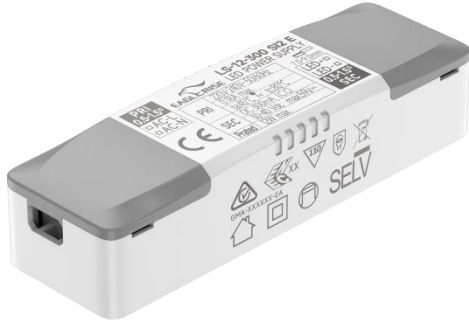


12W Constant Current power supply



■ Approve



Features

- Class II, SELV, Independent
- Input Voltage: 220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor: 0.6C
- Efficiency: $\geq 82\%$
- 5 years warranty
- IP20

Applications

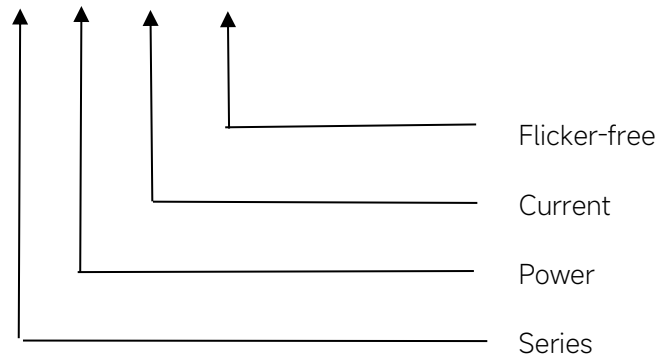
- LED panel, LED down light
LED spot light

◆ Description

LS-12-XXX SI2 E is a 12W constant current LED driver with 250 and 300mA output current. With it's compact dimensions from 92 x 28 x 21 mm. It is easy to integrate in LED panel, LED down light, LED spot light products. To ensure trouble-free operation, protection is provided against output short circuit and over Load.

◆ Model code

LS-12-XXX SI2 E



◆ Specification

	Constant Current	250mA	280mA	300mA
Output	Voltage Range	30-40V		
	Unload voltage Max.	59VDC		
	Current Accuracy	±5%		
	Output HF current ripple(≥1KHz)	±5%		
	Output LF current ripple(≤120Hz)	±5%		
	SVM	≤0.4		
	P _{st}	≤1		
	Efficiency(Typ.)	≥82%@Full load,230V		
	Input	Rated input voltage	220-240VAC	
Range of input voltage		198-264VAC		
Frequency(Hz)		50/60 Hz		
Displacement factor		≥0.7		
Power Factor		0.6C@Full load,230V		
Input Current max		150mA	160mA	180mA
Start-up time		< 0.5S		
No Load Power		≤0.5W		
Protection	Over Load Protection	103-130% YES/Auto Resume		
	Over Voltage Protection	59VDC YES/Auto Resume		
	Short circuit Protection	YES/Auto Resume		
	Over Temperature 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	> 50,000h@Tc=80°C		
	Noise	≤20dB(A)@10cm		
Surface	Dimension	92X28X21 (LXWXH)mm		
	material	PP		
statutory	Safety Standards	GB19510. 1, GB19510. 14;IEC61347- 1, IEC61347-2- 13;EN61347- 1, EN61347-2- 13;AS/NZS 61347- 1, AS/NZS 61347-2- 13;EN62384		
	EMC	GB/T17743, GB17625. 1;EN55015, EN61000-3-2, EN61000-3-3, EN61547;EN55015, EN61000-3-2, EN61000-3-3, EN61547,EN 62493;EN61000-4-5		
	Energy Efficiency	Erp2.0 EU 2019/2020		

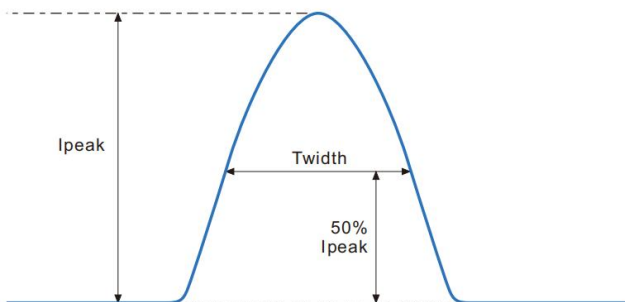
	RoHS	RoHS (2011/65/EU) (EU)2015/863
Note	<p>1.All parameters not specially mentioned are measured at 230VAC input , full load and 25°C of ambient temperature.</p> <p>2.Ripple & Noise are measured at 20MHz of bandwidth by using a 300mm twisted pair-wire terminated with a 0.1uF & 47 uF parallel capacitor.</p> <p>3.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	Output			
		Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)
1	*LS-12-250 SI2 E	250	30-40	59	10
2	*LS-12-280 SI2 E	280			11.2
3	*LS-12-300 SI2 E	300			12

