

42W Constant Current power supply



■ Approve

CE CB EN CCC SELV

Features

- Class II, SELV, Built-in
- Input Voltage: 220-240VAC
- Protections: SCP/OLP/OVP
- Power Factor: 0.95
- Efficiency: 90%
- 5 years warranty
- IP20

Applications

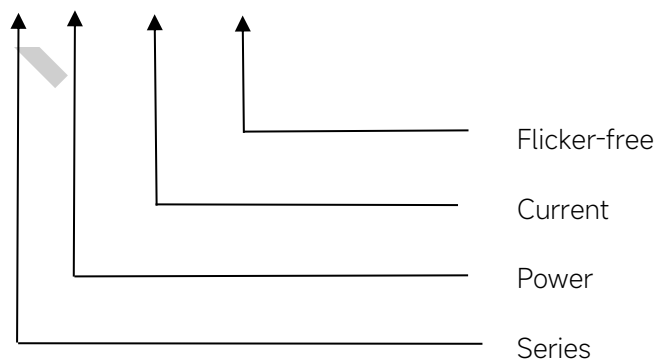
- LED panel, LED ceiling light
- LED spot light

◆ Description

CS-42-XXX LI is a 42W constant current LED driver with 800 to 1050mA output current. With it's compact dimensions from $\Phi 62 \times 25 \text{mm}$. It is easy to integrate in LED Panel, spot and ceiling lights product. To ensure trouble-free operation, protection is provided against output short circuit and over Load.

◆ Model code

CS-42-XXX LI



◆ Specification

Output	Constant Current (mA)	800	850	900	950	1000	1050
	Voltage Range(VDC)	12-50	12-47	12-45	12-43	12-40	12-40
	Unload voltage Max.	59VDC					
	Current Accuracy	±5%					
	Output HF current ripple(≥1KHz)	±5%					
	Output LF current ripple(≤120Hz)	±5%					
	SVM	≤0.4					
	Pst	≤1					
	Efficiency(Typ.)	90%					
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					
	Input Current max (mA)	0.3A					
	Start-up time	< 0.5S					
	No Load Power	≤0.5W					
	THD (Typ.)	<10%					
Protection	Over Load Protection	103-140%					
		YES/Auto Resume					
	Over Voltage Protection	69VDC					
		YES/Auto Resume					
capability	Short circuit Protection	YES/Auto Resume					
	Over Temperature Protection	YES/Auto Resume					
	Surge capability (L-N)	2KV					
	Surge capability (L/N-Ground)	2KV					
Environment	Operating Temperature	-20°C~+70°C					
	Humidity	20%-90%RH					
	Tc	100°C					
	Storage Temperature	-25°C~+60°C					
	Life time	> 50000h@Tc=85°C					
	Noise	≤20dB(A)@10cm					
Surface	Dimension	Φ62 x 24mm					
	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					

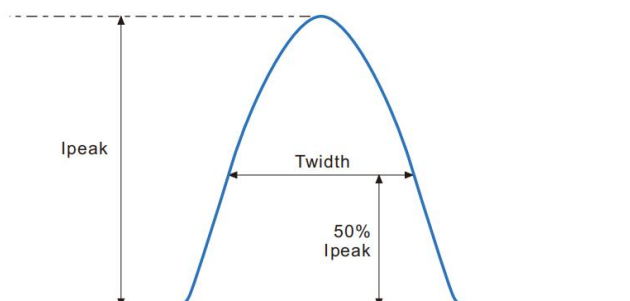
	Energy Efficiency	Erp2.0 EU 2019/2020
	RoHS	RoHS (2011/65/EU) (EU)2015/863
Note	1.All parameters not specially mentioned are measured at 230VAC input , full load and 25°C of ambient temperature. 2.Ripple & Noise are measured at 20MHz of bandwidth by using a 300mm twisted pair-wire terminated with a 0.1uF & 47 uF parallel capacitor. 3.Switch and dimmer are not recommended to connect between this product output and luminaries. 4.Surge capability (L/N-Ground) was measured with a metal plate 2-3mm underlay. 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.	

