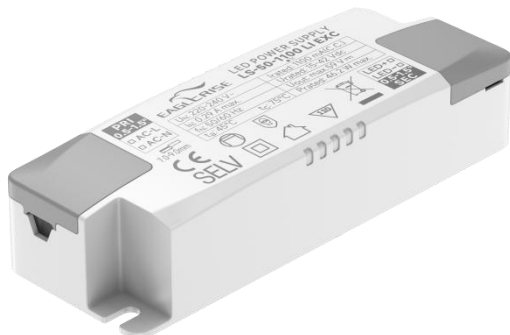


50W Constant Current power supply

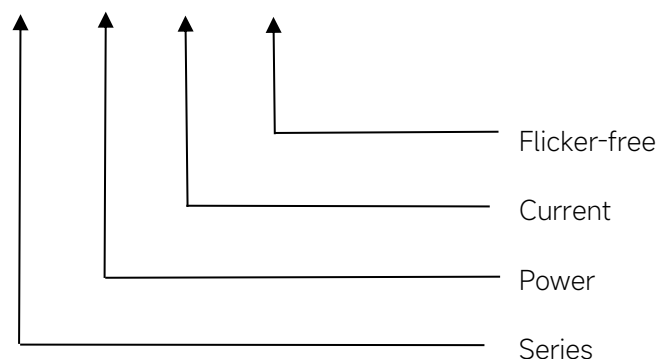


◆ Description

LS-50-XXX LI EXC is a 50W constant current LED driver with 500 to 1250mA output current. With it's 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



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

◆ 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					

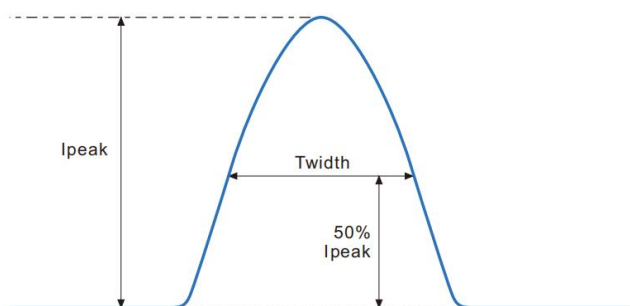
	RoHS	RoHS (2011/65/EU) (EU)2015/863
Note	1.All parameters not specially mentioned are measured at 230VAC input , full load and 25°C of ambient temperature. 2.Ripple & Noise are measured at 20MHz of bandwidth by using a 300mm twisted pair-wire terminated with a 0.1uF & 47 uF parallel capacitor. 3.All 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.	

◆ 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

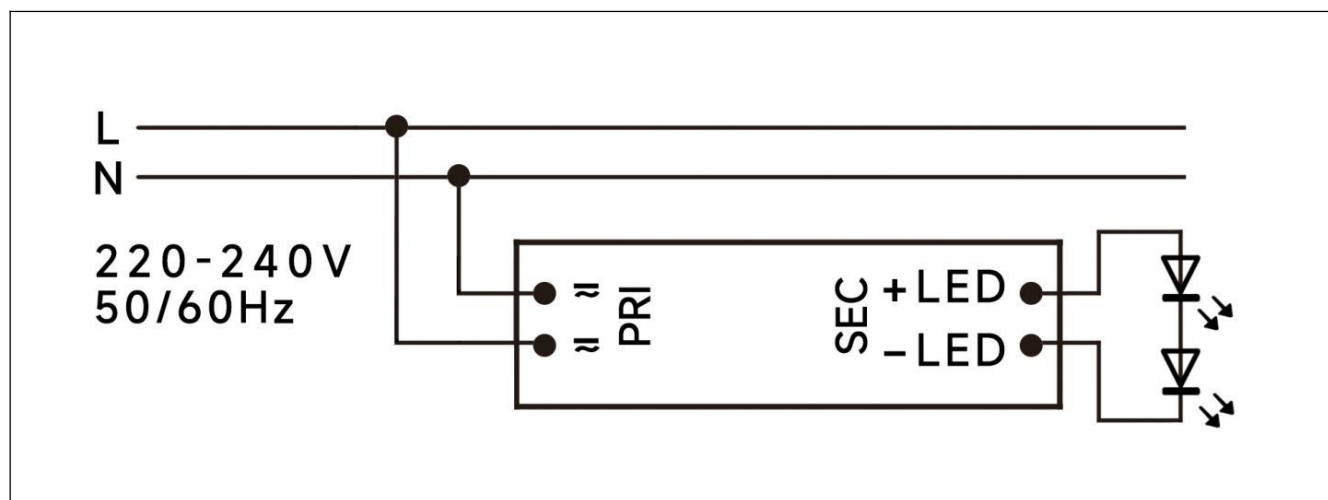
I _{peak}	T _{width}	B10	B16	B20	C10	C16	C20
33.6A	148μs	16pcs	26pcs	33pcs	27pcs	44pcs	55pcs



