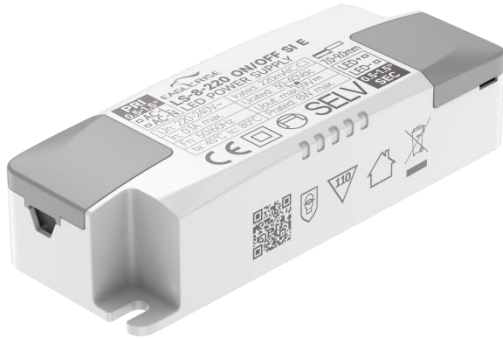


8W Constant Current power supply



■ Approve

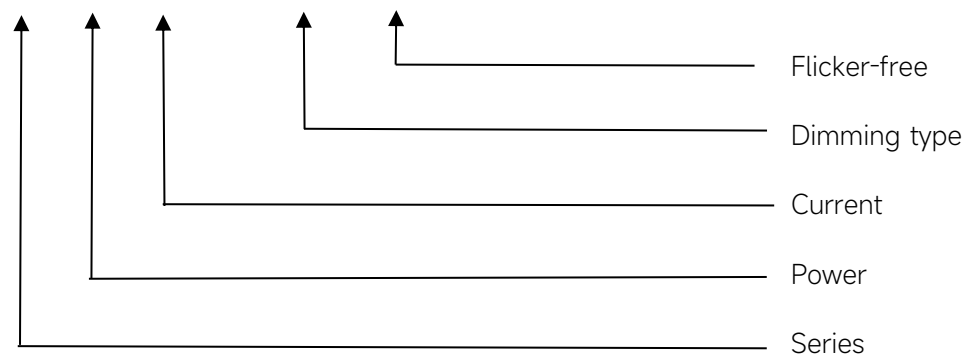


◆ Description

LS-8-XXX ON/OFF SI E is a 8W constant current LED driver with 100 to 220mA output current and a forward voltage range from 30 to 40Vdc. With its compact dimensions from 92 x 36 x 25 mm. It is easy to integrate in LED panel and Ceiling lights. To ensure trouble-free operation, protection is provided against output short circuit, over load, over voltage, over temperature and open circuit.

◆ Model code

LS-8-XXX ON/OFF SI E



Features

- For luminaires of protection Class II, SELV, Independent
- Input Voltage 220-240VAC
- Protections: OLP/OVP/SCP/OTP
- Power Factor: 0.55
- Efficiency: >74%@100-120mA
>79%@150-220mA

- 5 years warranty

Applications

- LED Panel

◆ Specification

Output	Constant Current	100	120	150	...	220
	Voltage Range	30-40V				
	Unload voltage Max.	59VDC				
	Current Accuracy	±10%	±9%	±7%		
	Output HF current ripple(≥	±5%				
	Output LF current ripple(≤	±5%				
	SVM	≤0.4@Full Load				
	Pst	≤1@Full Load				
	Efficiency(Typ.)	>74%@Full Load,230VAC			>79%@Full Load,230VAC	
Input	Rated input voltage	220-240VAC				
	Range of input voltage	198-264VAC				
	Frequency(Hz)	50/60 Hz				
	Power Factor(Typ.)	0.55@Full Load, 230VAC				
	Input Current max	0.1A MAX.@Full Load, 220-240VAC				
	Start-up time	< 0.5S				
	Unload Power Consumption	≤0.5W				
Protection	Over Voltage Protection	59VDC YES/Auto Resume				
	Over Load Protection	YES/Auto Resume				
	Short circuit Protection	YES/Auto Resume				
capability	Surge capability (L-N)	1KV				
	Surge capability	NA				
Environment	Operating Temperature	-20°C~+45°C				
	Humidity	20%-90%RH				
	Tc (Max)	75°C				
	Storage Temperature	-20°C...+60°C				
	Life time	> 30000h@Tc=75°C				
	Noise	≤25dB(A)@20cm				
Dimming	Three-level Dimming	100%-50%-12%(with memory function)				
Surface	Dimension	92x36x25(LXWXH)mm				
	material	PC				
Standards	Safety	GB19510. 1, GB19510. 14;IEC61347- 1, IEC61347-2- 13;AS/NZS 61347- 1				
	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;EN61000-4-2,3,4,5,6,8,11, EN61547				
	Energy Efficiency	Erp2.0 EU 2019/2020				
	RoHS	RoHS (2011/65/EU) (EU)2015/863				