◆ Inrush Current

I ^{peak}	T _{width}	B10	B16	B20	C10	C16	C20
8.44A	80μs	26pcs	42pcs	53pcs	26pcs	42pcs	53pcs

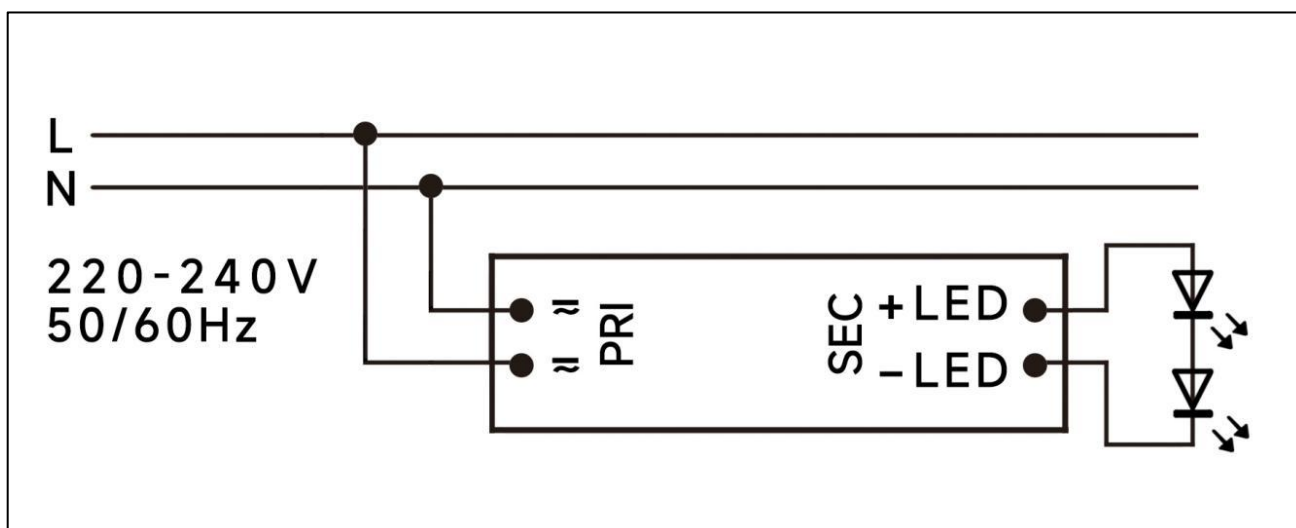


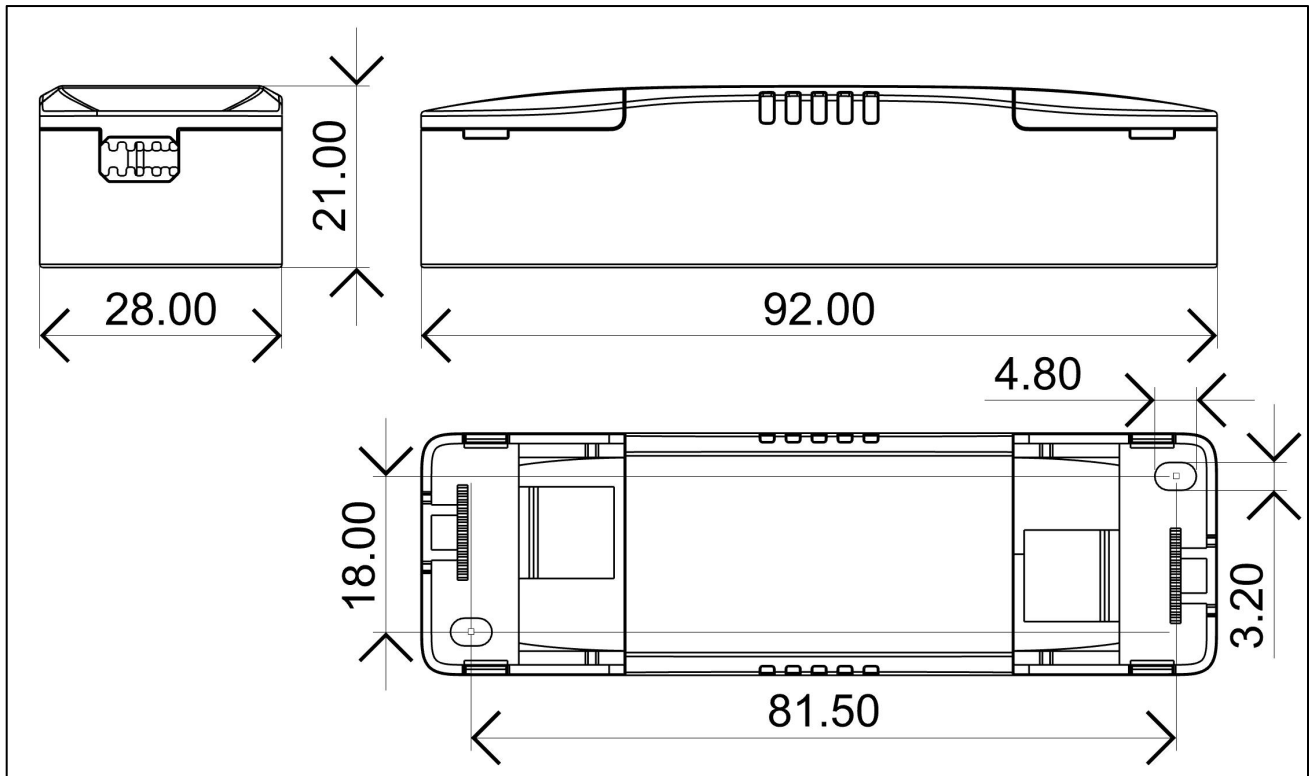
Remarks:

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



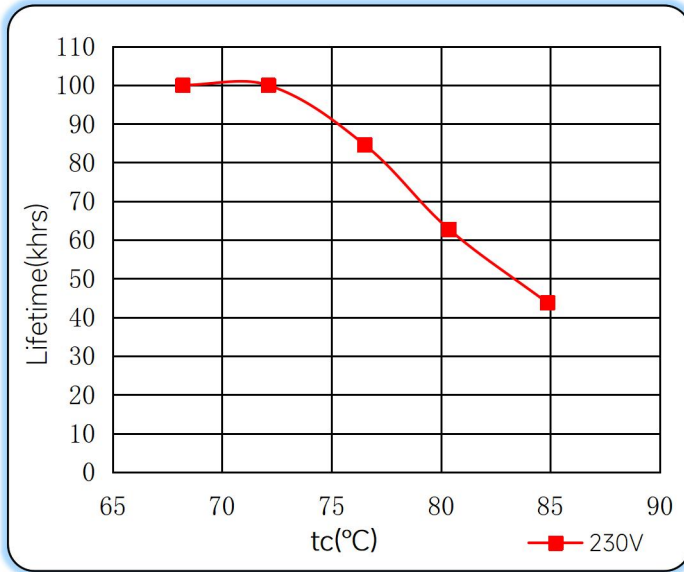
◆ 2D diagram

◆ 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

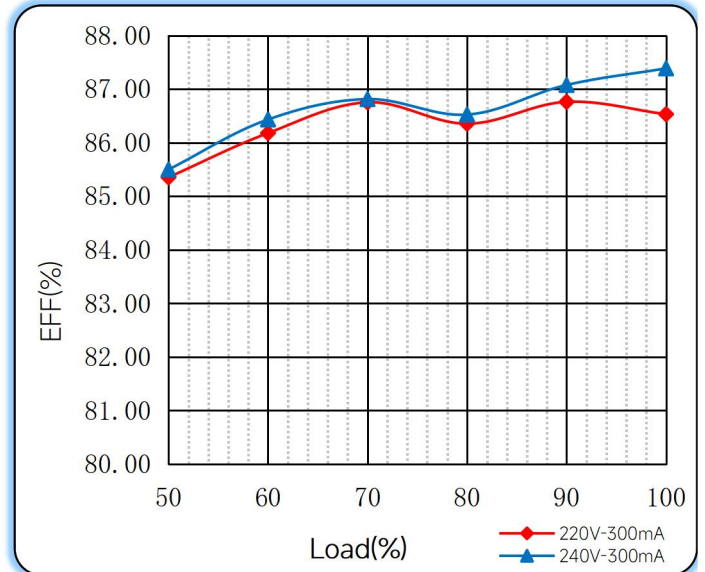
Note:Single-strand wire is risky to use on an angled terminal mounted on single-sided PCB.Multi-strand wire is recommended for this kind of use.

