

8W 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: 0.5C
- Efficiency: 80%
- 5 years warranty
- IP20

Applications

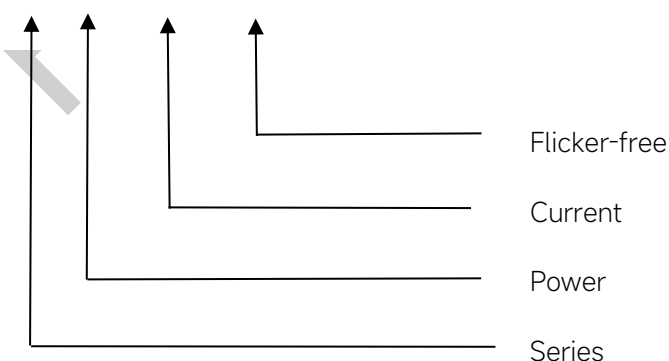
- LED panel, LED ceiling light
- LED spot light

◆ Description

CS-8-XXX SI is a 8W constant current LED driver with 100 to 200mA output current. With it's compact dimensions from $\Phi 42 \times 21 \text{mm}$. 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-8-XXX SI



◆ Specification

Output	Constant Current (mA)	100	120	150	180	200	220
	Voltage Range(VDC)	30-40					
	Unload voltage Max.	59VDC					
	Current Accuracy	±7%					
	Output HF current ripple(≥1KHz)	±5%					
	Output LF current ripple(≤120Hz)	±5%					
	SVM	≤0.4					
	Pst	≤1					
	Efficiency(Typ.)	≥80%@Full load,230V					
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	≥0.7					
	Power Factor	0.5C@Full load,230V					
	Input Current max (mA)	70	80	100	110		
	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					
capability	Over Temperature Protection	YES/Auto Resume					
	Surge capability (L-N)	1KV					
	Surge capability (L/N-Ground)	2KV					
Environment	Operating Temperature	-20°C~+70°C					
	Humidity	20%-90%RH					
	Tc	100°C					
	Storage Temperature	-25°C~+80°C					
	Life time	> 50000h@Tc=85°C					
	Noise	≤20dB(A)@10cm					
Surface	Dimension	Φ42 x 21mm					
	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

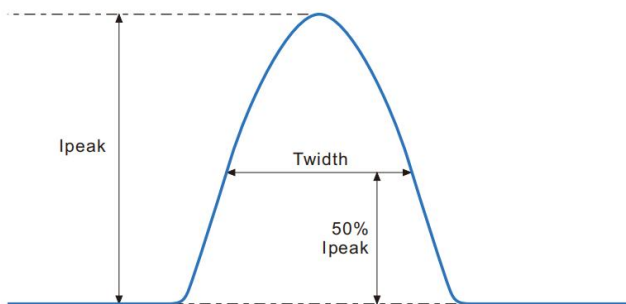
- 1.All parameters not specially mentioned are measured at 230VAC input , full load and 25°C of ambient temperature.
- 2.Ripple & Noise are measured at 20MHz of bandwidth by using a 300mm twisted pair-wire terminated with a 0.1uF & 47 uF parallel capacitor.
- 3.Switch and dimmer are not recommended to connect between this product output and luminaries.
- 4.Surge capability (L/N-Ground) was measured with a metal plate 2-3mm underlay.
- 5.All Astralux 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-8-100 SI	100	30-40	59	4
2	CS-8-120 SI	120			4.8
3	CS-8-150 SI	150			6
4	CS-8-180 SI	180			7.2
5	CS-8-200 SI	200			8
6	CS-8-220 SI	220			8.8