Note

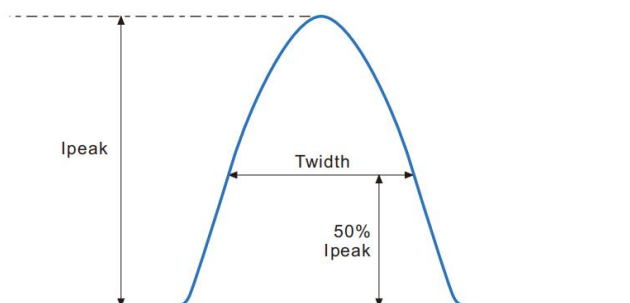
- 1.All parameters not specially mentioned are measured at 230VAC input , full load and 25°C of ambient temperature.
- 2.Ripple & Noise are measured at 20MHz of bandwidth by using a 300mm twisted pair-wire terminated with a 0.1uF & 47 uF parallel capacitor.
- 3.All Eaglerise power supply are complied 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.
- 4.The over-temperature protection of the product is provided by the IC.

◆ Model list

Number	Model number	Output			
		Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)
1	LS-8-100 ON/OFF SI E	100	30-40	59	4
2	LS-8-120 ON/OFF SI E	120			4.8
3	LS-8-150 ON/OFF SI E	150			6
4	LS-8-160 ON/OFF SI E	160			6.4
5	LS-8-180 ON/OFF SI E	180			7.2
6	LS-8-200 ON/OFF SI E	200			8
7	LS-8-220 ON/OFF SI E	220			8.8

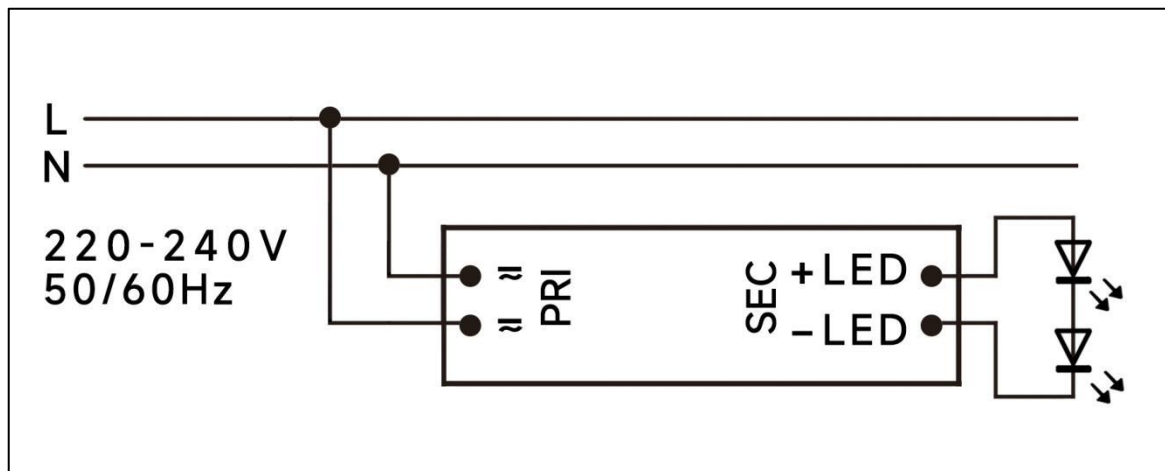
◆ Inrush Current

I _{peak}	T _{width}	B10	B16	B20	C10	C16	C20
6.84A	102μs	80pcs	128pcs	160pcs	80pcs	128pcs	160pcs

