8W Constant Current power supply

■Approve

Features

- Class II, SELV, independent
- Input Voltage: 220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor: 0.5C
- Efficiency: 80%
- 5 years warranty
- IP20

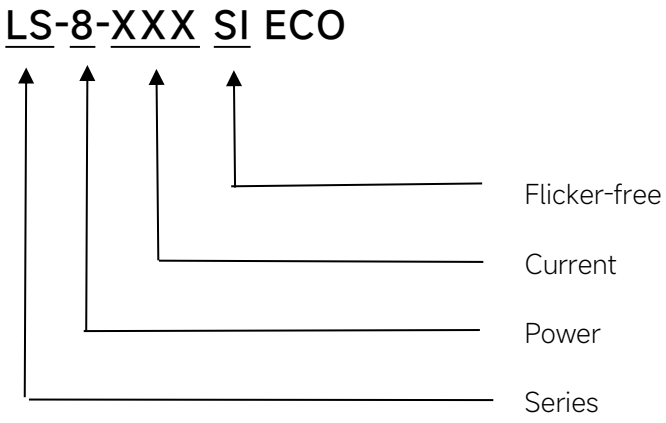
Applications

- LED panel、LED down light
  LED spot light

◆ Description

LS-8-XXX SI ECO is a 8W constant current LED driver with 120~600mA 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



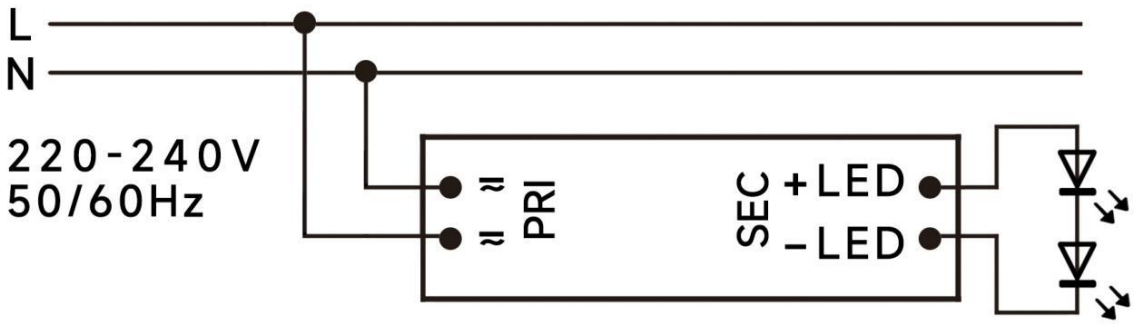
◆ Specification

Output	Constant Current (mA)	120	150	180	200	220	250	300	350	600
	Voltage Range(VDC)	30-42				30-38.5	16-26	15-24		8-13
	Unload voltage Max.(VDC)	59				50	37	40	35	25
	Current Accuracy	±9%			±8%			±7%	±6%	±10%
	Output HF current ripple(≥1KHz)	±5%								
	Output LF current ripple(≤120Hz)	±5%								
	SVM	≤0.4								
	P_{st}	≤1								
	Efficiency(Typ.)	≥80%								
Input	Rated input voltage	220-240VAC								
	Range of input voltage	198-264VAC								
	Frequency(Hz)	50/60 Hz								
	Displacement factor	≥0.5								
	Power Factor	0.5C								
	Input Current max (mA)	80	90	110	120	120	100		120	
	Start-up time	< 0.5S								
	No Load Power	≤0.5W								
	Standby Power	≤0.5W								
Protection	Over Load Protection	103-120%								
		YES/Auto Resume								
	Over Voltage Protection	59				50	37	40	35	25
		YES/Auto Resume								
	Short circuit Protection	YES/Auto Resume								
	Over Temperature Protection	YES/Auto Resume								
Environment	Operating Temperature	-20℃~+45℃								
	Humidity	20%-90%RH								
	Tc	70℃								
	Storage Temperature	-20℃~+60℃								
	Life time	> 50,000h@tc=70℃								
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℃ 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. Data are typical values obtained from test samples									