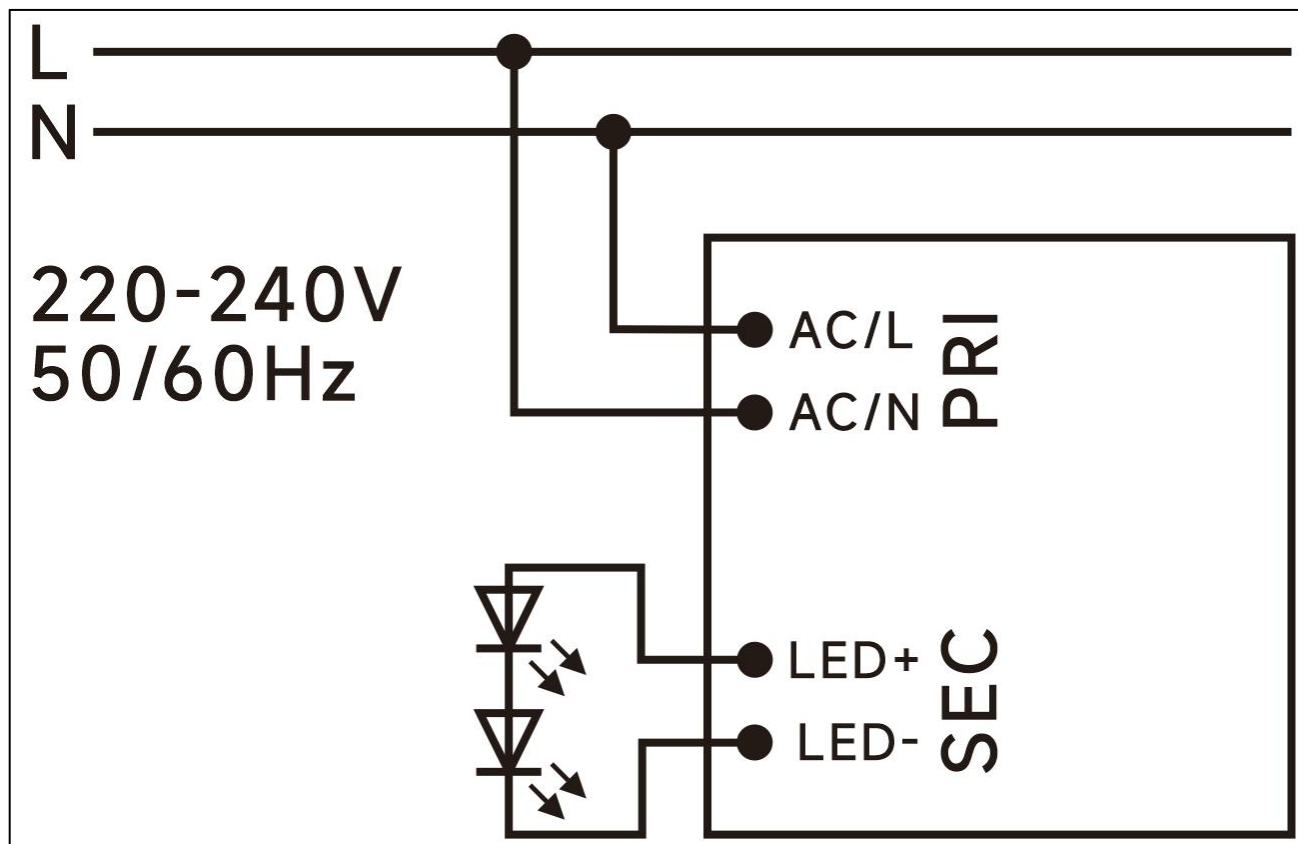
◆ Inrush Current

I _{peak}	T _{width}	B10	B16	B20	C10	C16	C20
5.76A	102μs	72pcs	116pcs	145pcs	72pcs	116pcs	145pcs

