

40W Constant Current-FMS Series



■ Approve



Features

- Class I, Non-isolated, Built-in
- Input Voltage 220-240VAC
- Protections: SCP/OVP/OTP
- Power Factor: 0.95(Typ.)
- Efficiency: 90%(Typ.)
- Adjustable Output Current with dip-switch
- 5 years warranty
- IP20

Applications

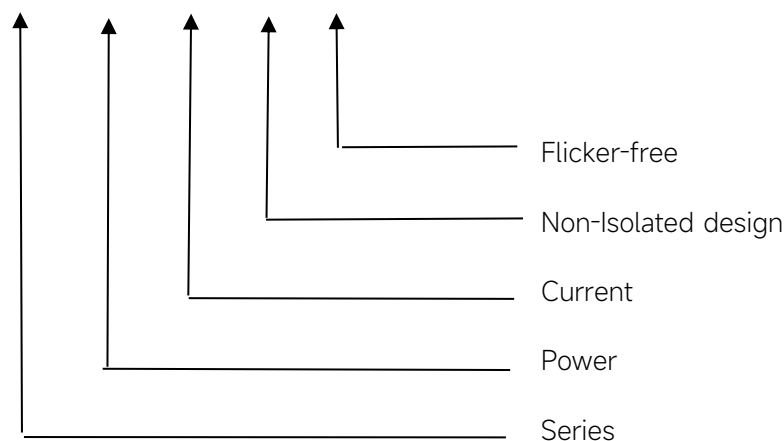
- Linear light

◆ Description

FMS-40-450 N-S LD EXC is a 40W constant current LED driver that operates from 198-264Vac input with 100 to 450mA output current. The output current is adjustable by DIP Switch. With it's dimensions from 168 x 30 x 21mm. It is easy to integrate in linear light products. To ensure trouble-free operation, protection is provided against output short circuit, over voltage and over temperature.

◆ Model code

FMS-40-450 N-S LD EXC



◆ Specification

	Constant Current	100mA	150mA	...mA	450mA
Output	Voltage Range	40-220VDC			
	Unload voltage Max.(VDC)	250VDC			
	Current Accuracy	±8%@100-150mA;±5%@200-450mA;			
	Output HF current ripple(≥1KHz)	±5%			
	Output LF current ripple(<120Hz)	±5%			
	SVM	≤0.4			
	Pst	≤1			
	Efficiency(Typ.)	≥90%@Full load ,220-240V			
	Input	Rated input voltage	220-240VAC		
Range of input voltage		198-264VAC			
Range of input DC voltage(VDC)		176-280VDC			
Frequency(Hz)		0/50/60 Hz			
Displacement factor		≥0.9			
Power Factor		≥0.95@Full load ,220-240V			
Input Current max		0.25A			
Start-up time		< 0.5S			
No Load Power		≤0.5W			
THD (Typ.)		<10% @Full load ,220-240V			
Protection	Over Voltage Protection	YES/Auto Resume			
	Short circuit Protection	YES/Auto Resume			
	Over Temperature Protection	YES/Auto Resume Ta≥75° C, reducing the output current			
Environment	Operating Temperature	-25°C~+60°C			
	Humidity	20%-90%RH			
	Maximum case temperature(Tc)	85°C			
	Storage Temperature	-40°C~+85°C			
	Life time	>50,000h@Tc=85°C >100,000h@Tc=75°C			
	Ripple & Noise	≤20dB(A)@20cm			
Surface	Dimension	168 x 30 x 21(LXWXH)mm			
Standards	IEC61347- 1, IEC61347-2- 13; EN61347- 1, EN61347-2- 13; EN61347- 1, EN61347-2- 13, EN62384; GB/T17743, GB17625. 1, GB19510. 1, GB19510. 14; EN55015, EN61000-3-2, EN61000-3-3, EN61547				
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. 3.Switch and dimmer are not recommended to connect between this product output and luminaries.				