◆ Model list

Number	Model number	Output			
		Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)
1	CS-42-800 LI	800	12-50	59VDC	40
2	CS-42-850 LI	850	12-47		40
3	CS-42-900 LI	900	12-45		40.5
4	CS-42-950 LI	950	12-43		40.9
5	CS-42-1000 LI	1000	12-40		40
6	CS-42-1050 LI	1050	12-40		42

◆ Inrush Current

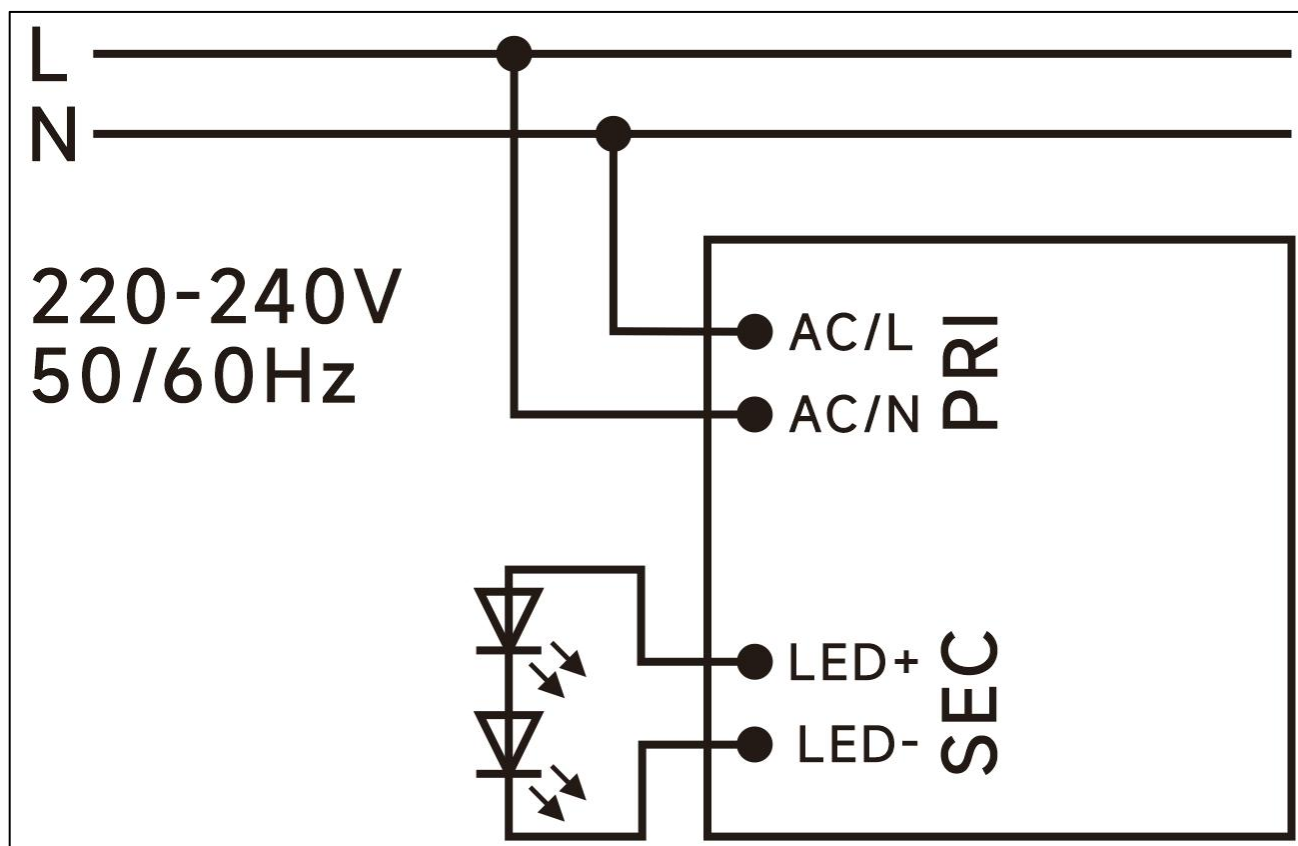
I _{peak}	T _{width}	B10	B16	B20	C10	C16	C20
26.6A	130μs	24pcs	38pcs	48pcs	26pcs	42pcs	53pcs