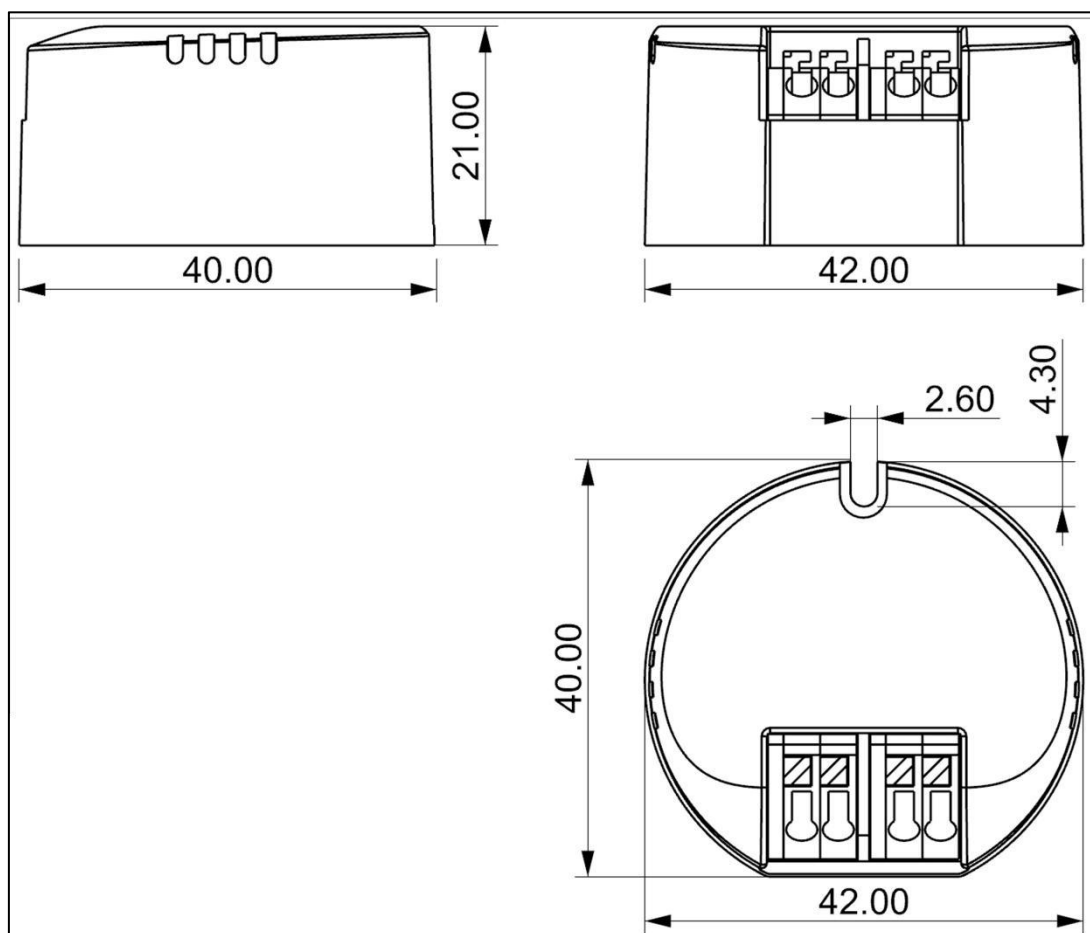

Remarks:

- 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.