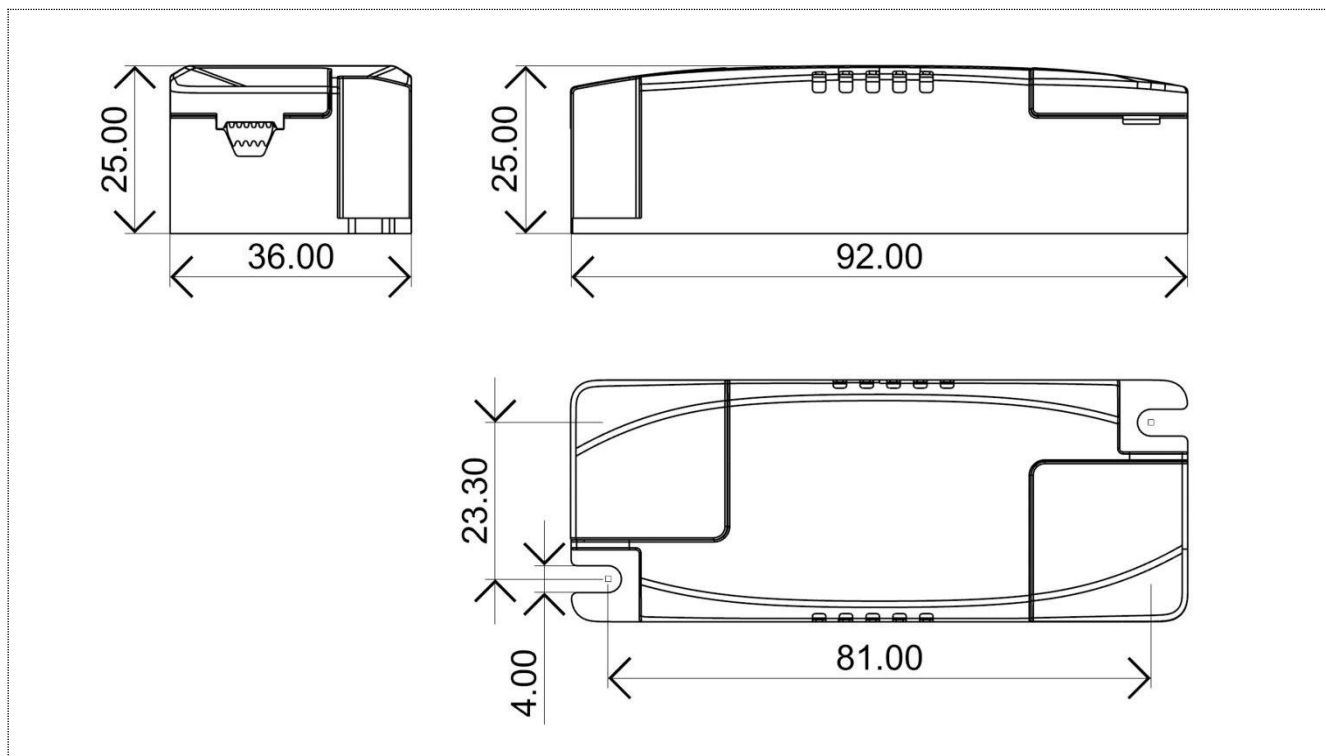

Remarks:

- 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

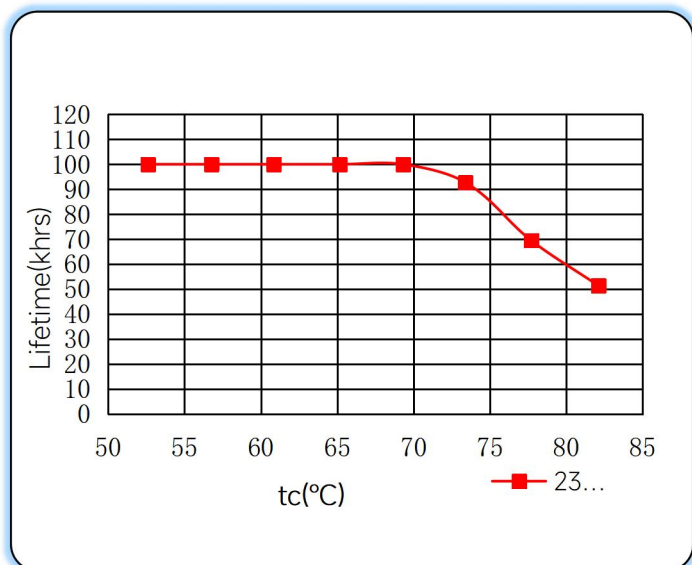
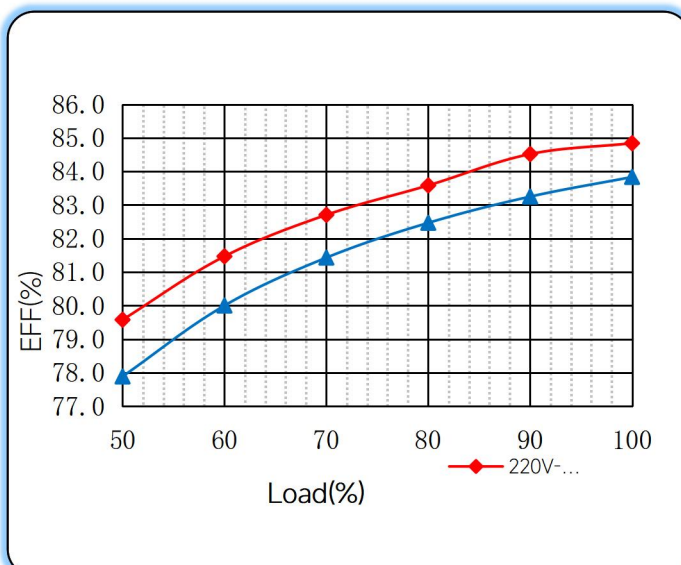
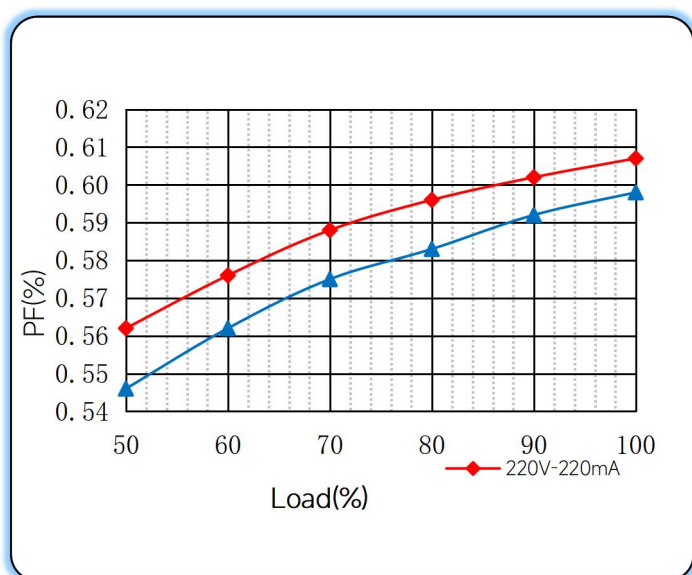
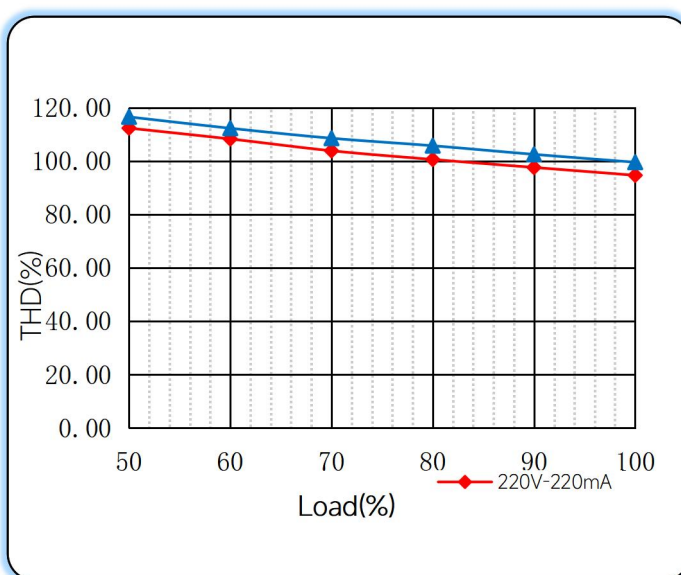
Specification item		Value (Unit)
Input	Input wire cross-section	0.5...1.5 mm ²
	Input wire gauge.	16...20 AWG
	Input wire strip length	7...9mm
Output	Output wire cross-section	0.5...1.5 mm ²
	Output wire gauge.	16...20 AWG
	Output wire strip length	7...9mm

