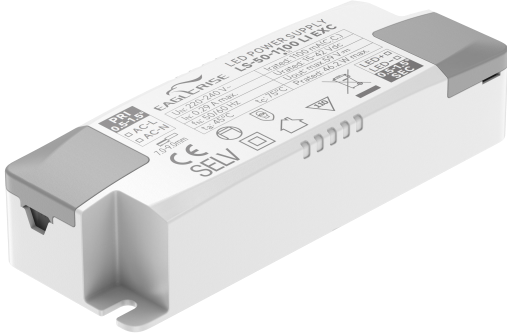


## 50W Constant Current power supply



### Features

- Class II, SELV, independent
- Input Voltage: 220-240VAC
- Protections: SCP/OLP/OVP
- Power Factor: 0.95
- Efficiency: 91%
- 5 years warranty
- IP20

### Applications

- LED panel, LED down light
- LED spot light

Approve

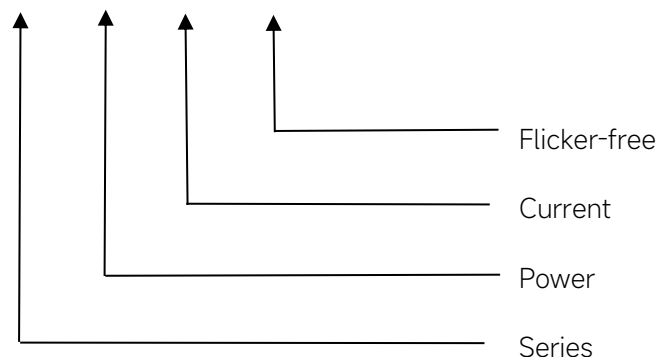


### ◆ Description

LS-50-XXX LI EXC is a 50W constant current LED driver with 500 to 1250mA output current. With its compact dimensions from 116 x 41.2 x 26mm it is easy to integrate in LED Panel, spot and down lights product. To ensure trouble-free operation, protection is provided against output short circuit and over Load.

### ◆ Model code

#### LS-50-XXX LI EXC



## ◆ Specification

Output	Constant Current (mA)	500	600	1100	1150	1200	1250		
	Voltage Range(VDC)	30-84V			15-42V		15-40V		
	Unload voltage Max.	100VDC			59VDC				
	Current Accuracy	±5%							
	Output HF current ripple(≥1KHz)	±3%							
	Output LF current ripple(≤120Hz)	±3%							
	SVM	≤0.4							
	Pst	≤1							
	Efficiency(Typ.)	91%@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	> 0.95							
	Power Factor	0.95@full load,230V							
	Input Current max (mA)	0.29A							
	Start-up time	< 0.5S							
	No Load Power	≤0.5W							
	THD (Typ.)	<10%@full load,230V							
Protection	Over Load Protection	103-130%						YES/Auto Resume	
	Over Voltage Protection	100VDC			59VDC				YES/Auto Resume
	Short circuit Protection	YES/Auto Resume							
capability	Surge capability (L-N)	2KV							
	Surge capability (L/N-Ground)	2KV							
Environment	Operating Temperature	-20°C~+45°C							
	Humidity	20%-90%RH							
	Tc	80°C							
	Storage Temperature	-30°C~+80°C							
	Life time	> 50000h@Tc=80°C							
	Noise	≤20dB(A)@10cm							
Surface	Dimension	116X41.2X26(LXWXH)mm							
	material	PC							
Standards	Safety	GB19510. 1, GB19510. 14;IEC61347- 1, IEC61347-2- 13;EN62384							
	EMC	GB/T17743, GB17625. 1;EN55015, EN61000-3-2, EN61000-3-3, EN61547;EN61000-4-5							
	ErP	Erp2.0 EU 2019/2020							

