

80W Constant Current -FMS Series



■ Approve



Features

- For luminaries of protection Class I or II, Non-isolated, Built-in
- Input Voltage 220-240VAC
- Protections: SCP/OVP/OLP/OTP
- Power Factor: 0.95(Typ.)
- Efficiency : $\geq 93\%$ (Typ.)
- Adjustable Output Current with dip-switch
- 5 years warranty
- IP20

Applications

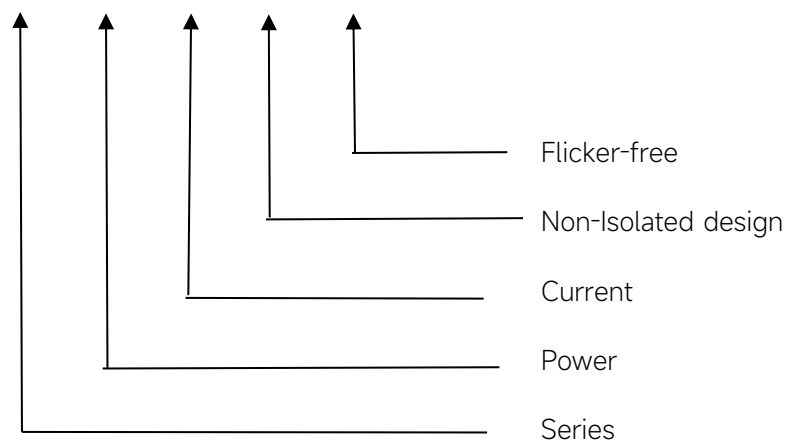
- Linear light

◆ Description

FMS-80-550 N-S LD1 E is an 80W non-Isolated design constant current LED driver that operates from 198-264Vac input with 350 to 550mA output current and a forward voltage range from 40 to 216Vdc. The output current is adjustable by DIP Switch. With it's compact dimensions from 210*30*21 mm. 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-80-550 N-S LD1 E



◆ Specification

Output	Constant Current	350mA	400mA	500mA	550mA
	Voltage Range	40-216VDC	40-187VDC	40-150VDC	40-136VDC
	Unload voltage Max.	250VDC			
	Current Accuracy	±5%			
	Output LF current ripple(≤120Hz)	±5%			
	SVM	≤0.4			
	Pst	≤1			
	Efficiency(Typ.)	≥93% @Full load ,230V			
Input	Rated input voltage	220-240V			
	Range of input voltage	198-264VAC			
	Maximum voltage	300VAC@1 h maximum,unit might not operate in this abnormal condition			
	Range of input DC voltage(VDC)	176-280VDC			
	Frequency(Hz)	0/50/60 Hz			
	Displacement factor	≥0.9			
	Power Factor	0.95 @Full load ,230V			
	Input Current max	0.5A			
	Start-up time	< 0.5S			
	No Load Power	≤0.5W			
	THD (Typ.)	<10%@Full load ,230V			
Protection	Over Load Protection	>103%			
	Over Voltage Protection	YES/Auto Resume			
	Short circuit Protection	YES/Auto Resume			
capability	Surge capability (L-N)	2KV			
	Surge capability (L/N-Ground)	2KV			
Environment	Operating Temperature	-20°C~+50°C			
	Humidity	20%-90%RH			
	Tc	85°C			
	Storage Temperature	-40°C~+85°C			
	Life time	> 50000h@Tc=80°C			
	Noise	≤25dB(A)@20cm			
Surface	Dimension	210X30X21(LXWXH)mm			
	material	metal case			
Standards	Safety	GB19510.1, GB19510.14; IEC61347-1, IEC61347-2-13; EN61347-1, EN61347-2-13, EN62384;AS/NAS 61347-1, AS/NAS 61347-2-13;AS/NZS 61347.1,AS			
	EMC	GB/T17743, GB17625.1; EN55015, EN61000-3-2, EN61000-3-3, EN61547; EN55015, EN61000-3-2, EN61000-3-3, EN61547; EN61000-4-5			
	ErP	Erp2.0 EU 2019/2020			

	RoHS	RoHS (2011/65/EU) (EU)2015/863
Note	<p>1.All parameters not specially mentioned are measured at 230VAC input, full load and 25°C of ambient temperature.</p> <p>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.</p> <p>3.The over-temperature protection of the product is provided by the IC.</p> <p>4.The DC input for this product is only used for emergency lighting and applies to functional and safety requirements, EMC is not considered..</p> <p>5.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.</p>	