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

Packaging

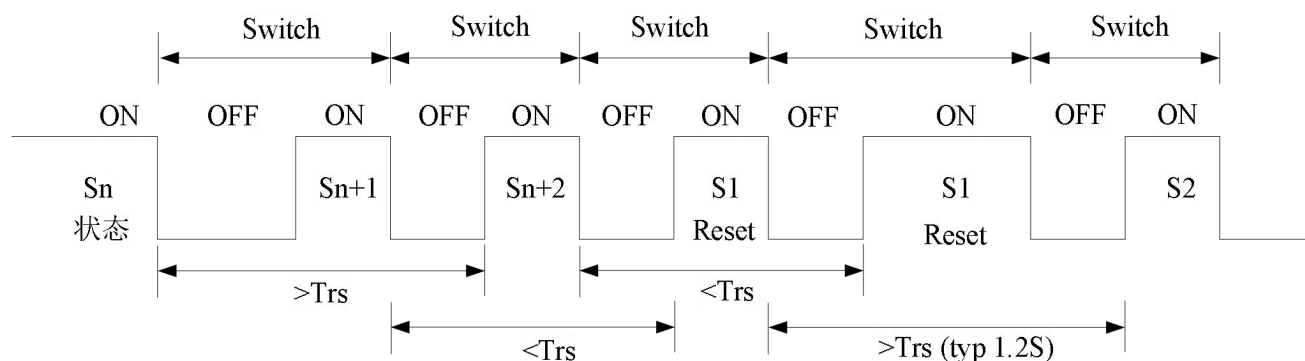
Model	Product Dimensions(mm)	weight/piece	Outer carton dimension(mm)	Quantity/carton	Net weight/carton(Kg)	Gross weight/carton(Kg)
LS-8-XXX ON/OFF SI E	92x36x25	0.039	370X275X215	180	7	7.6

◆ Curve for LS-8-XXX ON/OFF SI E, $I_o=220\text{mA}$

Lifetime vs. Ambient Temperature Curve

Efficiency vs. Load

Power Factor Characteristics

THD vs. Load


◆ Operation

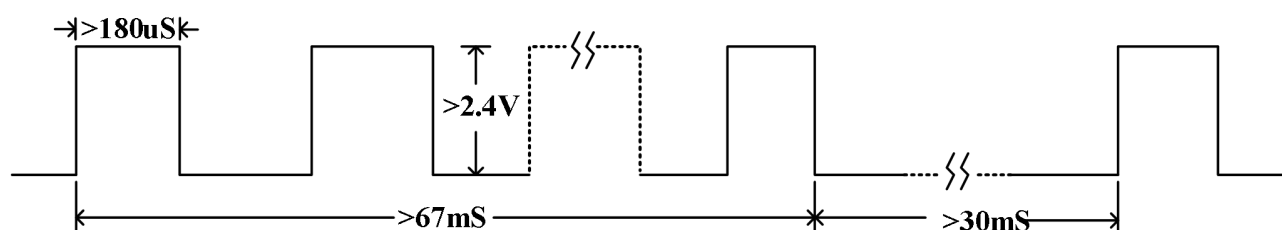
Reset Mode— Power off and on twice within 1 second to reset.



If shutdown takes $\sim 6.4s$ or a reset ("OFF→ON→OFF") is executed in $\sim 1.2s$, a sync issue might arise.