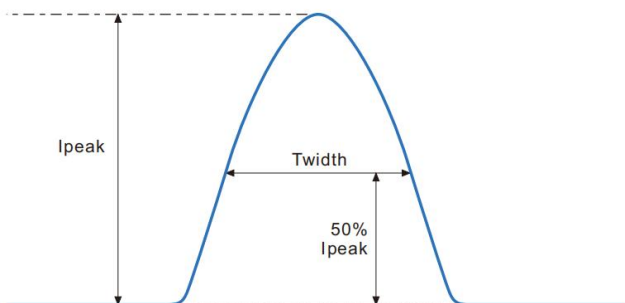
	RoHS	RoHS (2011/65/EU) (EU)2015/863
Note	<p>1.All parameters not specially mentioned are measured at 230VAC input , full load and 25°C of ambient temperature.</p> <p>2.Ripple &amp; Noise are measured at 20MHz of bandwidth by using a 300mm twisted pair-wire terminated with a 0.1uF &amp; 47 uF parallel capacitor.</p> <p>3.All Eaglerise power supply are complied with EMI regulations. Since they are belong to component and will be installed inside system enclosure. When they are integrated into a system, the EMI characteristics of the system must be re-verified again.</p>	

## ◆ Model list

Number	Model number	Output			
		Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)
1	LS-50-500 LI EXC	500	30-84	100	42
2	LS-50-600 LI EXC	600			50.4
3	LS-50-1100 LI EXC	1100	15-42	59	46.2
4	LS-50-1150 LI EXC	1150			48.3
5	LS-50-1200 LI EXC	1200			50.4
6	LS-50-1250 LI EXC	1250	15-40		50

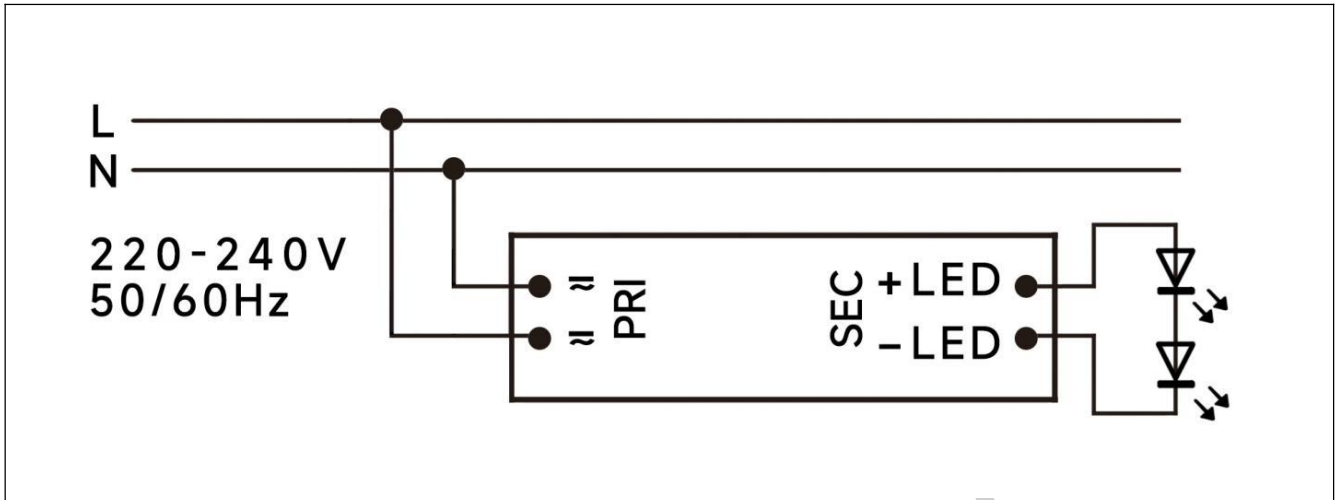
## ◆ Inrush Current

I <sub>peak</sub>	T <sub>width</sub>	B10	B16	B20	C10	C16	C20
33.6A	148μs	16pcs	26pcs	33pcs	27pcs	44pcs	55pcs