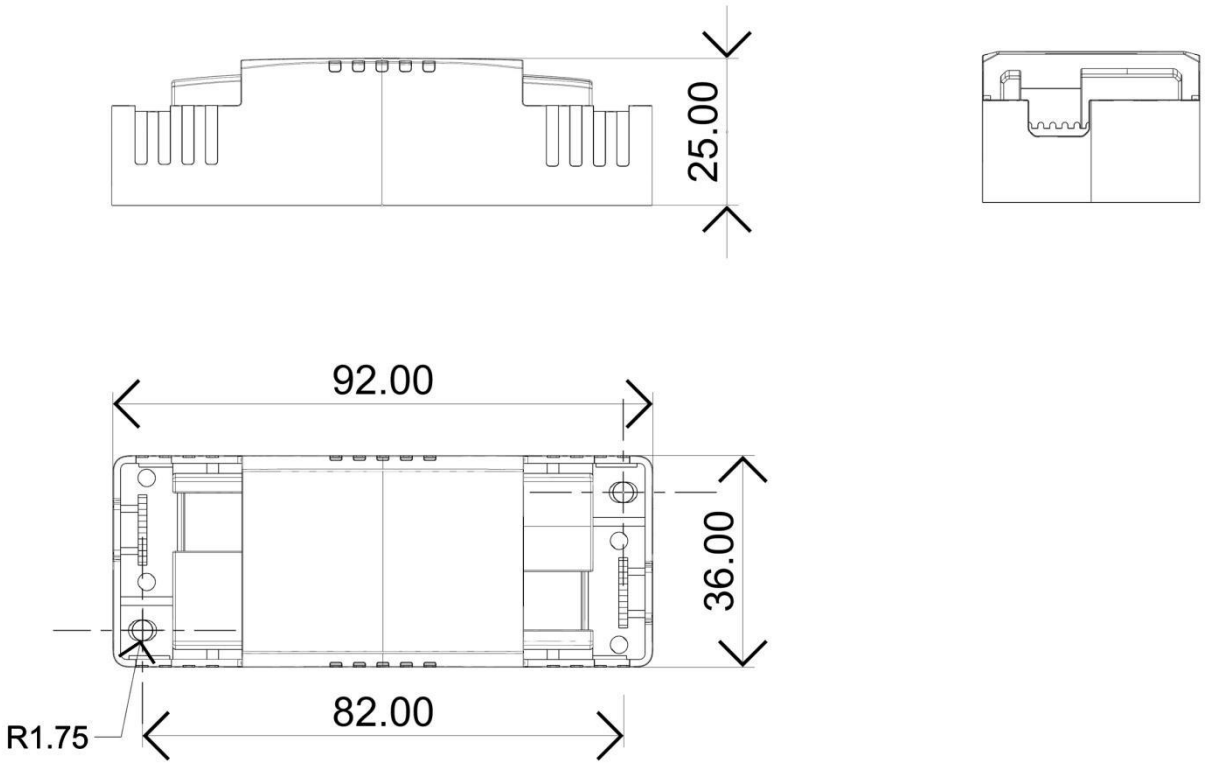
◆ Model list

Number	Model number	Output			
		Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)
1	*LS-8-120 SI ECO	120	30-42	59	5.1
2	*LS-8-150 SI ECO	150			6.3
3	*LS-8-180 SI ECO	180			7.6
4	*LS-8-200 SI ECO	200			8.4
5	*LS-8-220 SI ECO	220	30-38.5	50	8.5
6	LS-8-250 SI ECO	250	16-26	37	6.5
7	*LS-8-300 SI ECO	300	15-24	40	7.2
8	*LS-8-350 SI ECO	350		35	8.4
9	LS-8-400 SI ECO	400	12-20	30	8
10	LS-8-450 SI ECO	450	11-18	30	8.1
11	LS-8-500 SI ECO	500	10-16	26	8
12	LS-8-550 SI ECO	550	9-14	25	7.7
13	*LS-8-600 SI ECO	600	8-13	25	7.8

