

## 12W Constant Current power supply



■ Approve



### Features

- Class II, SELV, independent
- Input Voltage: 220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor: 0.55C
- Efficiency: 83%
- 5 years warranty
- IP20

### Applications

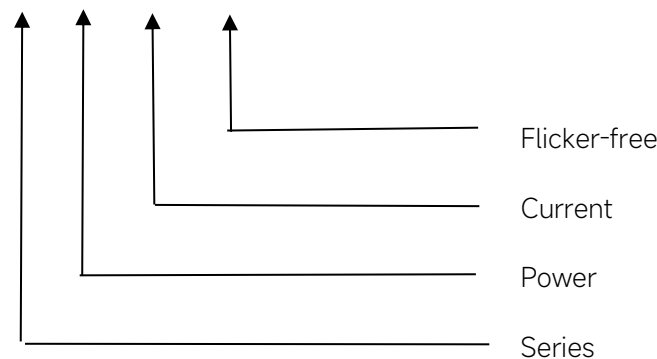
- LED panel, LED down light  
LED spot light

### ◆ Description

LS-12-XXX SI ECO is a 12W constant current LED driver with 250~600mA output current. With it's compact dimensions from 92 x 36 x 25 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 SI ECO



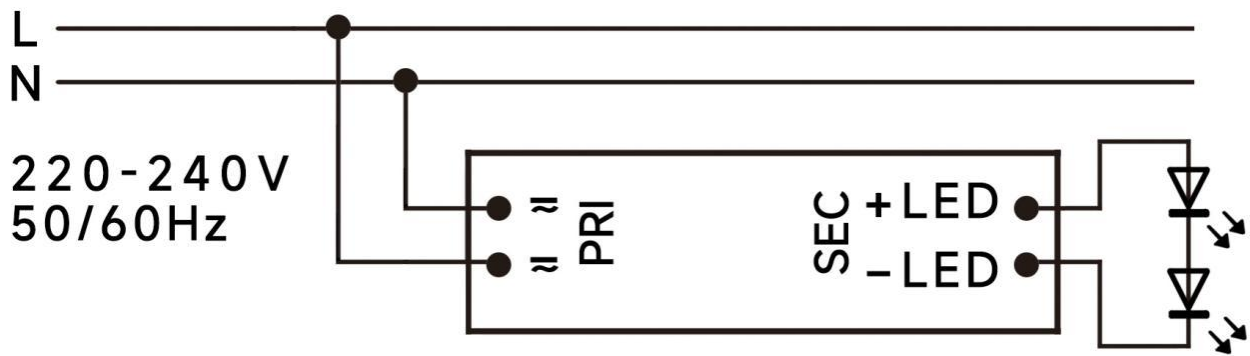
## ◆ Specification

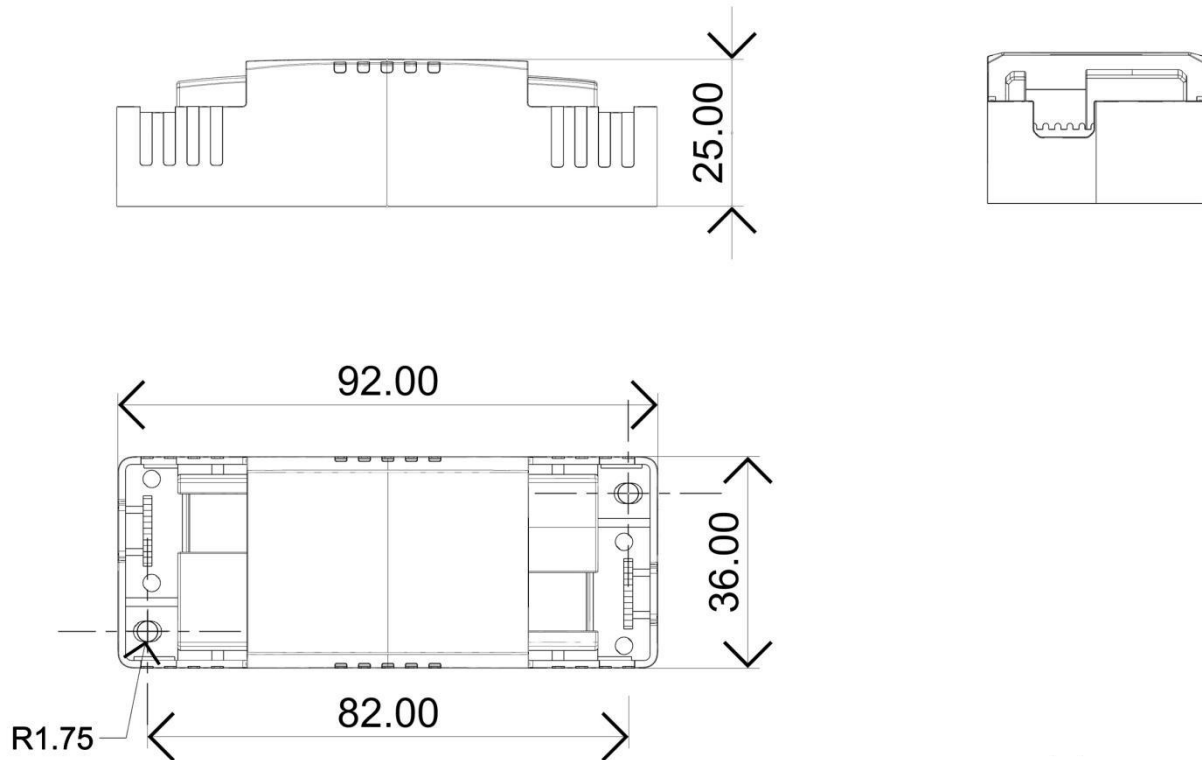
Output	Constant Current	250mA	300mA	350mA	500mA	600mA
	Voltage Range	30-42VDC		27-40V	14-26V	11-20V
	Unload voltage Max.	59VDC		57VDC	39VDC	31VDC
	Current Accuracy	±5%				±10%
	Output HF current ripple(≥1KHz)	±5%				
	Output LF current ripple(≤120Hz)	±5%				
	SVM	≤0.4				
	P <sub>st</sub>	≤1				
	Efficiency(Typ.)	≥83%				
Input	Rated input voltage	220-240VAC				
	Range of input voltage	198-264VAC				
	Frequency(Hz)	50/60 Hz				
	Displacement factor	≥0.7				
	Power Factor	0.55C				
	Input Current max	150mA	180mA	200mA	190mA	
	Start-up time	< 0.5S				
	No Load Power	≤0.5W				
Protection	Over Load Protection	103-120% YES/Auto Resume				
	Over Voltage Protection	59VDC		57VDC	39VDC	31VDC
	Short circuit Protection	YES/Auto Resume				
	Over Temperature Protection	YES/Auto Resume				
Environment	Operating Temperature	-20°C~+45°C				
	Humidity	20%-90%RH				
	Tc	75°C				
	Storage Temperature	-25°C~+60°C				
	Life time	> 30,000h@tc=75°C; > 60,000h@tc=65°C				
Surface	Dimension	92X36X25 (LXWXH)mm				
standards	EN 61347-1; EN61347-2-13; EN62384; EN55015; EN61000-3-2 ; EN61000-3-3; EN 61547;					
Others	ErP	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.					