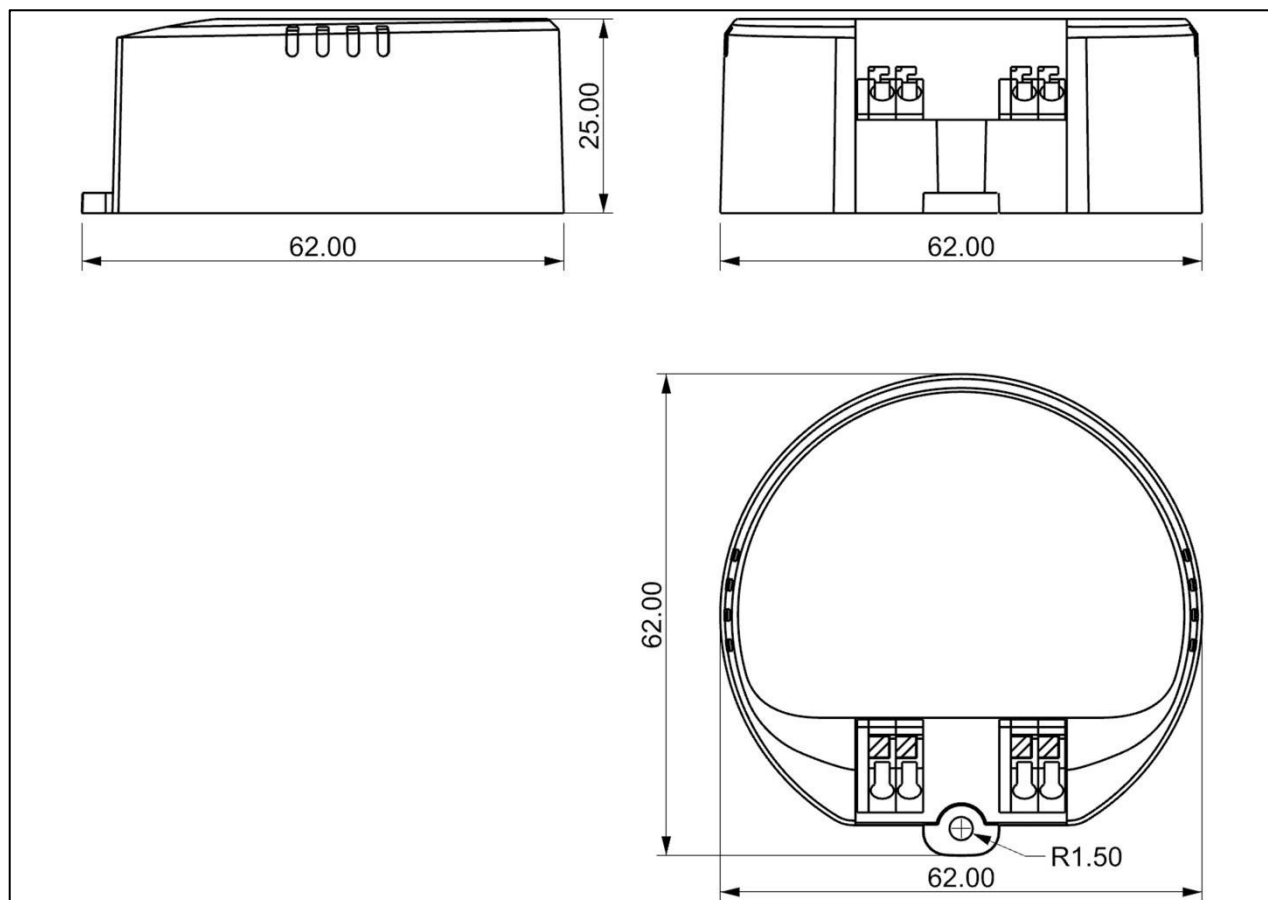
Remarks:

- 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.