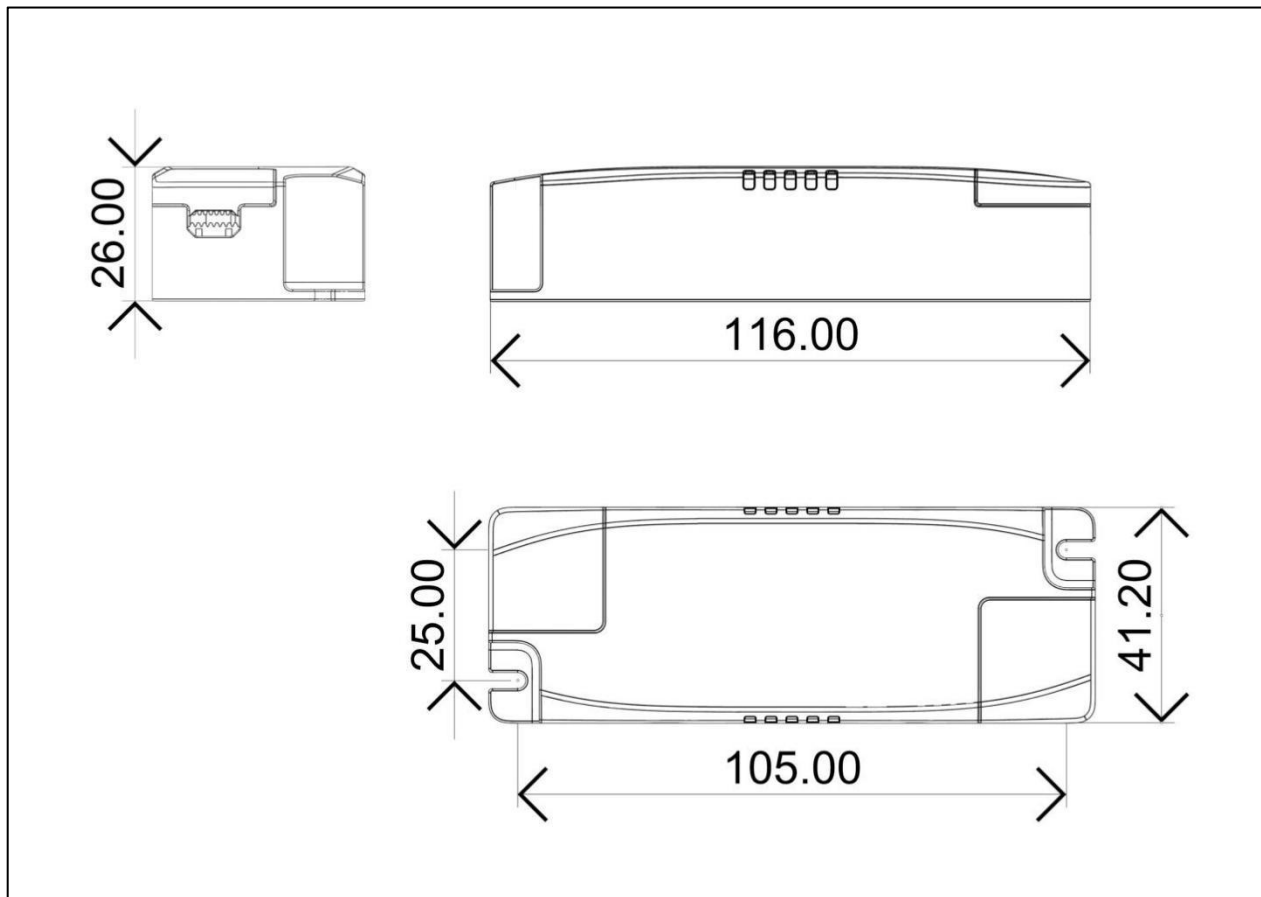
### Remarks:

- 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.