◆ Parameter

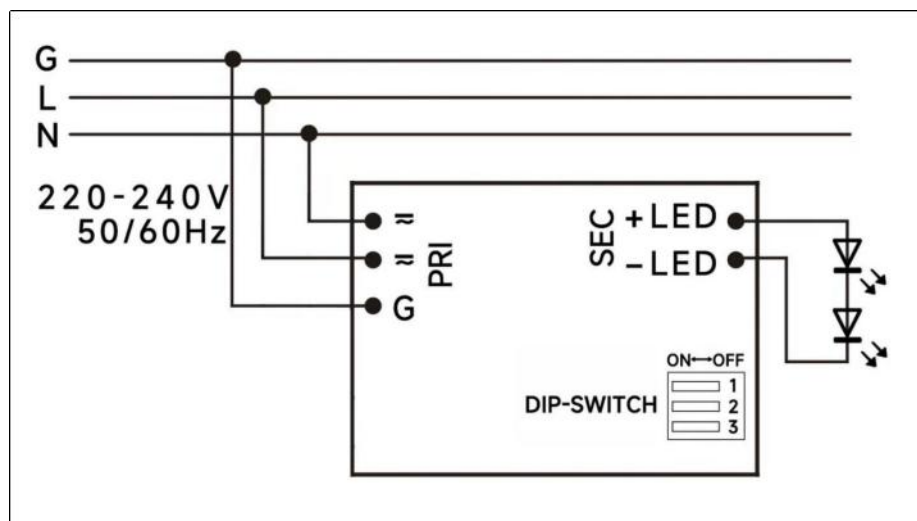
Number	Output				Switch position		
	Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)	1	2	3
1	100mA	40-220	250	22W	--	--	--
2	150mA	40-220		33W	ON	--	--
3	200mA	40-200		40W	--	ON	--
4	250mA	40-160		40W	ON	ON	--
5	300mA	40-133		39.9W	--	--	ON
6	350mA	40-114		39.9W	ON	--	ON
7	400mA	40-100		40W	--	ON	ON
*8	450mA	40-88		39.6W	ON	ON	ON

* Factory default

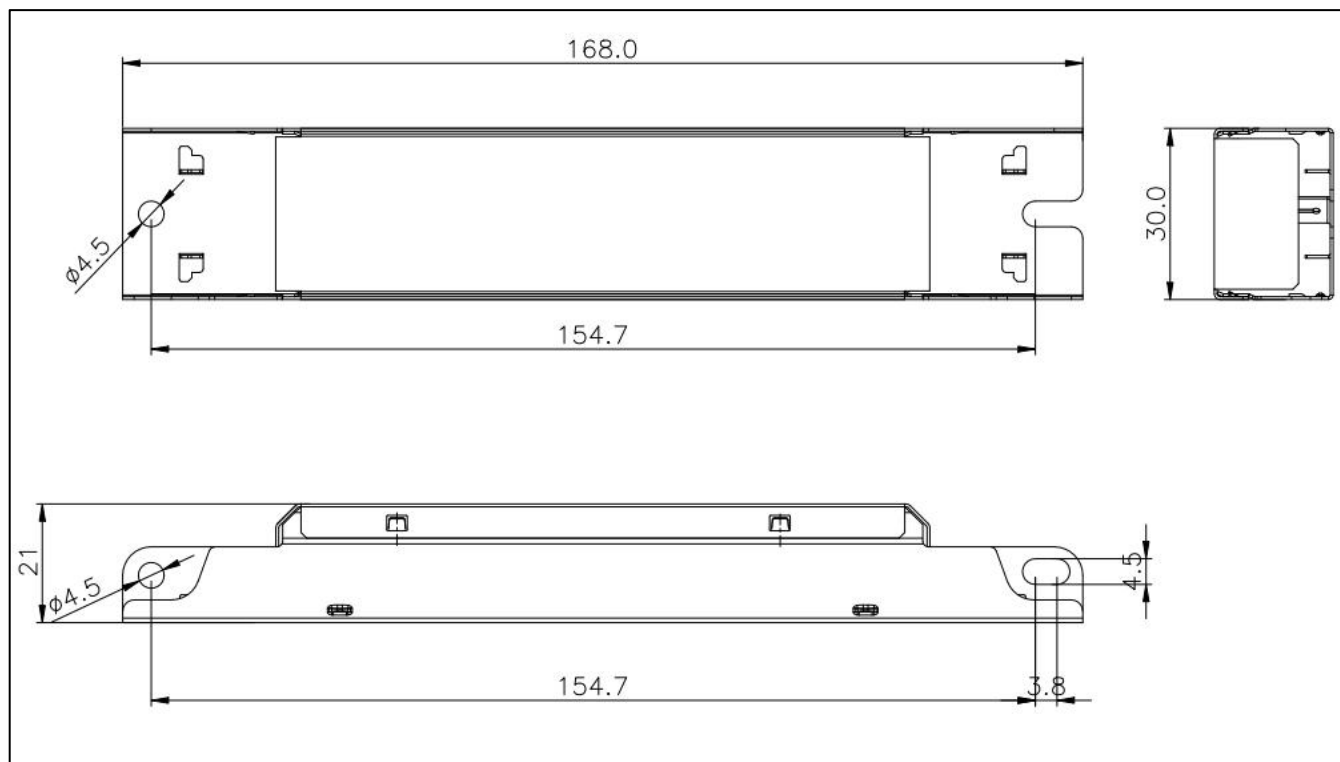
◆ Circuit Breaker

I _{peak}	T _{width}	B10	B16	B20	C10	C16	C20
17.6A	162μs	29pcs	46pcs	58pcs	32pcs	51pcs	64pcs