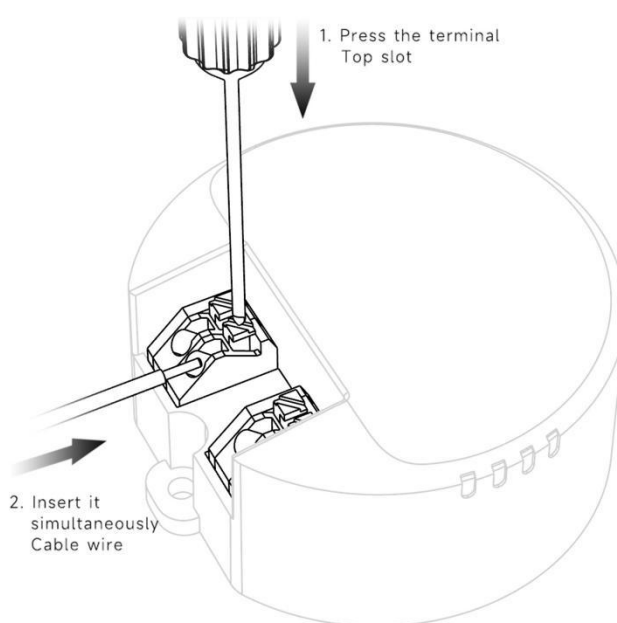
◆ Wiring diagram



◆ 2D diagram



Termina



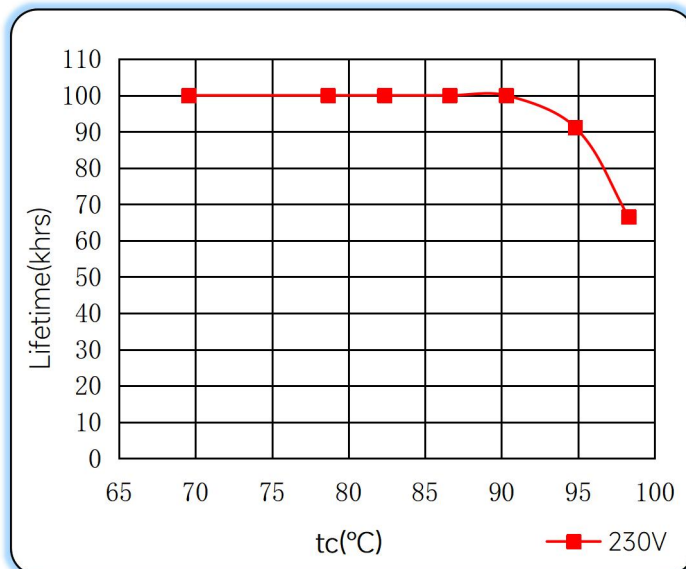
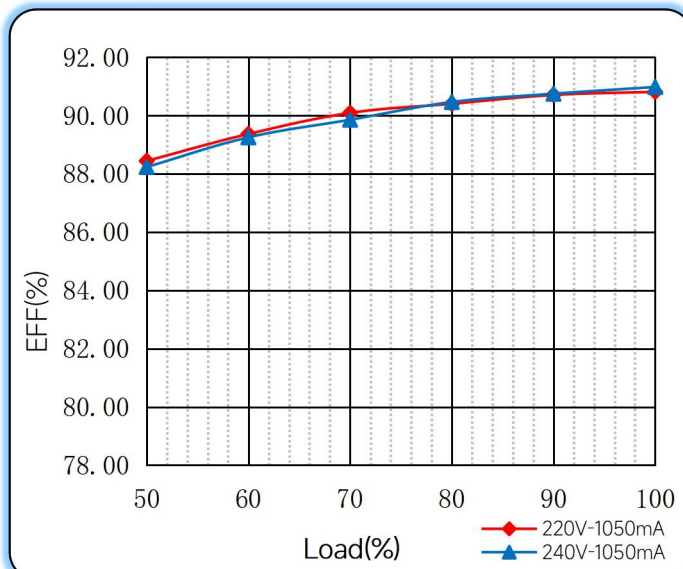
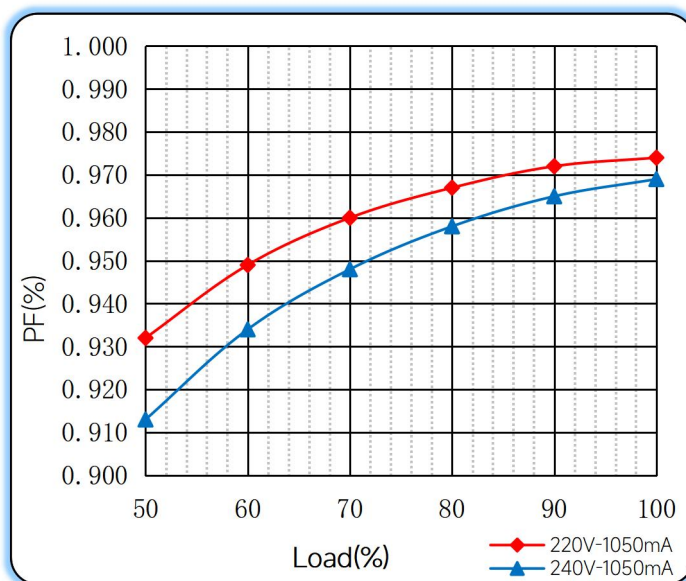
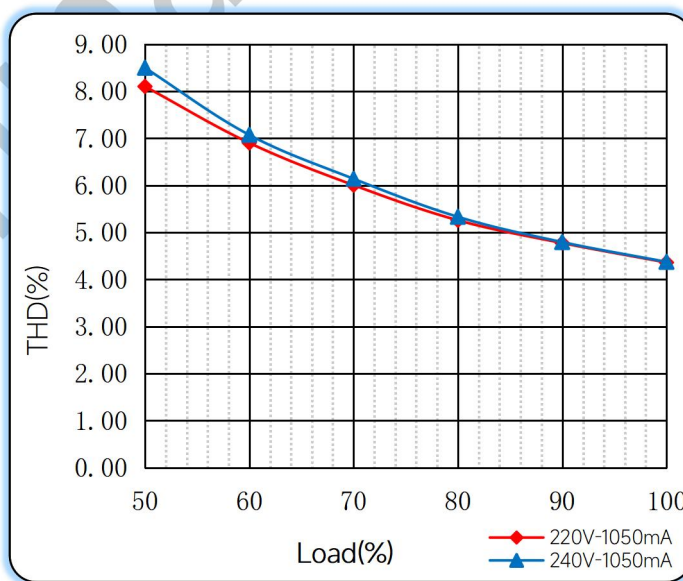
◆ Wiring & Connections