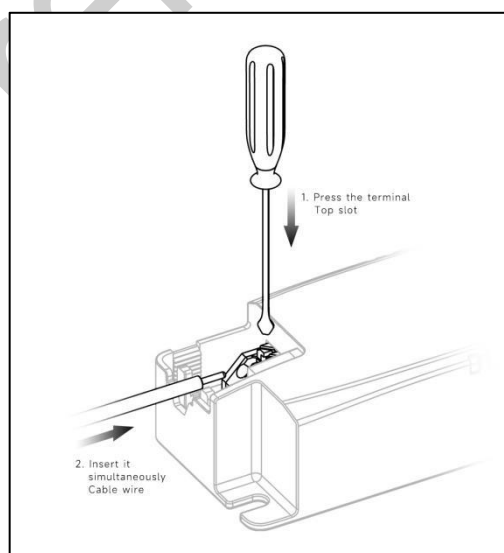
**◆ Wiring diagram**

Preliminary

◆ 2D diagram



Termina



## ◆ Wiring & Connections

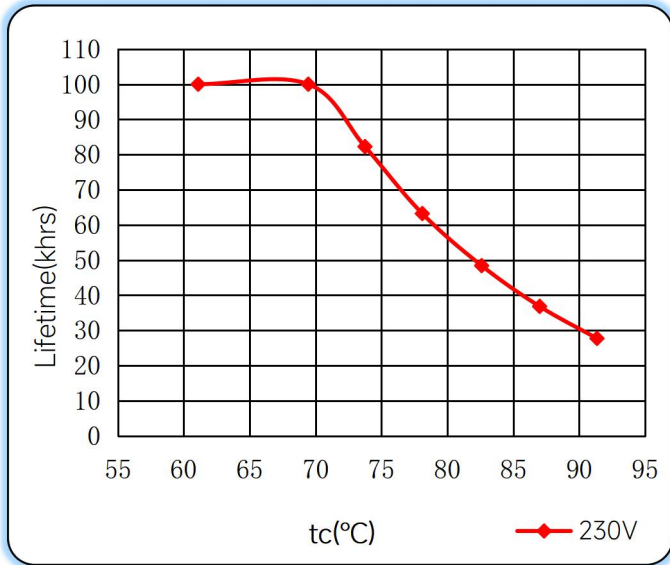
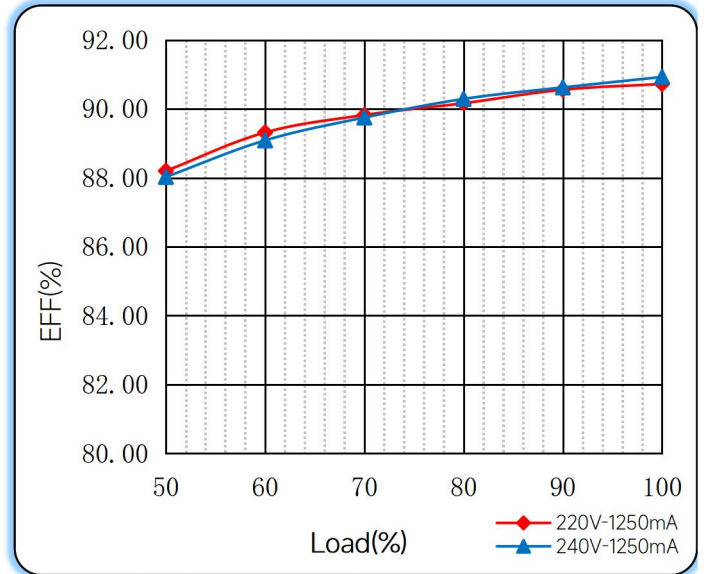
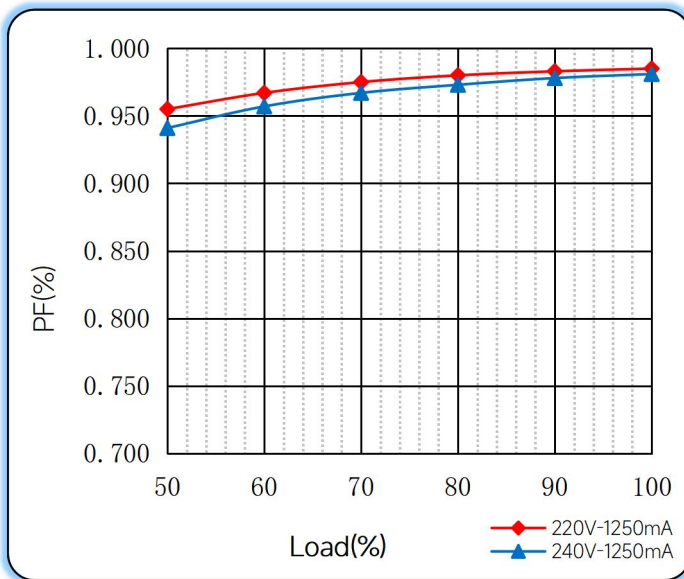
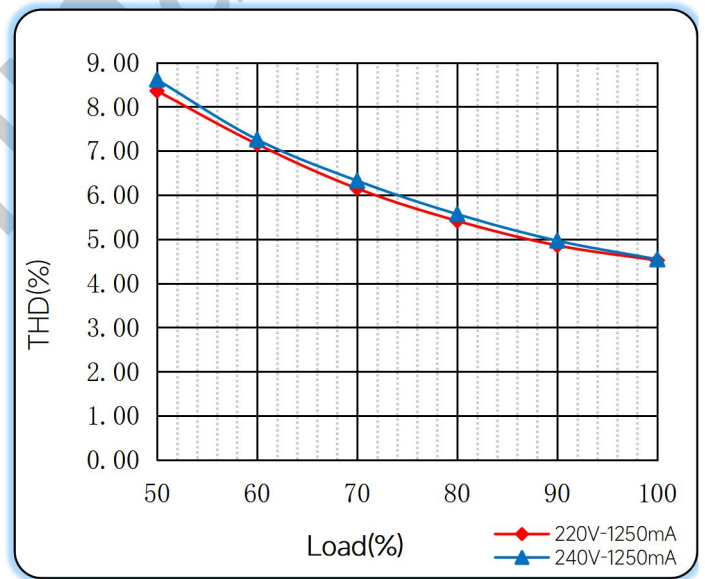
Specification item		Value (Unit )
Input	Input wire cross-section	0.5...1.5 mm <sup>2</sup>
	Input wire gauge.	16...20 AWG
	Input wire strip length	7...9mm
Output	Output wire cross-section	0.5...1.5 mm <sup>2</sup>
	Output wire gauge.	16...20 AWG
	Output wire strip length	7...9mm