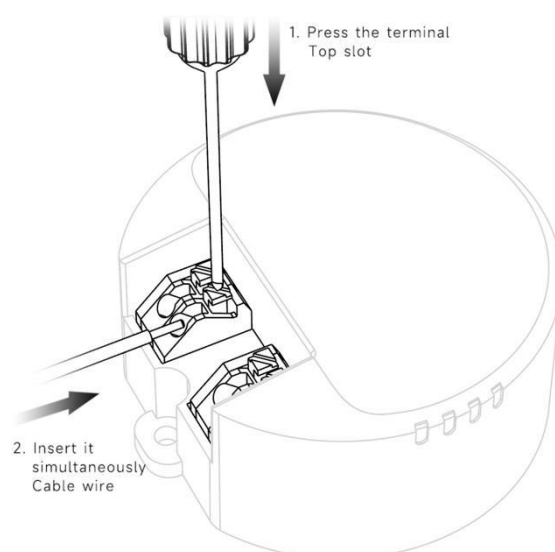
◆ Wiring diagram



◆ 2D diagram



Termina



iring & Connections

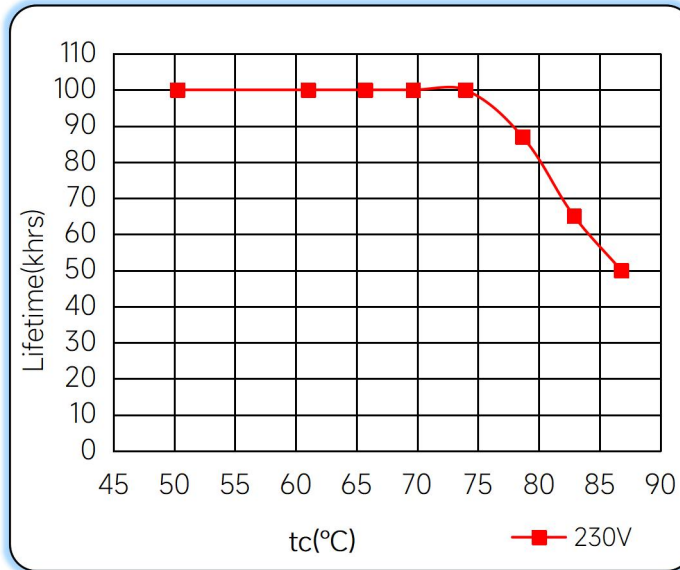
	Specification item	Value (Unit)
Input	Input wire cross-section	0.5...1.5 mm ²
	Input wire gauge.	16...20 AWG
	Input wire strip length	7...9mm
Output	Output wire cross-section	0.5...1.5 mm ²
	Output wire gauge.	16...20 AWG
	Output wire strip length	7...9mm