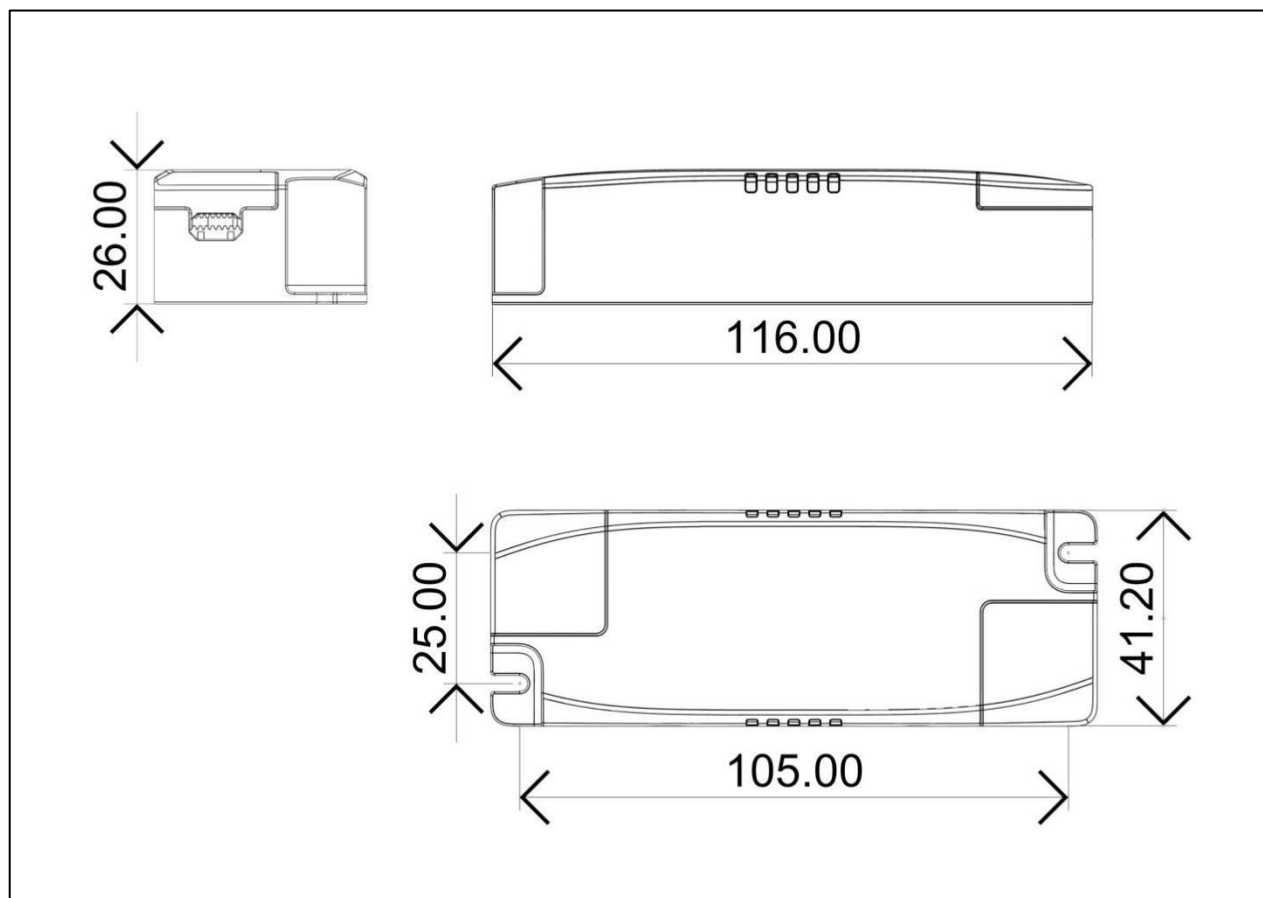
Remarks:

- 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.