◆ Wiring diagram



◆ 2D diagram

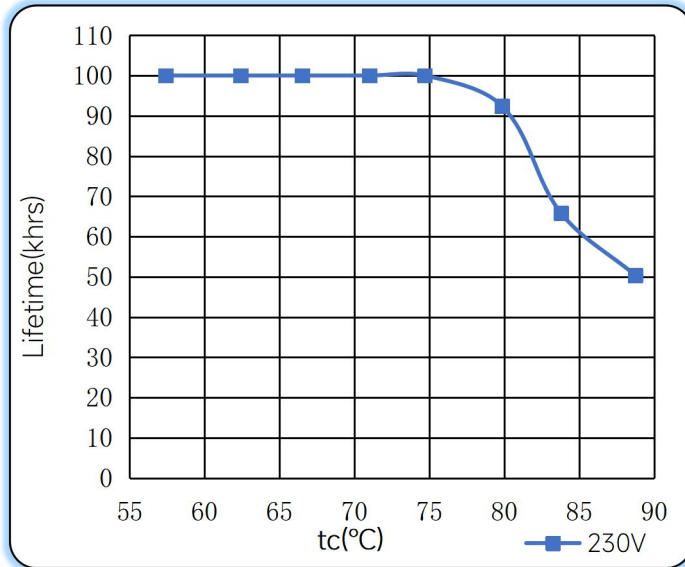


◆ Wiring & Connections

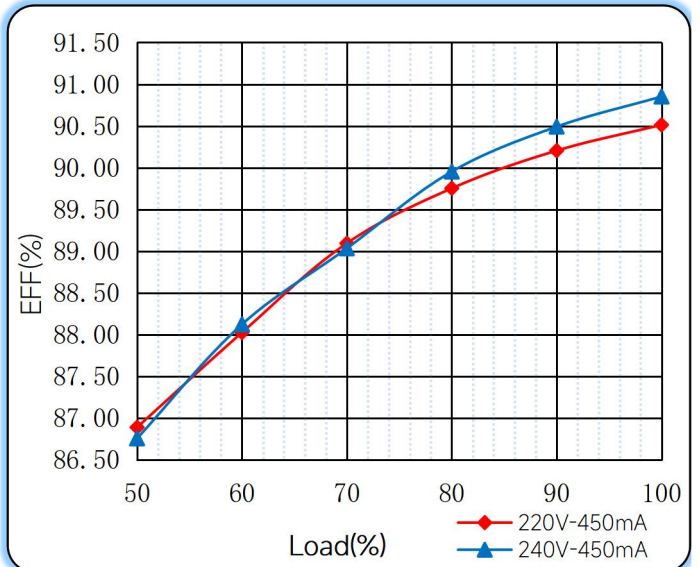
Specification item		Value (Unit)
Input	Input wire cross-section	0.5...1.5 mm ²
	Input wire gauge.	16...20 AWG
	Input wire strip length	7...9mm
Output	Output wire cross-section	0.5...1.5 mm ²
	Output wire gauge.	16...20 AWG
	Output wire strip length	7...9mm