◆ Wiring diagram



◆ 2D diagram

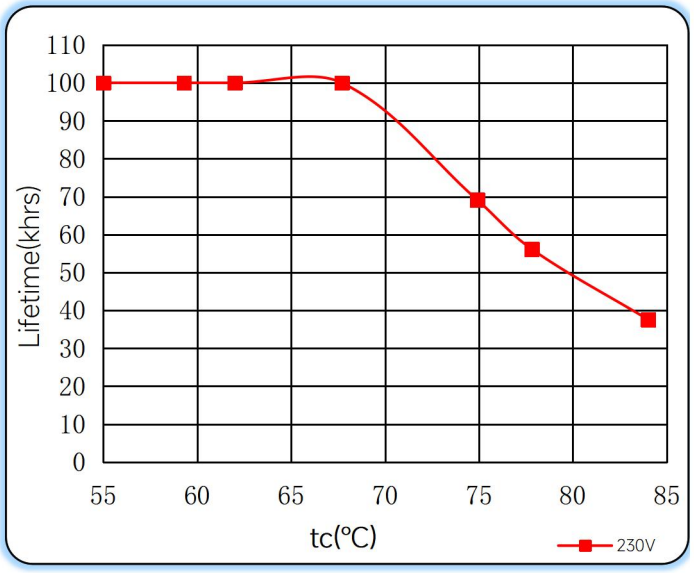


◆ Wiring & Connections

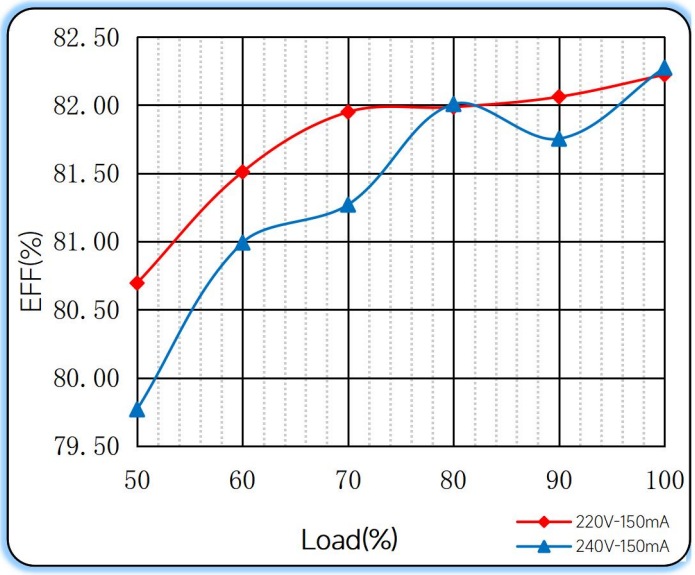
Specification item		Value （Unit ）
Input	Input wire cross-section	0.5...1.5 mm2
	Input wire gauge.	16...20 AWG
	Input wire strip length	7...9mm
Output	Output wire cross-section	0.5...1.5 mm2
	Output wire gauge.	16...20 AWG
	Output wire strip length	7...9mm