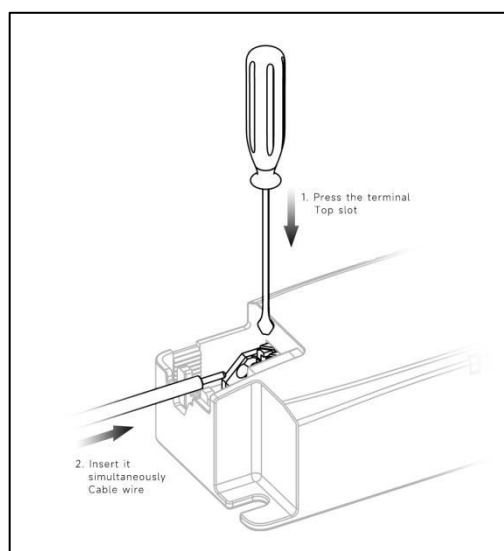
◆ Wiring diagram



◆ 2D diagram



Terminals



◆ 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

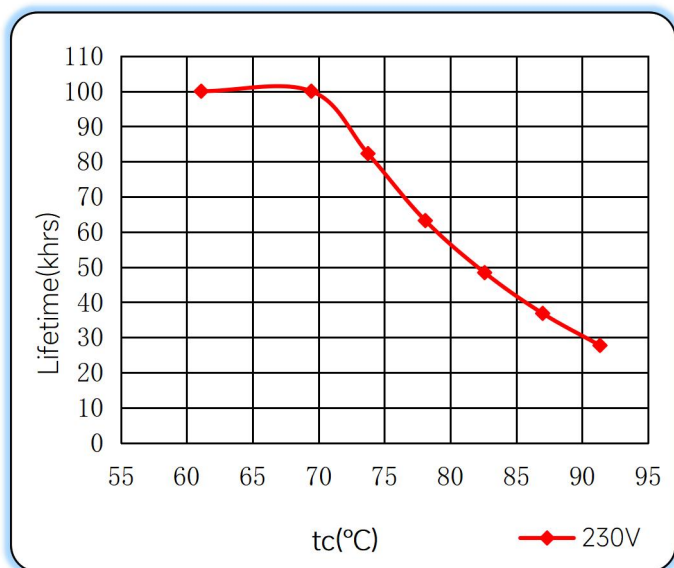
◆ Recommended wire

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

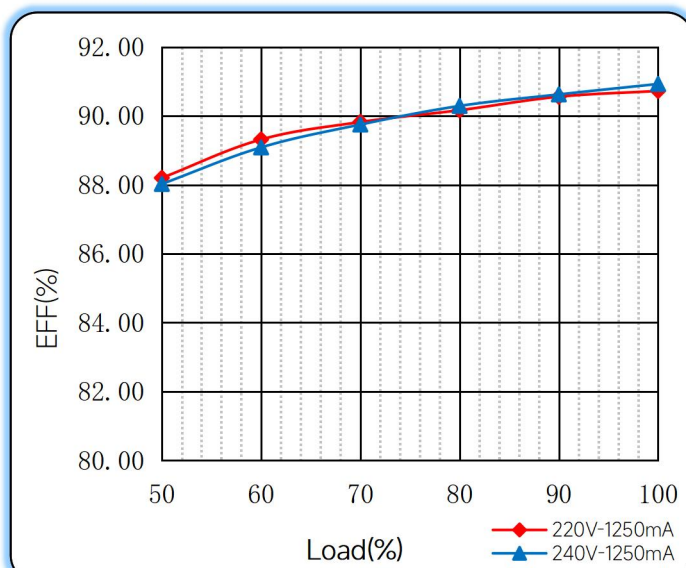
Note: Solid wire is risky to use on an angled terminal. Stranded wire is recommended for this kind of use.