## ◆ Recommended wire

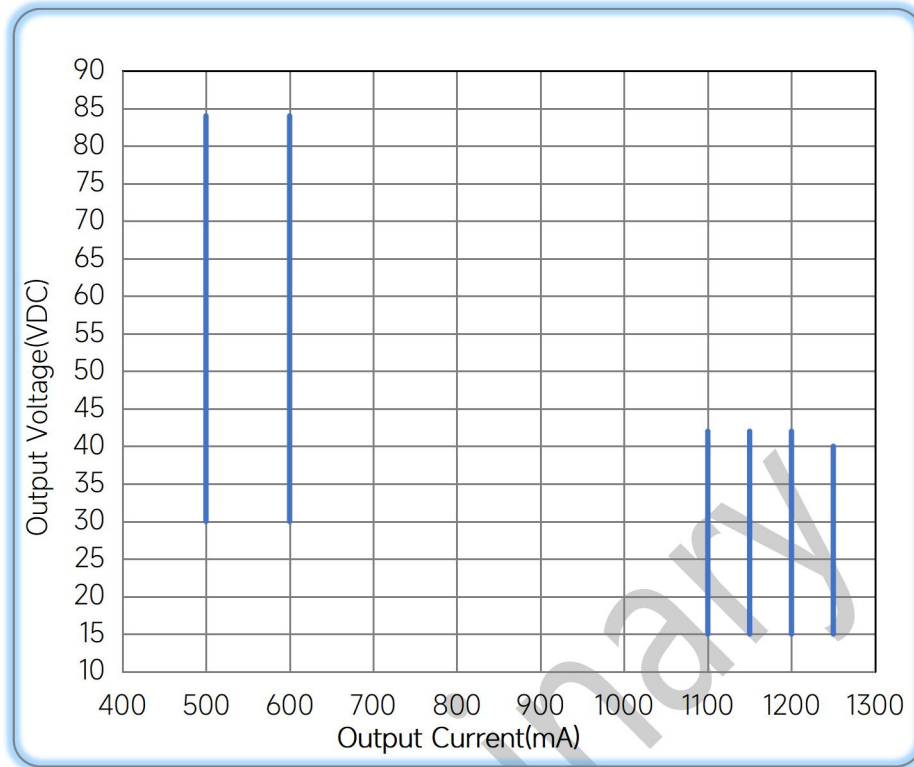
Wire cross-section	Wire type
2*0.5mm <sup>2</sup>	H03VVH2-F 2core
2*0.75mm <sup>2</sup>	H03VVH2-F 2core
1.5mm <sup>2</sup>	CCC 08(RV-90)
16AWG(1.25mm <sup>2</sup> )	UL1015

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

### ◆ Curve for LS-50-1250 LI1 EXC, I<sub>o</sub>=1250mA

**Lifetime vs. Temperature Curve**

**Efficiency vs. Load**

**Power Factor Characteristics**

**THD vs. Load**


◆ **Operating window**



— Operating window 100%

◆ **Revision Updates**

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2023/10/13
PF,Tc		update	B	2023/11/23

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

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EAGLERISE



Manual