

60W Constant Current -FMS Series



■ Approve



Features

- For luminaires of protection Class I or II , Built-in
- Input Voltage :220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor: >0.95@full load
- Efficiency: 90%
- Adjustable Output Current with dip-switch
- 5 years warranty

Applications

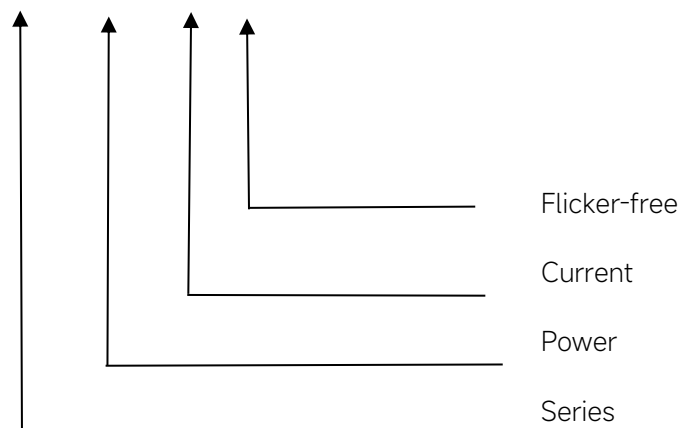
- Linear light

◆ Description

FMS-60-450 LD1-F is a 60W isolated design constant current LED driver that operates from 198-264Vac input with 250 to 450mA output current. The output current is adjustable by dip-switch. With it's long dimensions from 280 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 Load and over temperature.

◆ Model code

FMS-60-450 LD1-F



◆ Specification

Output	Constant Current	250mA	300mA	350mA	400mA	450mA
	Voltage Range	70-240V	70-200V	70-170V	70-150V	70-133.3V
	Unload voltage Max.	300VDC				
	Current Accuracy	±5%				
	Output HF current ripple(≥1KHz)	±5%				
	Output LF current ripple(≤120Hz)	±3%				
	SVM	≤1				
	Pst	≤0.4				
	Efficiency(Typ.)	90%				
Input	Rated input voltage(V)	220-240VAC				
	Range of input voltage(VAC)	198-264VAC				
	Maximum voltage	380VAC@1 h maximum,unit might not operate in this abnormal condition				
	Frequency(Hz)	50/60 Hz				
	Displacement factor	>0.95				
	Power Factor	>0.95@full load				
	Input Current max	0.45A				
	Start-up time	< 0.5S				
	No Load Power	≤1W				
	THD (Typ.)	<10%				
	Over Load Protection	> 102%				
Protection		YES/Auto Resume				
	Over Voltage Protection	> 300VDC				
		YES/Auto Resume				
capability	Short circuit Protection	YES/Auto Resume				
	Surge capability (L-N)	2KV				
Environment	Surge capability (L/N-Ground)	2KV				
	Operating Temperature	-20°C~+50°C				
	Humidity	10%-90%RH				
	Tc	85°C				
	Storage Temperature	-25°C~+85°C				
	Life time	> 50000h@Tc=80,230VAC				
Surface	Noise	≤25dB(A)@20cm				
	Dimension	280X30X21(LXWXH)mm				
Standards	material	metal case				
	Safety	IEC61347- 1, IEC61347-2- 13;EN61347- 1, EN61347-2- 13;EN62384;				

	EMC	EN55015, EN61000-3-2, EN61000-3-3, EN61547;EN 62493;EN61000-4-5;EN61000-4-2,3,4,5,6,8,11, EN61547
	RoHS	RoHS (2011/65/EU) (EU)2015/863
Note	1.All parameters not specially mentioned are measured at 240VAC 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.Temperature test: tested at high temperature(50°C)/low temperature(-20°C)/normal temperature(25°C) 4.Data are typical values obtained from test samples 5.Switch and dimmer are not recommended to connect between this product output and luminaries. 6.The DC input for this product is only used for emergency lighting and applies to functional and safety requirements, EMC is not considered. 7.The over-temperature protection of the product is provided by the IC. 8.EL compatible with IEC 61347-2-13 Annex J, compatible with EN 60598-2-22 emergency lighting fixtures, compatible with EN 50172 central battery system applications.	