◆ Curve for LS-12-300 SI2 E, $I_o=300mA$

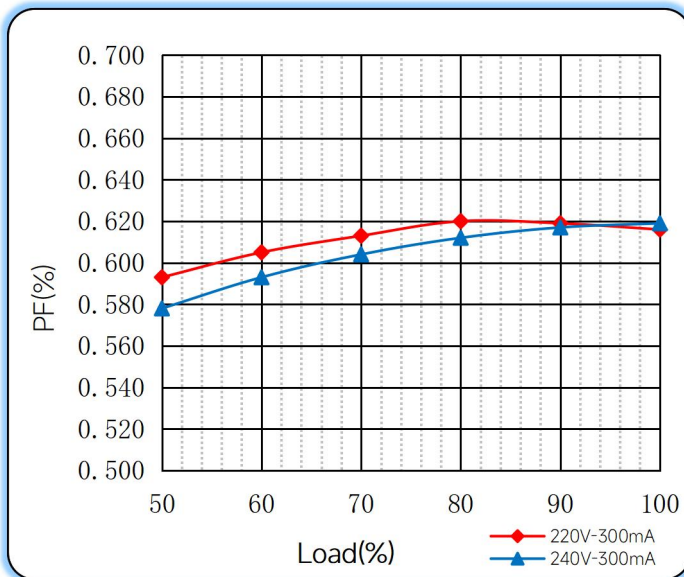
Lifetime vs. Temperature Curve



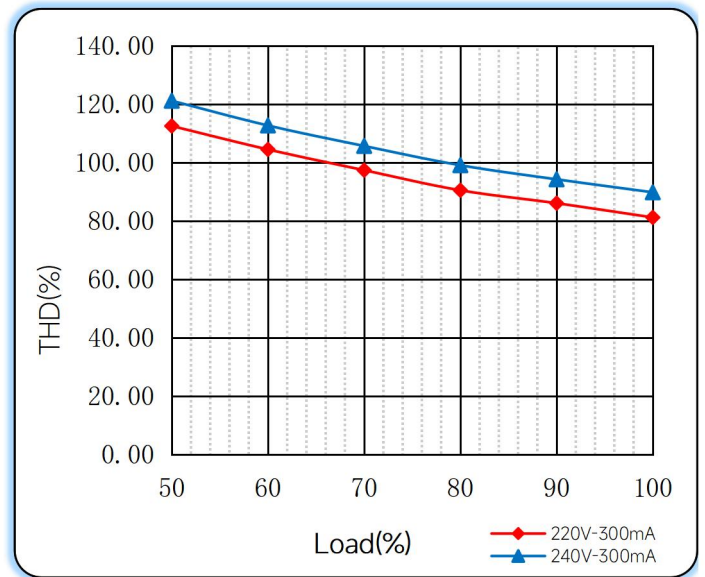
Efficiency vs. Load



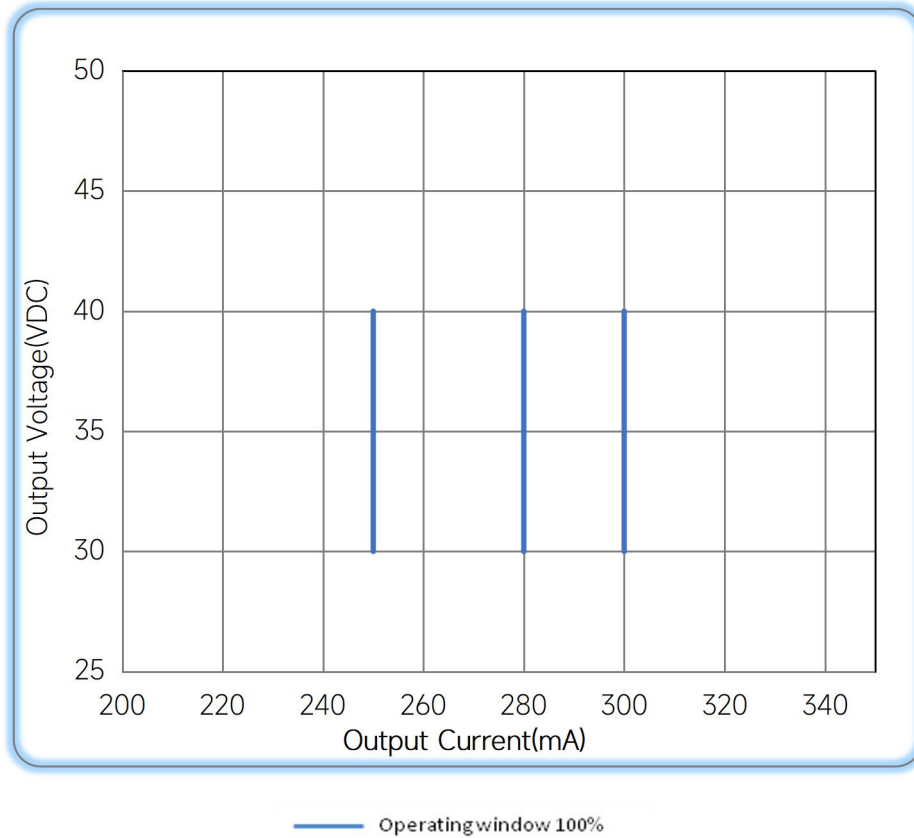
Power Factor Characteristics



THD vs. Load



◆ Operating window



◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2023/08/23
Over Load Protection	103-120%	103-130%	B	2023/09/22
Current Accuracy		update	C	2023/11/20

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

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