◆ Curve for LS-50-1250 LI EXC, $I_o=1250\text{mA}$

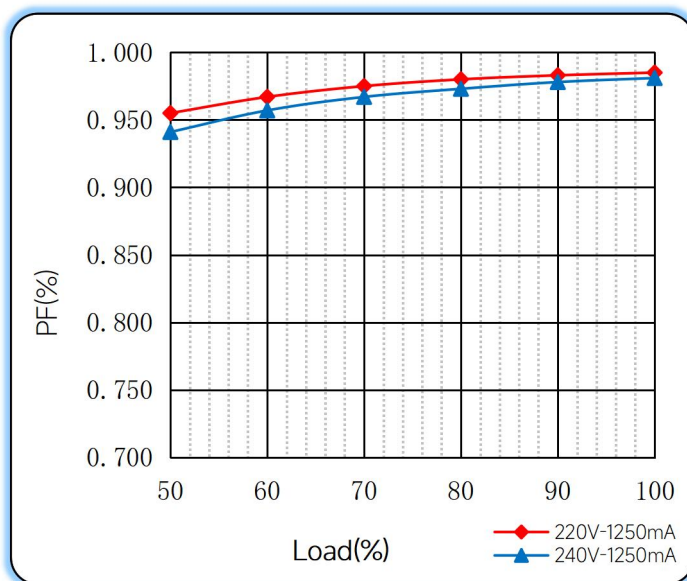
Lifetime vs. Temperature Curve



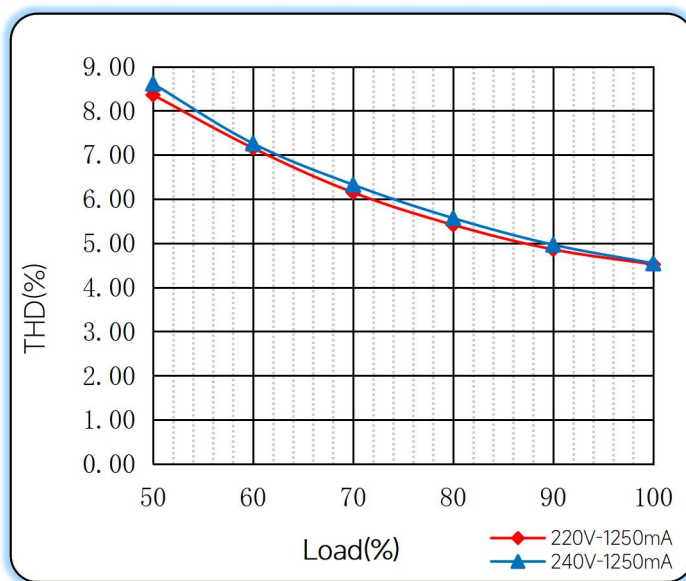
Efficiency vs. Load



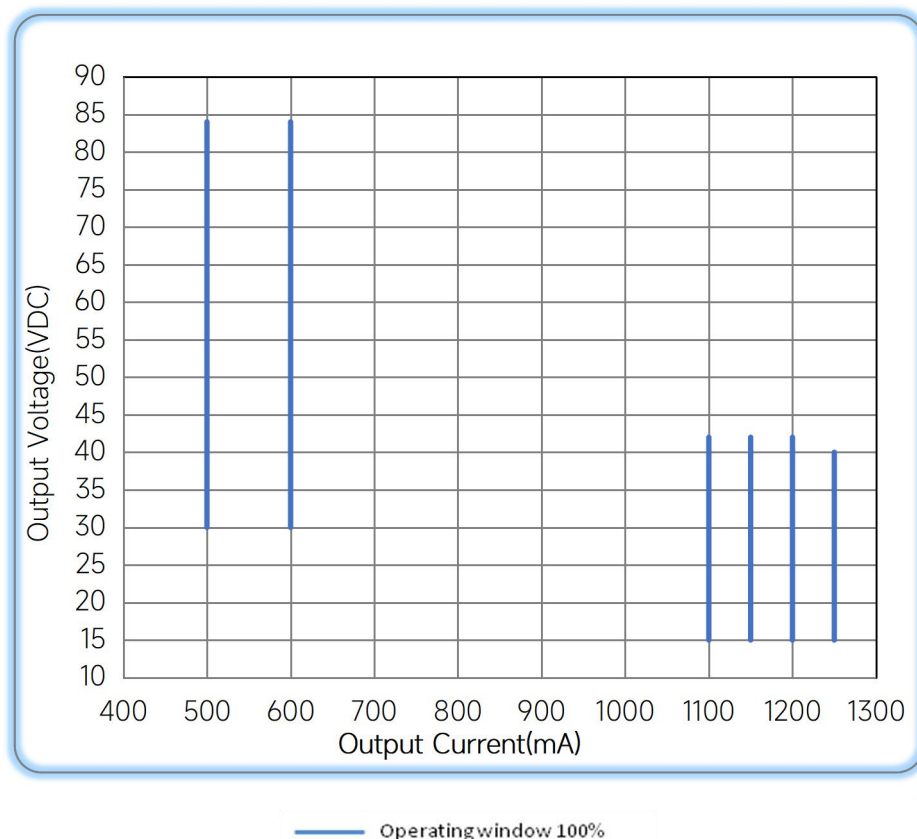
Power Factor Characteristics



THD vs. Load



◆ Operating window



◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2023/10/13
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.

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

E-mail: sales@eaglerise.com

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



EAGLERISE



Manual