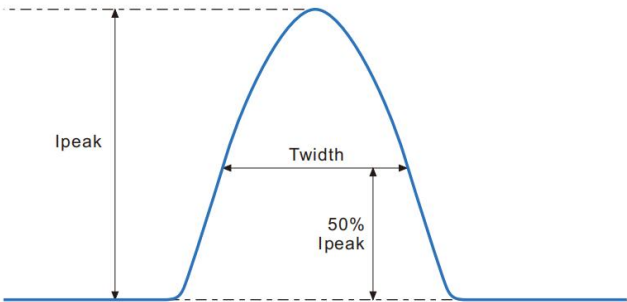
◆ Parameter

Number	Output				Switch position		
	Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)	1	2	3
1	250mA	70-240VDC	300VDC	60	--	--	--
2	300mA	70-200VDC		60	ON	--	--
3	350mA	70-170VDC		59.5	--	ON	--
4	400mA	70-150VDC		60	ON	--	ON
*5	450mA	70-133.3VDC		60	ON	ON	ON

* Factory default

◆ Inrush Current

I _{peak}	T _{width}	B10	B16	B20	C10	C16	C20
40.4A	238μs	8pcs	13pcs	16pcs	14pcs	22pcs	28pcs

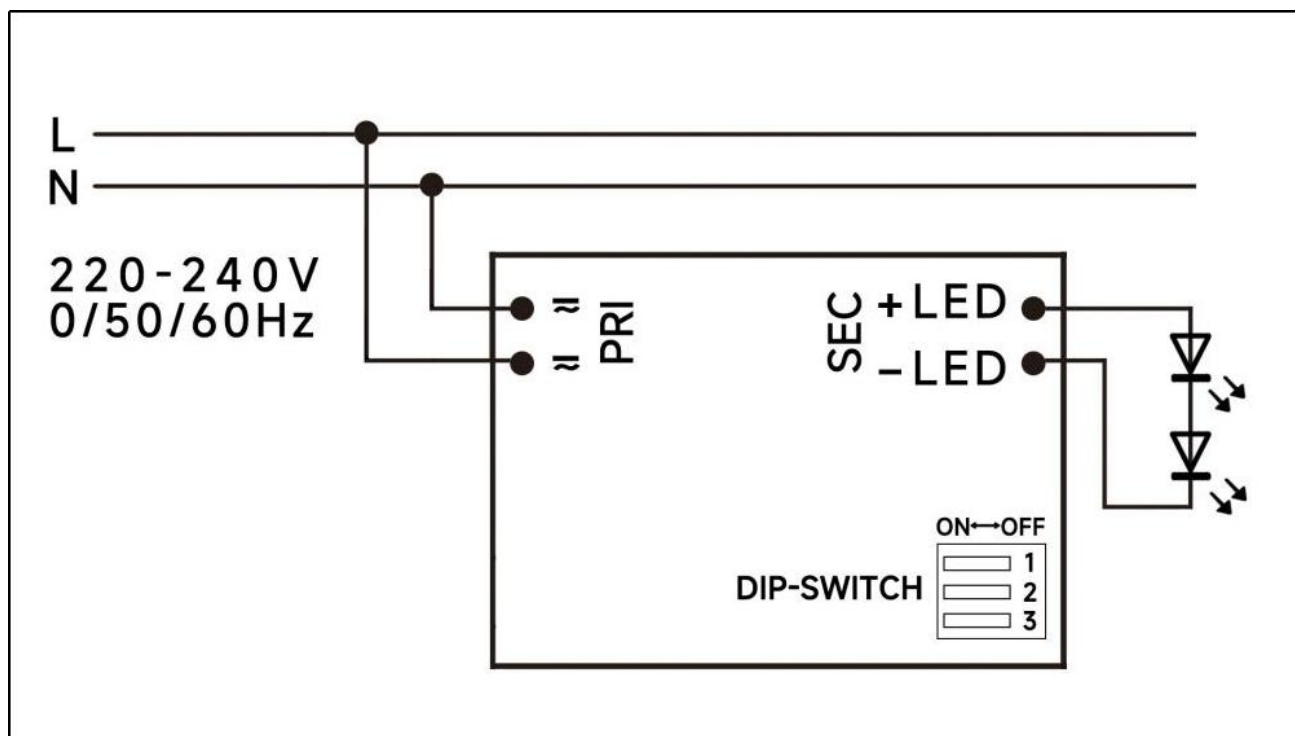


Remarks:

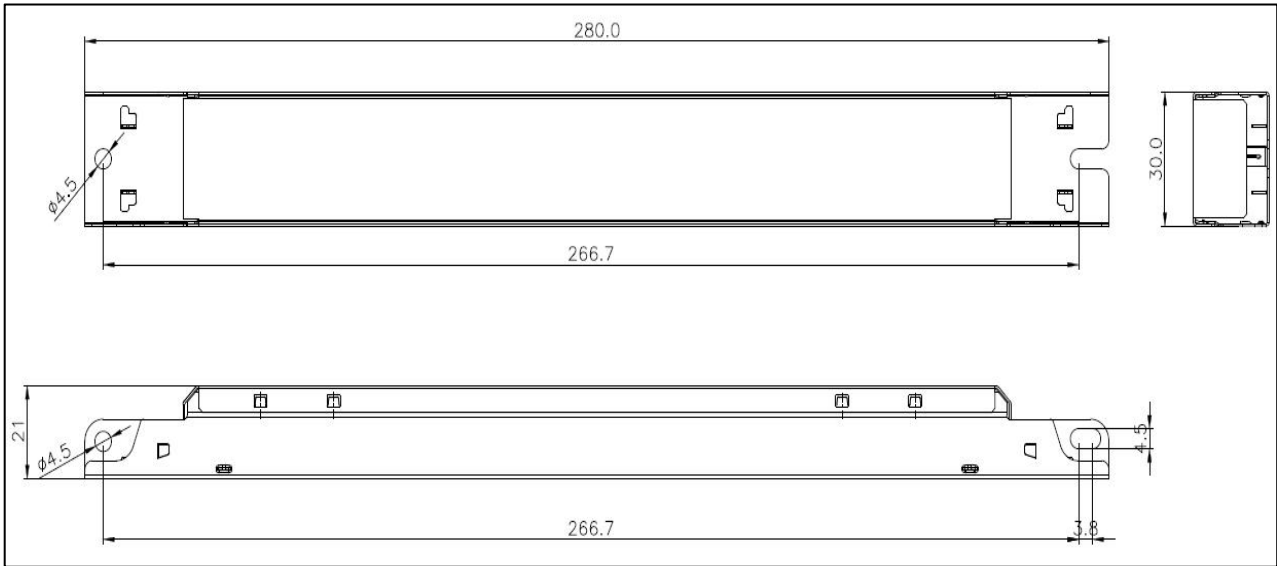
1.The number of drives mounted under different MCBs in the table is the maximum value. Please do not exceed this number during installation.