However, given the $\pm 5\%$ time tolerance, the risk window is minimal, and the occurrence probability is negligible.

Signal Detection Requirements



The S4165M determines power ON/OFF states by detecting pulse signals or high/low levels through the CLK pin. The pulse signal must meet the following requirements:

- Pulse width: $>180\mu s$
- Pulse amplitude: $>2.4V$ (AC signals detectable; for design margin, $>4V$ recommended).

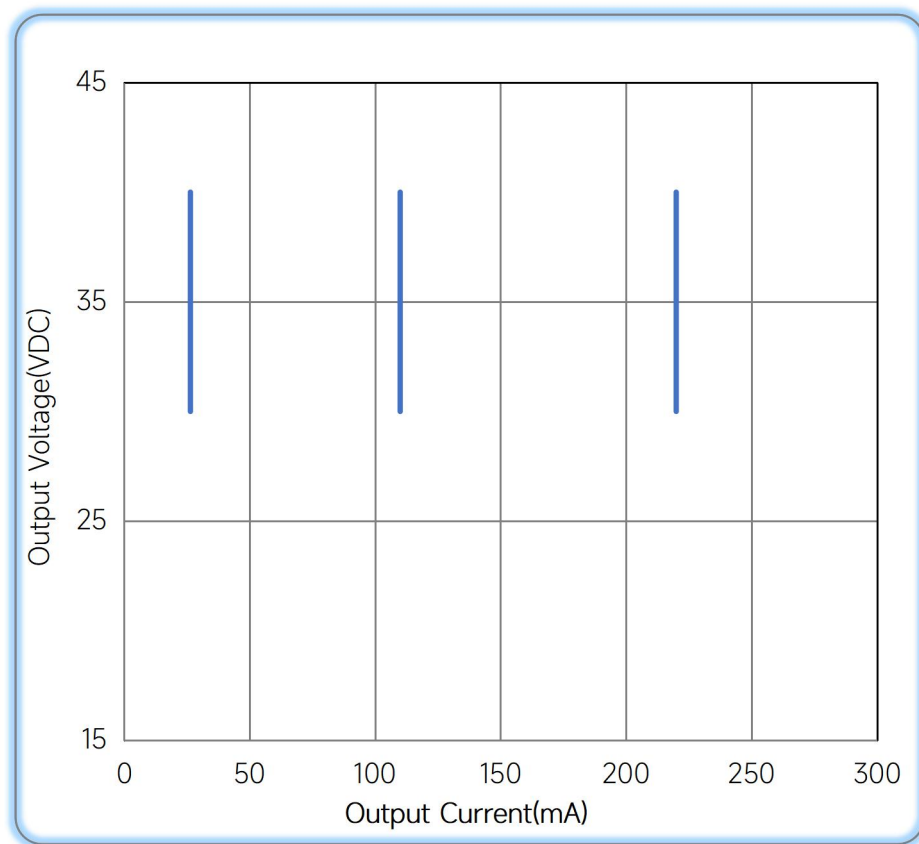
To suppress noise interference, the IC incorporates:

- Power-on delay $T_{d(on)}$: 67ms (typ. at room temp) to confirm ON state.
- Power-off delay $T_{d(off)}$: 30ms (typ. at room temp) to confirm OFF state.

State transition logic:

- Shutdown: Triggered only after detecting a valid CLK signal for >67ms.
- Power-on: Activated after >30ms of no valid CLK signal detection.

◆ Operating window



— Operating window 100%

◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2024/11/12
Tc (Max)	80°C	75°C	B	2025/06/06
Power Factor(Typ.)	0.5@Full Load, 230VAC	0.55@Full Load, 230VAC	C	2025/09/18

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

Tel: (86 757) 8252 3552, 8625 6816

Fax: (86 757) 8626 9260, 8625 6780

E-mail: sales@eaglerise.com

Website : <https://lighting.eaglerise.com/index.aspx>



EAGLERISE



Manual

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Article information 2025/09/18

REV: C

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