◆ Curve for FMS-40-450 N-S LD EXC, $I_o=450\text{mA}$

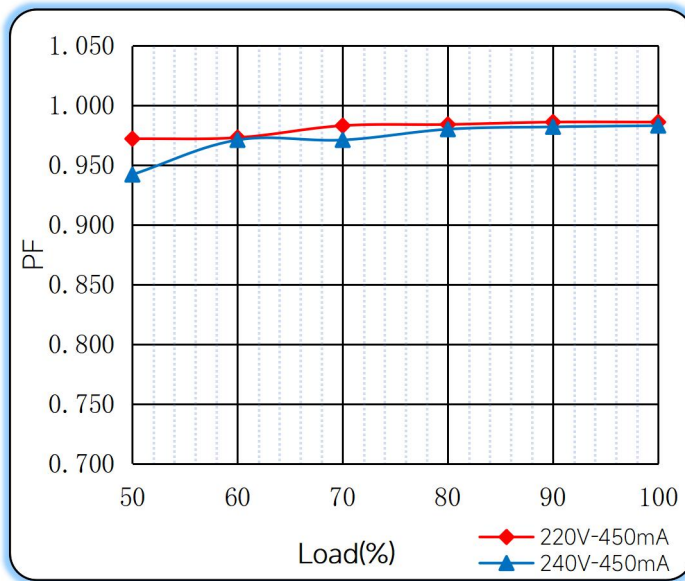
Lifetime vs. Temperature Curve



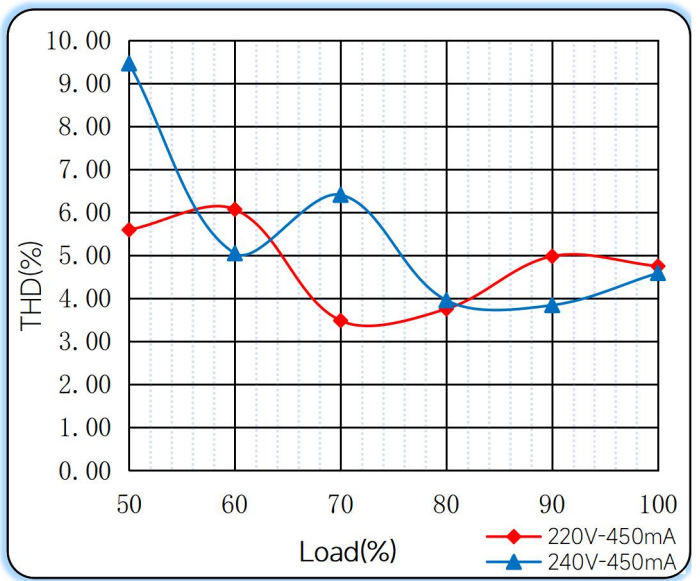
Efficiency vs. Load



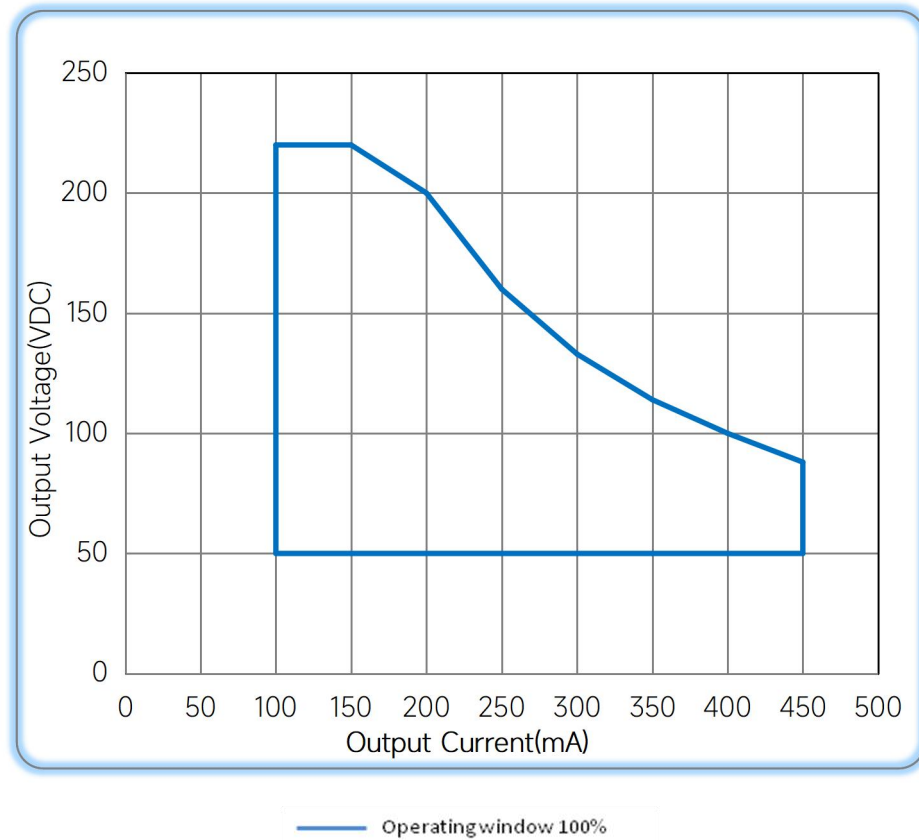
Power Factor Characteristics



THD vs. Load



◆ Operating window



◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2023/05/12
Current Accuracy	±5%	±8%@100-150mA; ±5%@200-450mA;	B	2023/05/17
		Updated	C	2023/05/30

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

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