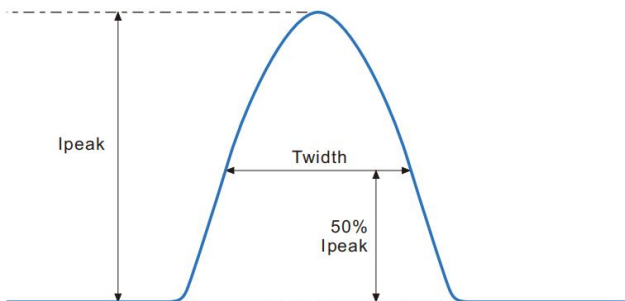
◆ Parameter

Number	Output				Switch position	
	Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)	1	2
1	350mA	40-216VDC	250	75.6	--	--
2	400mA	40-187VDC		74.8	ON	--
3	500mA	40-150VDC		75	--	ON
*4	550mA	40-136VDC		74.8	ON	ON

* Factory default

◆ Inrush Current

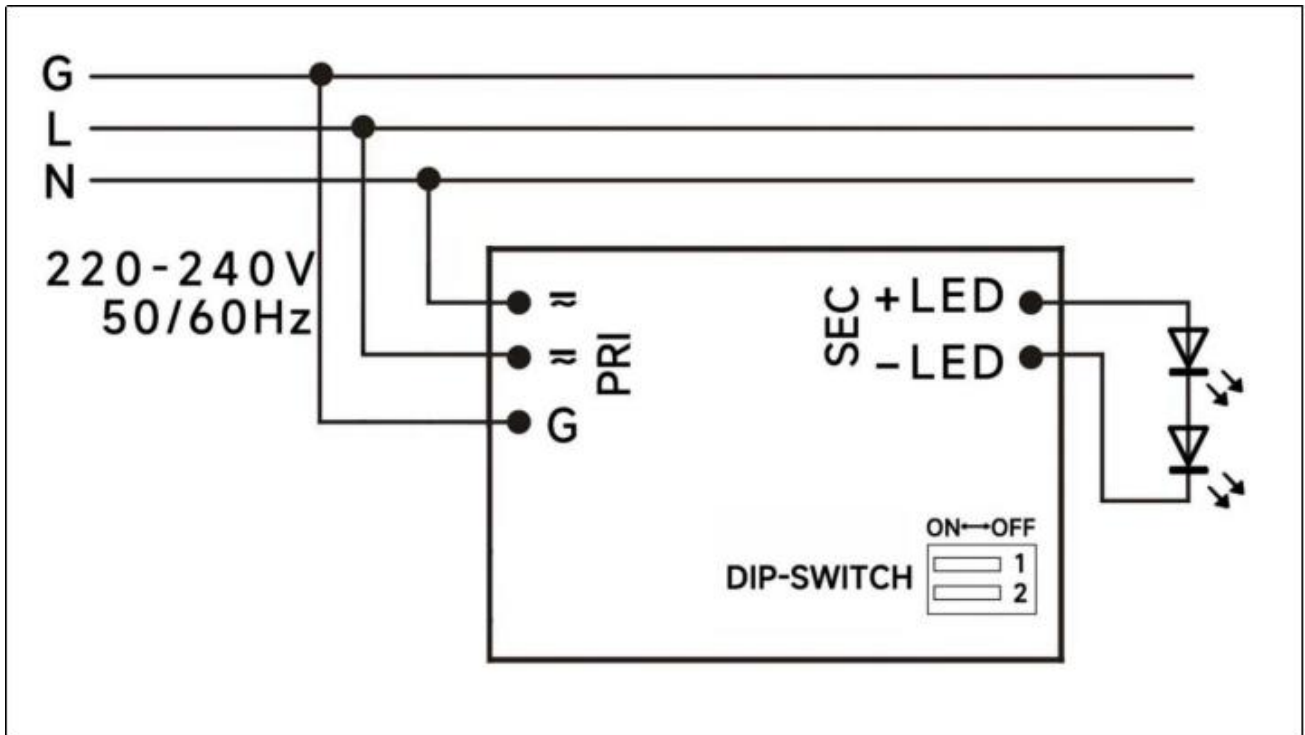
I _{peak}	T _{width}	B10	B16	B20	C10	C16	C20
42.6A	178μs	10pcs	17pcs	21pcs	16pcs	25pcs	32pcs



