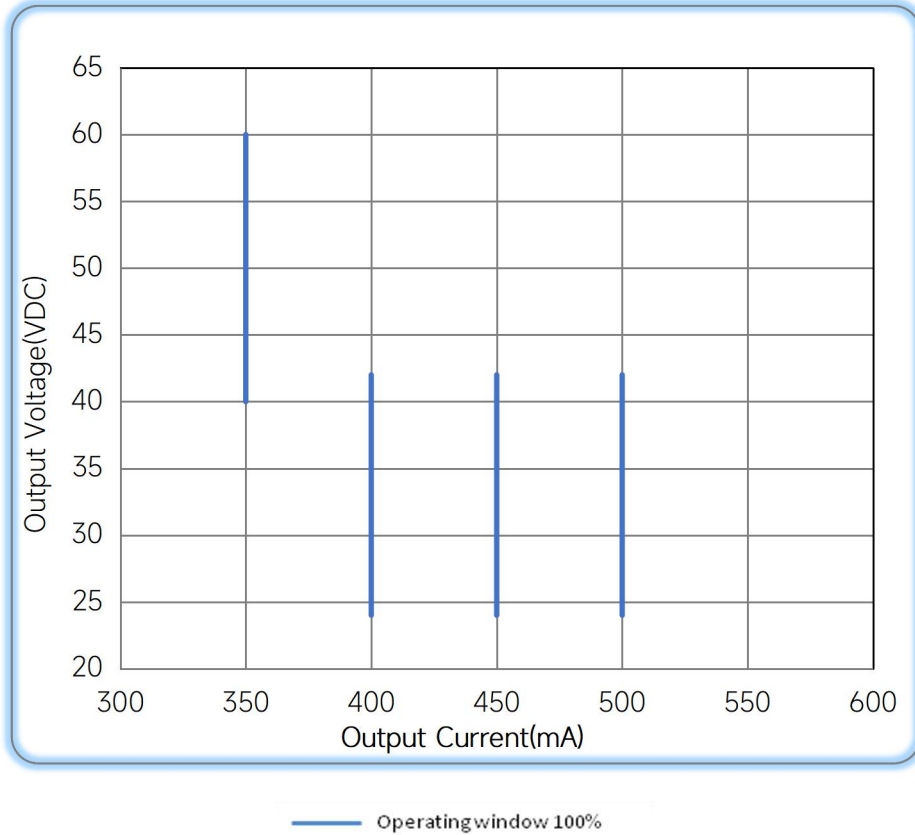
Power Factor Characteristics



THD vs. Load



◆ Operating window



◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2023/08/23
update			B	2023/11/17
Output LF current ripple	±50%@350mA	±70%@350mA	C	2024/01/12

Remark: The final interpretation of the contents of the specification belongs to Eaglerise Electric & Electronic (China) Co., Ltd.

Tel: +86-0757-86256822, +86-0757-86256831

E-mail: sales@eaglerise.com

Website : <https://lighting.eaglerise.com>