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

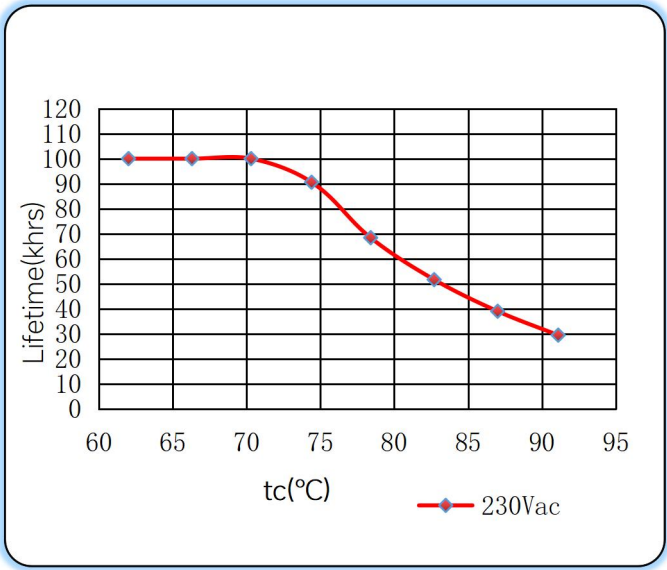
Note: Solid wire is risky to use on an angled terminal. Stranded wire is recommended for this kind of use.

◆ Packaging

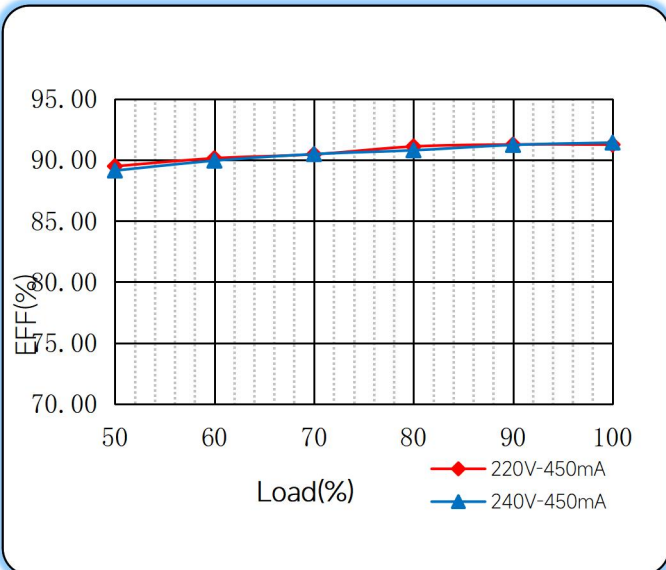
Model	Product Dimensions(mm)	weight/piece	Outer carton dimension(mm)	Quantity/carton	Net weight/carton(Kg)	Gross weight/carton(Kg)
FMS-60-450 LD1-F	280X30X21mm	0.196	295X255X200mm	56	10.97	11.58