◆ **Circuit Breaker**

I <sup>peak</sup>	T <sup>width</sup>	B10	B16	B20	C10	C16	C20
8.64A	92μs	36pcs	58pcs	72pcs	36pcs	58pcs	72pcs

◆ **Wiring diagram**

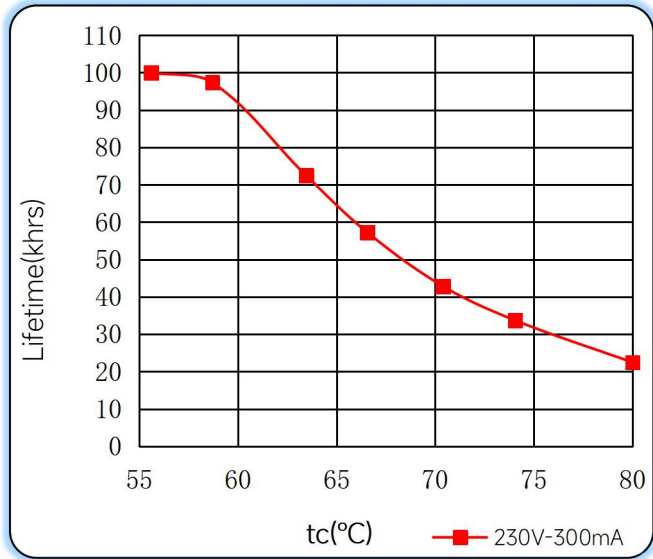


**◆ 2D diagram**

**◆ Wiring & Connections**

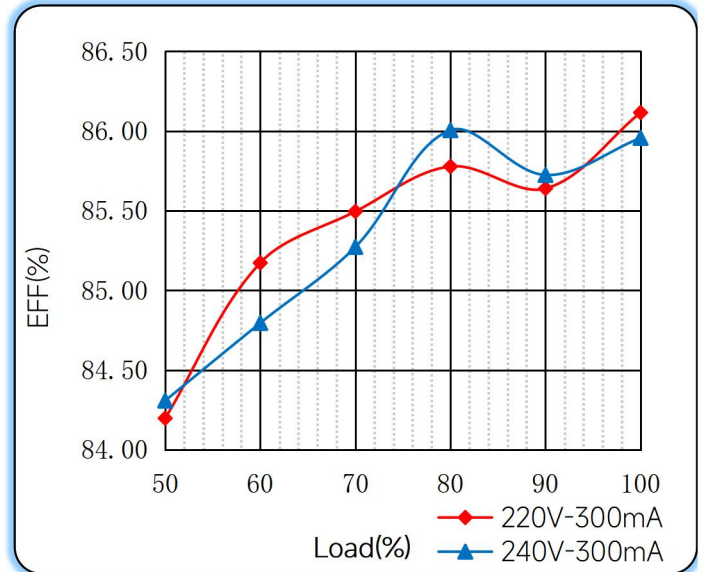
Specification item		Value (Unit )
Input	Input wire cross-section	0.5...1.5 mm <sup>2</sup>
	Input wire gauge.	16...20 AWG
	Input wire strip length	7...9mm
Output	Output wire cross-section	0.5...1.5 mm <sup>2</sup>
	Output wire gauge.	16...20 AWG
	Output wire strip length	7...9mm

