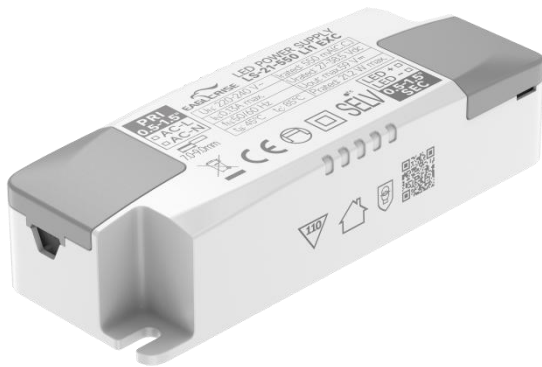


21W Constant Current power supply



■ Approve



Features

- For luminaires of protection Class II, SELV, independent
- Input Voltage 220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor ≥ 0.95
- Efficiency: $\geq 85\%$
- 5 years warranty

Applications

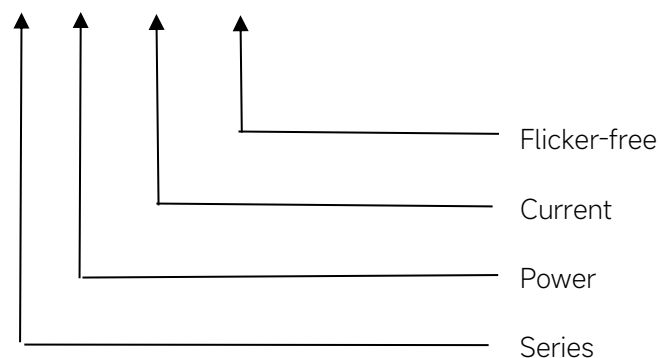
- LED panel, LED down light
- LED spot light

◆ Description

LS-21-XXX LI1 EXC is a 21W constant current LED driver that operates from 198-264Vac input with 400 to 550mA output current. With it's compact dimensions from 102 x 38.2 x 25mm it is easy to integrate in LED Panel, spot, down lights. To ensure trouble-free operation, protection is provided against output short circuit and over Load.

◆ Model code

LS-21-XXX LI1 EXC



◆ Specification

	Constant Current (mA)	400	450	500	550
Output	Voltage Range(VDC)	27-42			27-38.5
	Unload voltage Max.(VDC))	59V			
	Current Accuracy	±5%			
	Output HF current ripple(≥1KHz)	±5%			
	Output LF current ripple(≤120Hz)	±3%			
	SVM	≤0.4			
	P _{st}	≤1			
	Efficiency(Typ.)	85%	86%		
	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(Typ.)		≥0.95			
Power Factor		≥0.95			
Input Current max		0.1A	0.11A	0.12A	0.13A
Start-up time		< 0.5S			
No Load Power		≤0.5W			
THD (Typ.)		< 10%			
Protection	Over Load Protection	103-130% YES/Auto Resume			
	Over Voltage Protection	59VDC YES/Auto Resume			
	Short circuit Protection	YES/Auto Resume			
capability	Surge capability (L-N)	1KV			
	Surge capability (L/N-Ground)	NA			
Environment	Operating Temperature	-20°C~+45°C			
	Humidity	10%-90%RH			
	Tc	85°C			
	Storage Temperature	-25°C~+60°C			
	Life time	> 50000h@Tc=75°C			
Surface	Noise	≤20dB(A)@10cm			
	Dimension	102x38.2x25mm			
Standards	material	PC			
	Safety	GB19510. 1, GB19510. 14;IEC61347- 1, IEC61347-2- 13;EN61347- 1, EN61347-2-13;EN62384			
	EMC	GB/T17743, GB17625. 1;EN55015, EN61000-3-2, EN61000-3-3, EN61547;EN61000-4-5;EN61000-4-2,3,4,5,6,8,11, EN61547			