◆ Curve for LS-8-150 SI ECO, Io=150mA

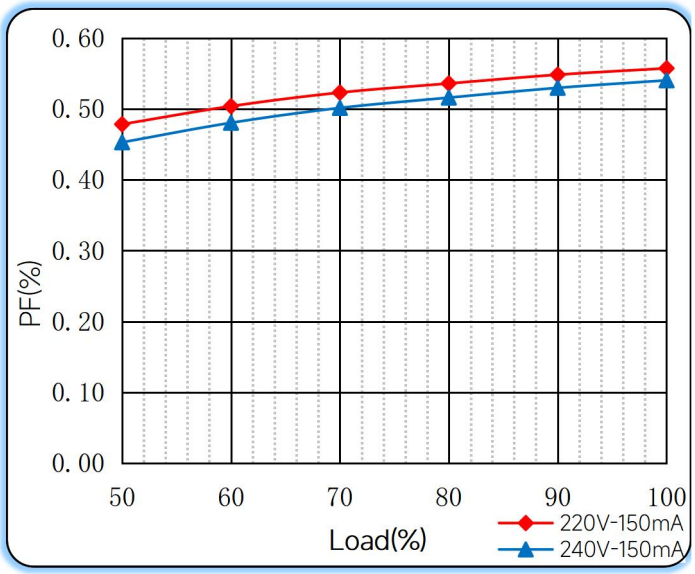
Lifetime vs. Temperature Curve



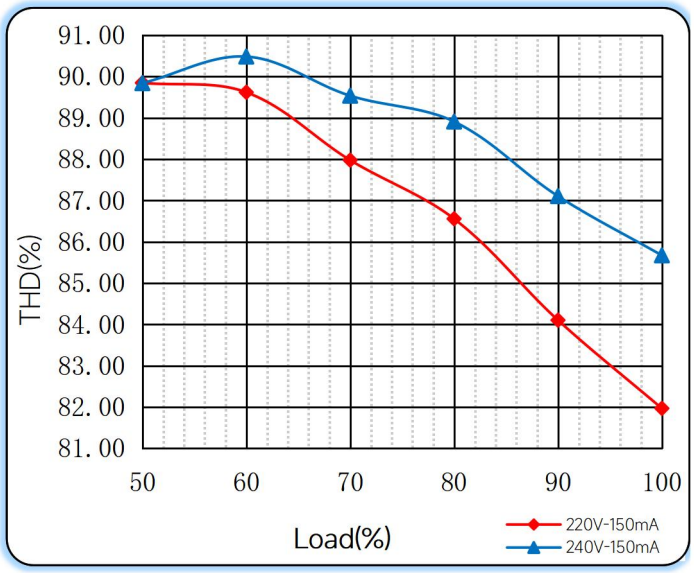
Efficiency vs. Load



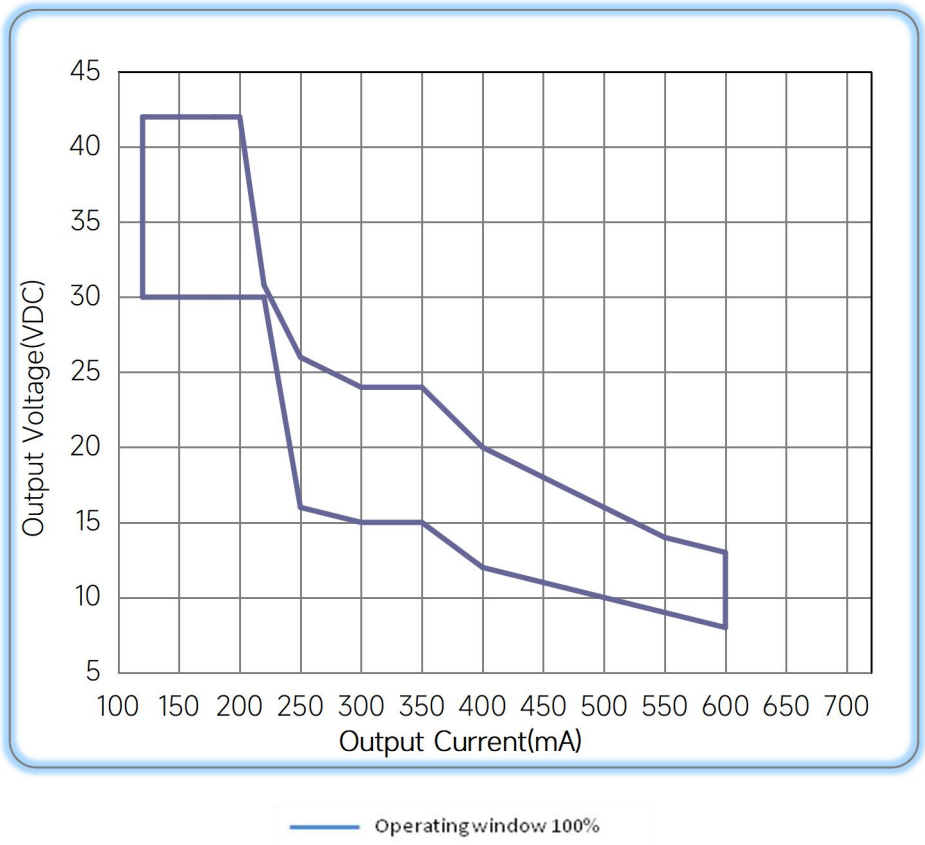
Power Factor Characteristics



THD vs. Load



◆ Operating window



◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2022/05/15
		+220mA	A1.01	2022/09/20

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Manual