	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

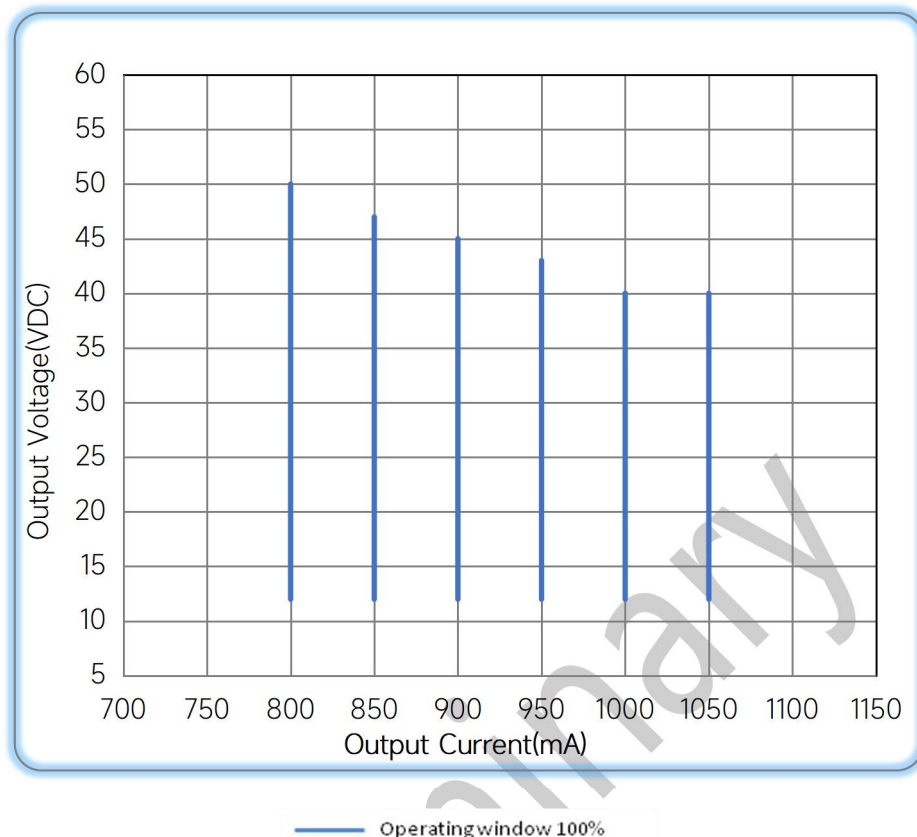
Note: Solid wire is risky to use on an angled terminal. Stranded wire is recommended for this kind of use.

Preliminary

◆ Curve for CS-42-1050 LI, $I_o=1050\text{mA}$

Lifetime vs. Temperature Curve

Efficiency vs. Load

Power Factor Characteristics

THD vs. Load


◆ Operating window



◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2023/07/12
Life time	> 50000h@Tc=90°C	> 50000h@Tc=85°C	B	2023/01/15
Unload voltage Max.	69V	59V	C	2024/05/05
Ta/TC	60°C/90°C	70°C/100°C		

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

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