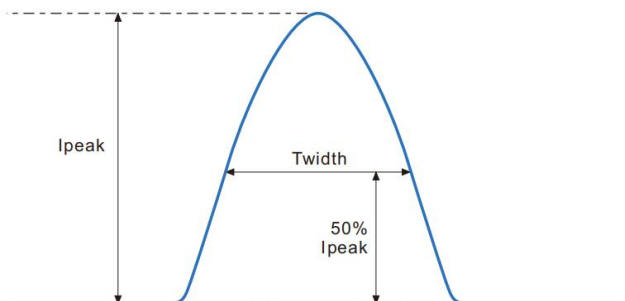
	Energy Efficiency	Erp2.0 EU 2019/2020
	RoHS	RoHS (2011/65/EU) (EU)2015/863
Note	<p>1.All parameters not specially mentioned are measured at 230VAC input , full load and 25°C of ambient temperature.</p> <p>2.Ripple & Noise are measured at 20MHz of bandwidth by using a 300mm twisted pair-wire terminated with a 0.1uF & 47 uF parallel capacitor.</p> <p>3.Switch and dimmer are not recommended to connect between this product output and luminaries.</p> <p>4.The over-temperature protection of the product is provided by the IC.</p> <p>5.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	Input		Output		
		Current (A)	Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)
1	LS-21-400 LI1 EXC	0.1	400	27-42	59	16.8
2	LS-21-450 LI1 EXC	0.11	450			18.9
3	LS-21-500 LI1 EXC	0.12	500			21
4	LS-21-550 LI1 EXC	0.13	550	27-38.5		21.2

◆ Inrush Current

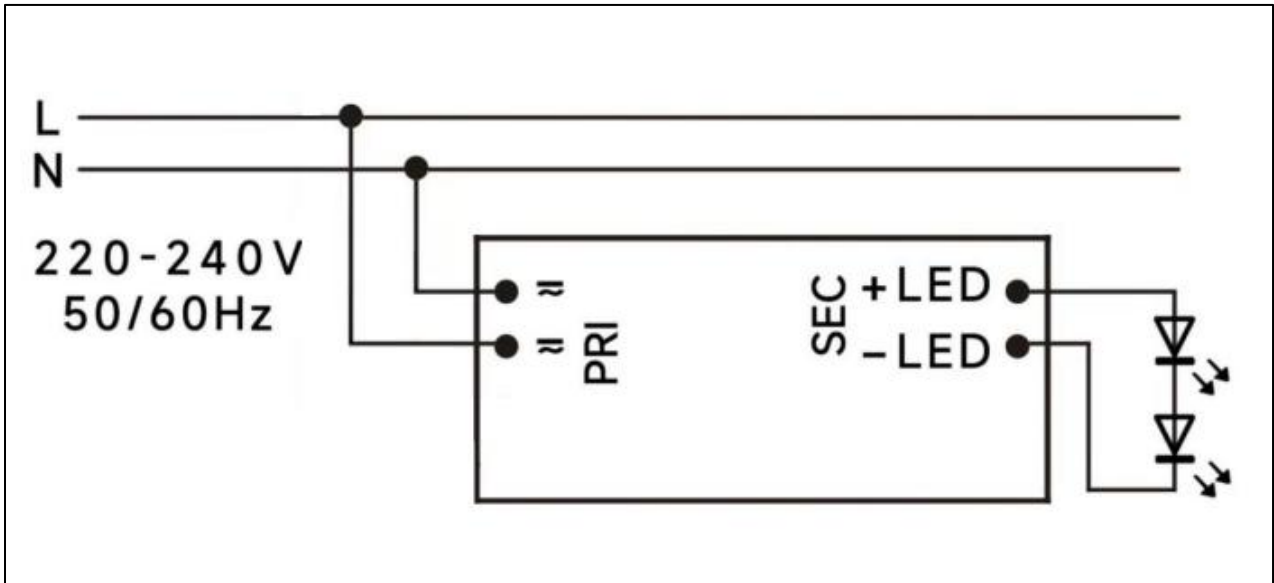
I ^{peak}	T _{width}	B10	B16	B20	C10	C16	C20
15A	110μs	51pcs	82pcs	102pcs	61pcs	98pcs	123pcs



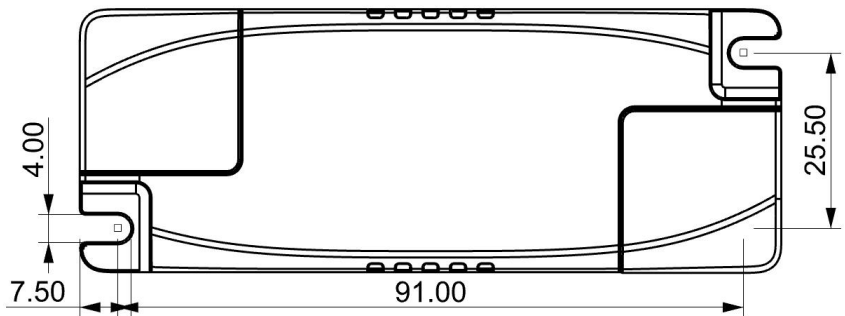
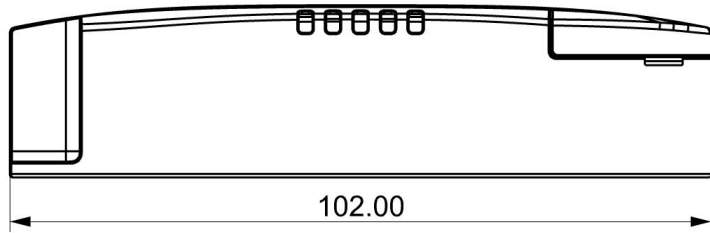
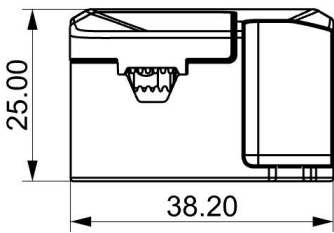
Remarks:

- 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

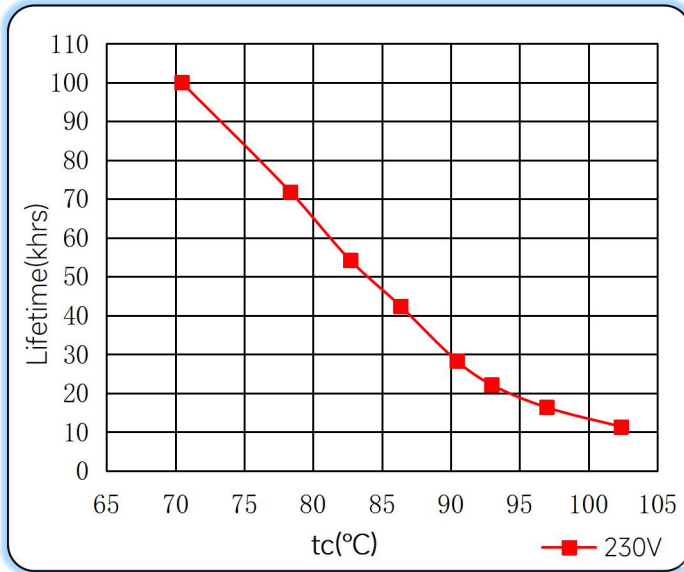
◆ Recommended wire

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

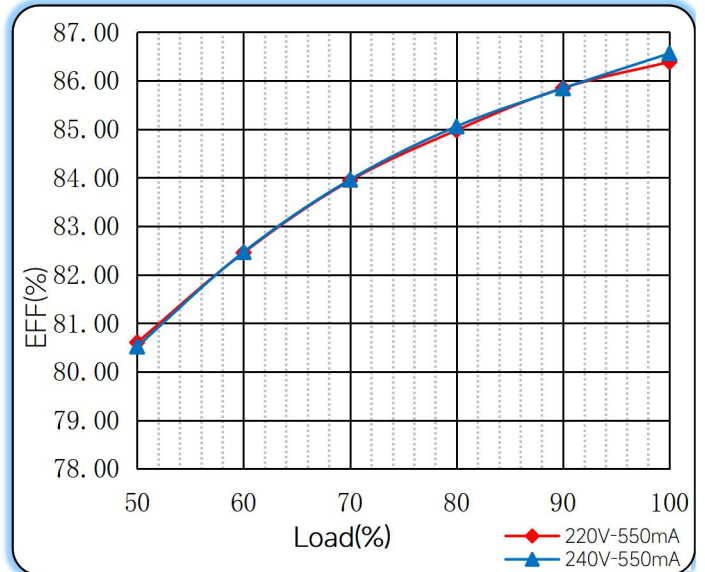
Note:Solid wire is risky to use on an angled terminal.Stranded wire is recommended for this kind of use.