◆ Curve for FMS-60-450 LD1-F, $I_o=450\text{mA}$

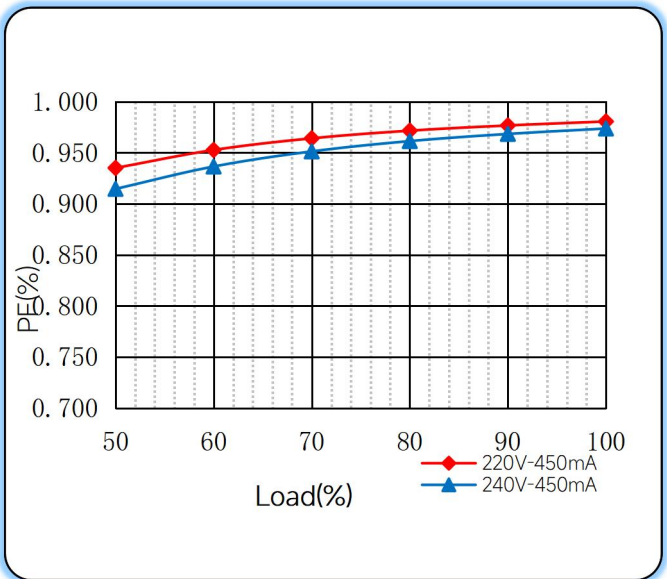
Lifetime vs. Temperature Curve



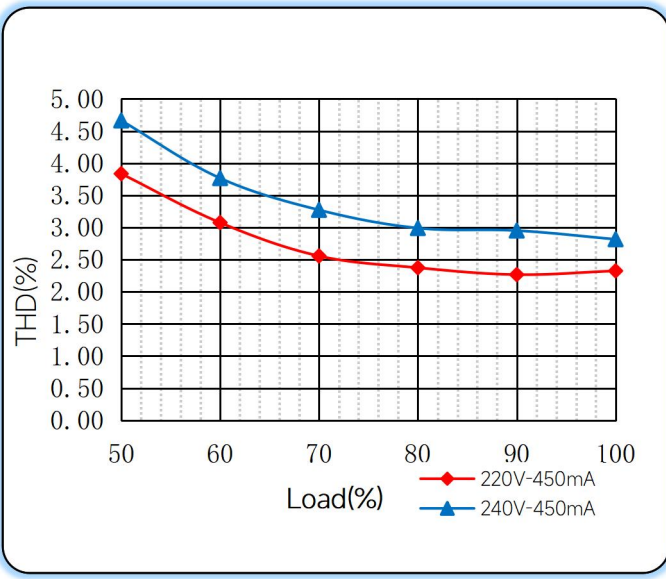
Efficiency vs. Load



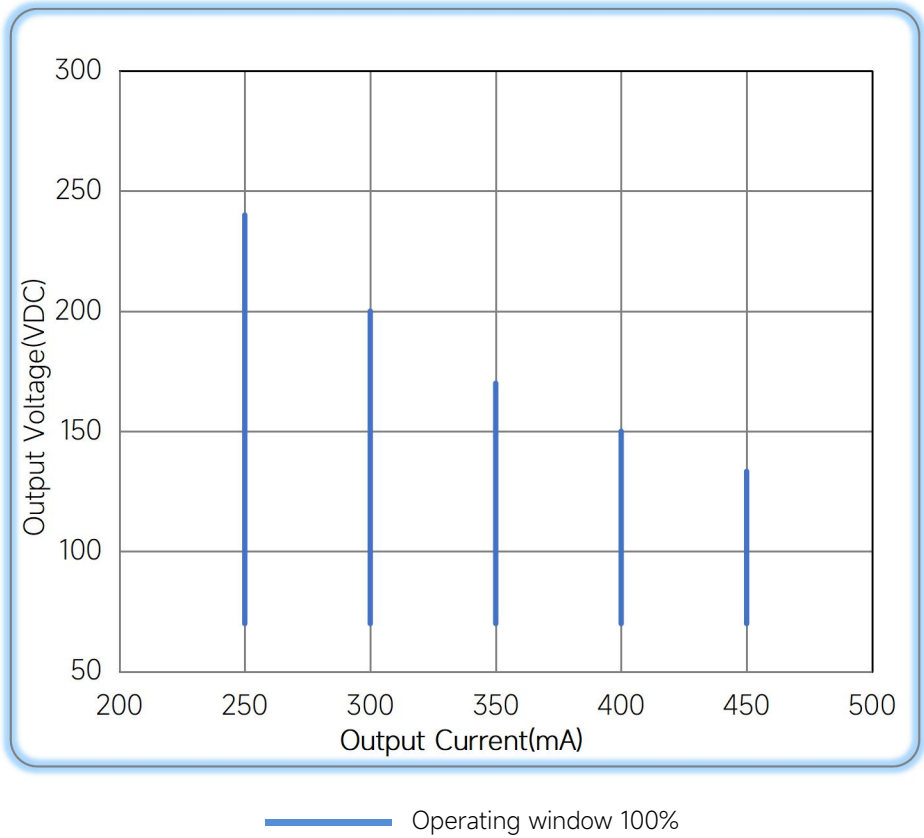
Power Factor Characteristics



THD vs. Load



◆ Operating window



◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2024/03/04

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