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

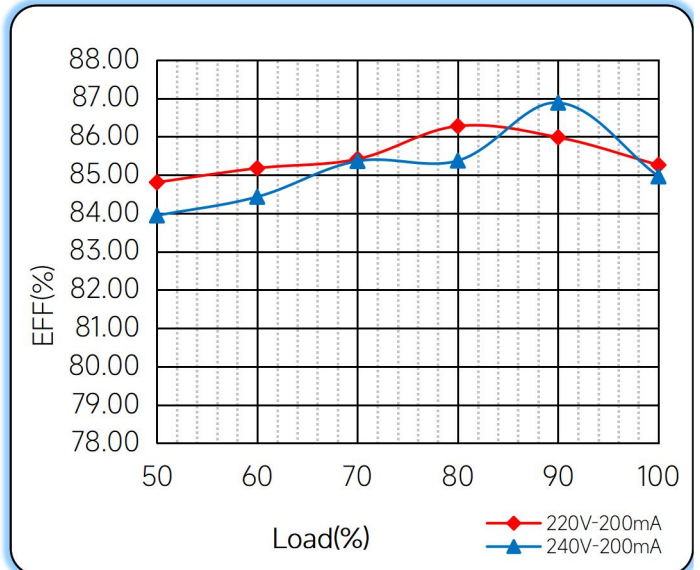
Preliminary

◆ Curve for CS-8-XXX SI, $I_o=200\text{mA}$

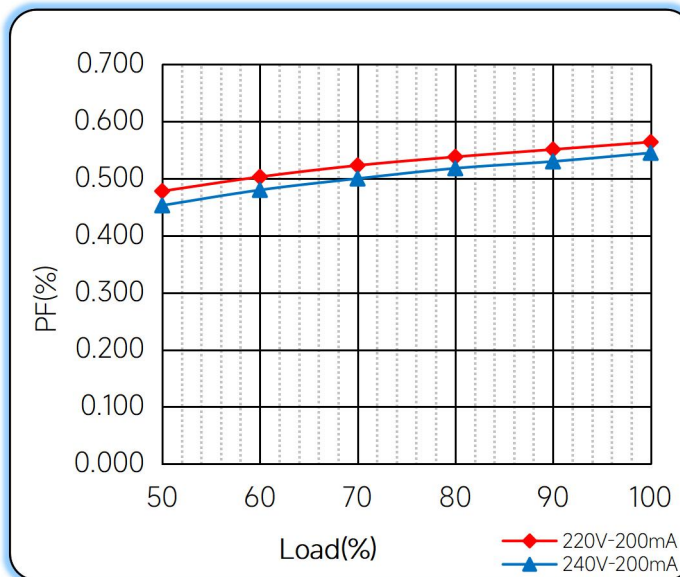
Lifetime vs. Temperature Curve



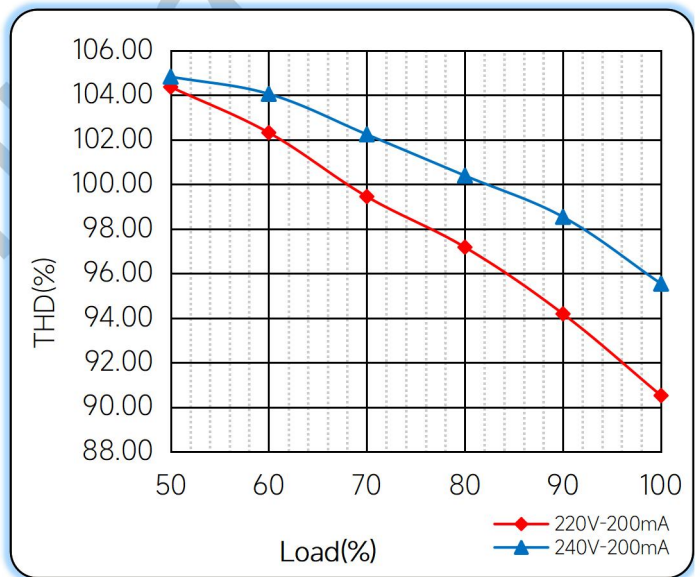
Efficiency vs. Load



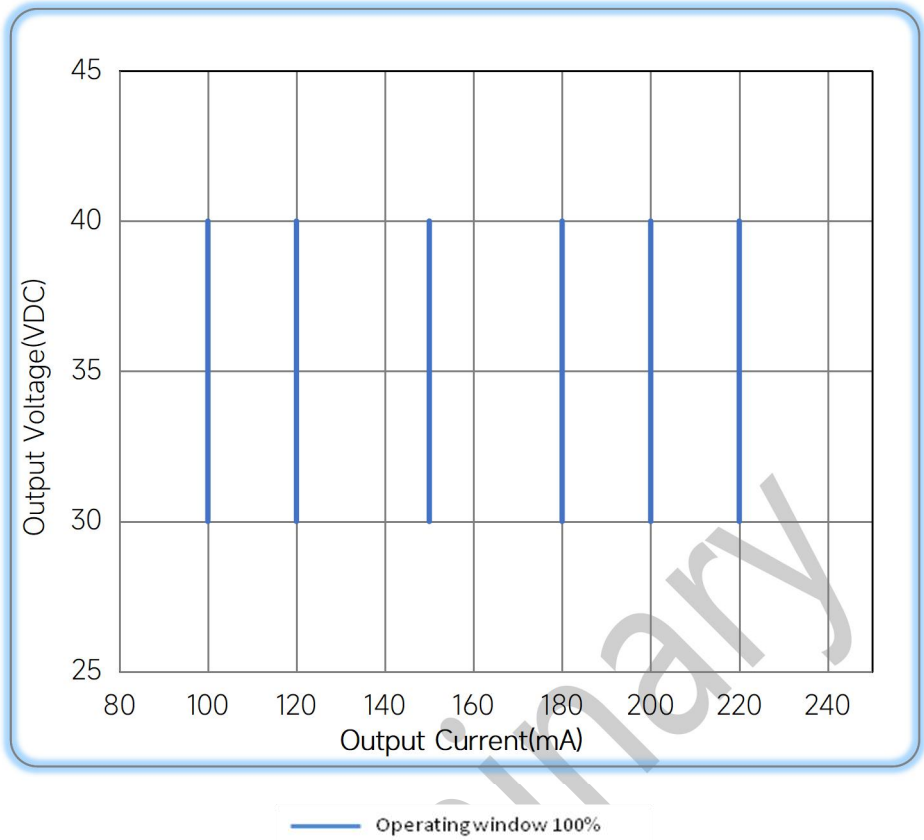
Power Factor Characteristics



THD vs. Load



◆ Operating window



◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2023/07/12
TC	80℃	85℃	B	2024/02/01
Ta/TC	60℃/85℃	70℃/100℃	C	2024/04/10

Remark:The final interpretation of the contents of the specification belongs to Astralux.

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