◆ **Curve for LS-21-XXX LI1 EXC, I_o=550mA**

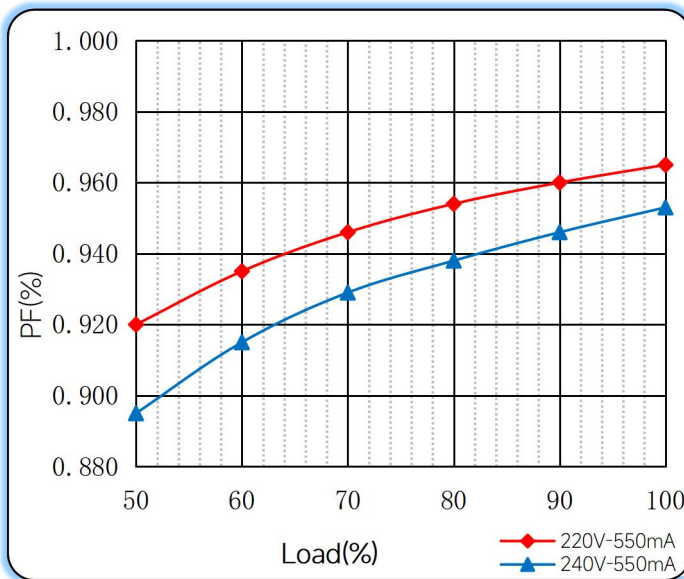
Lifetime vs. Temperature Curve



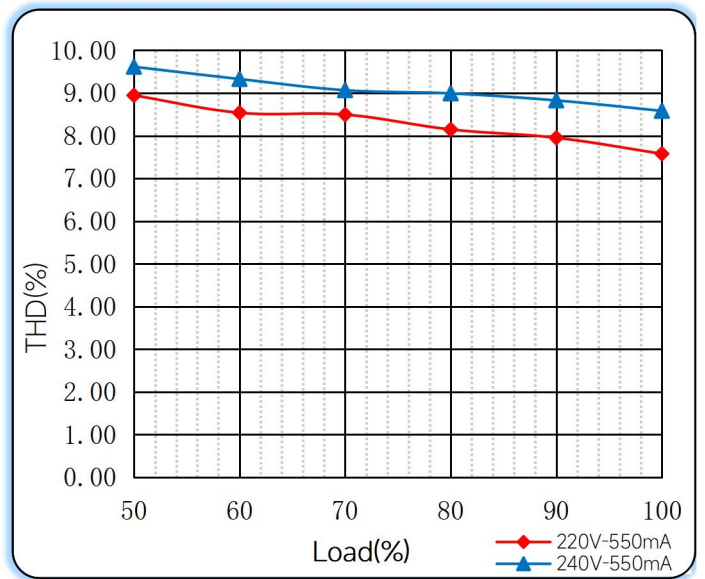
Efficiency vs. Load



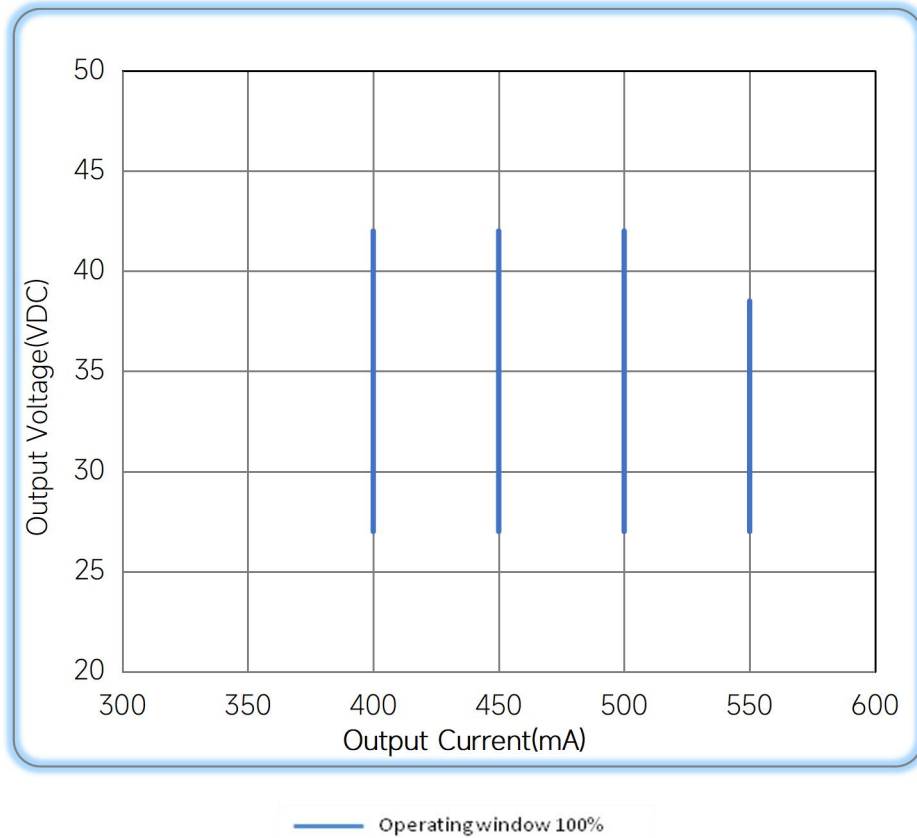
Power Factor Characteristics



THD vs. Load



◆ Operating window



◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2024/01/09
Tc	80°C	85°C	B	2024/08/27

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

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EAGLERISE



Manual