◆ **Curve for LS-12-300 SI ECO, I<sub>o</sub>=300mA**

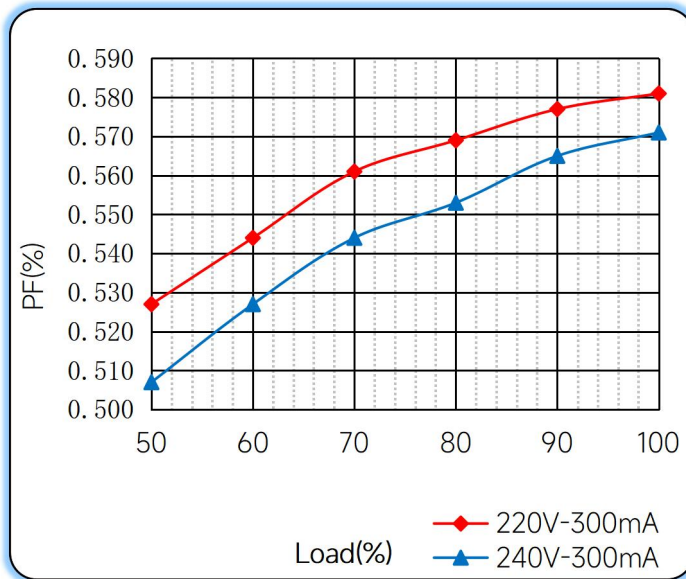
Lifetime vs. Temperature Curve



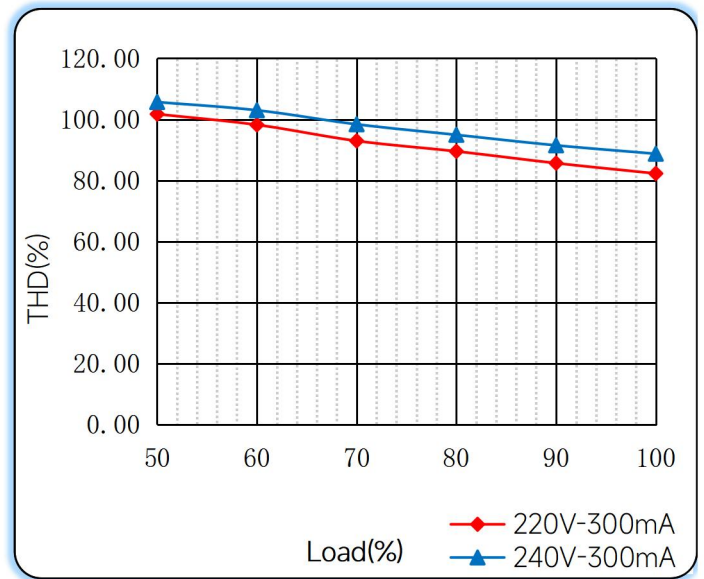
Efficiency vs. Load



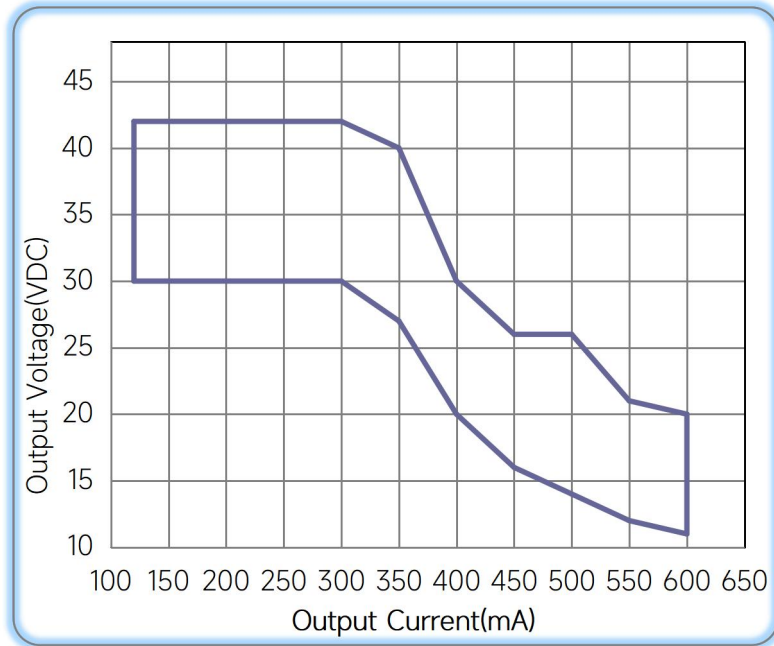
Power Factor Characteristics



THD vs. Load



### ◆ Operating window



— Operating window 100%

### ◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2022/05/15

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Manual