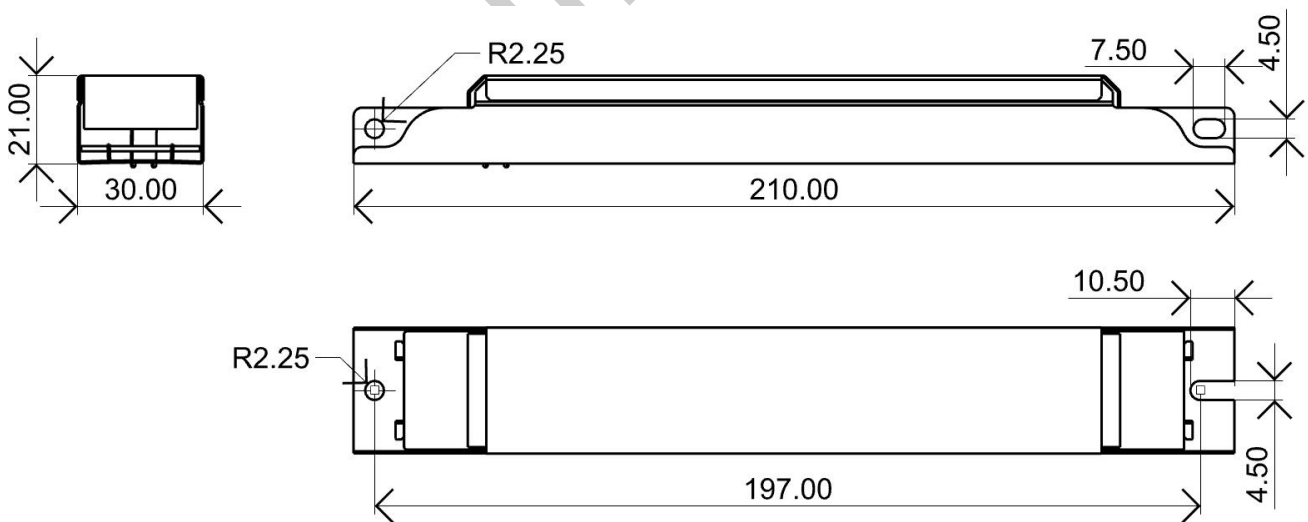
Remarks:

- 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

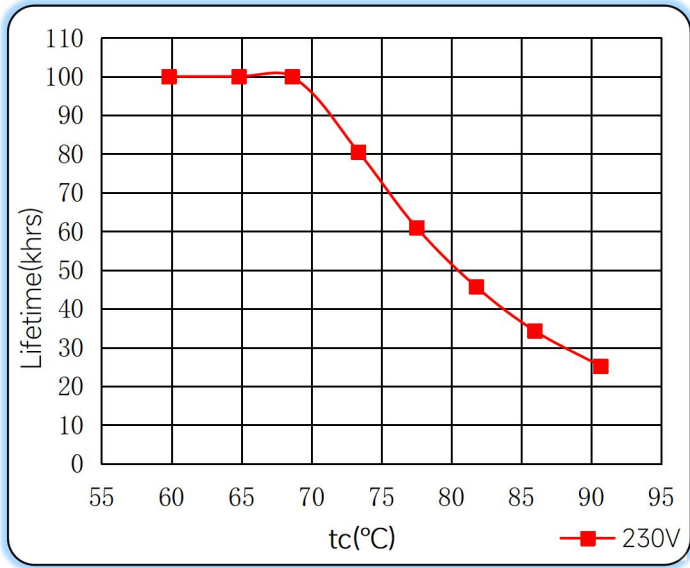
	Specification item	Value (Unit)
Input	Input wire cross-section	0.5...1.5 mm ²
	Input wire gauge.	16...20 AWG
	Input wire strip length	7...9mm
Output	Output wire cross-section	0.5...1.5 mm ²
	Output wire gauge.	16...20 AWG
	Output wire strip length	7...9mm

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

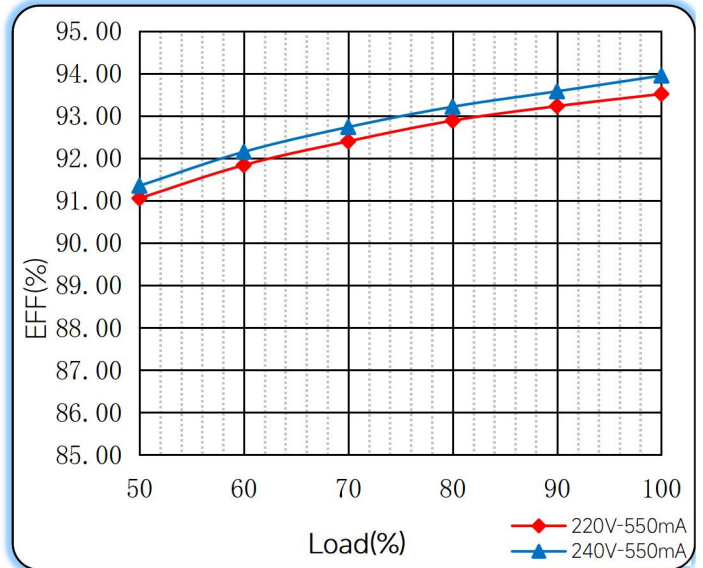
Preliminary

◆ Curve for FMS-80-550 N-S LD1 E, I_o=550mA

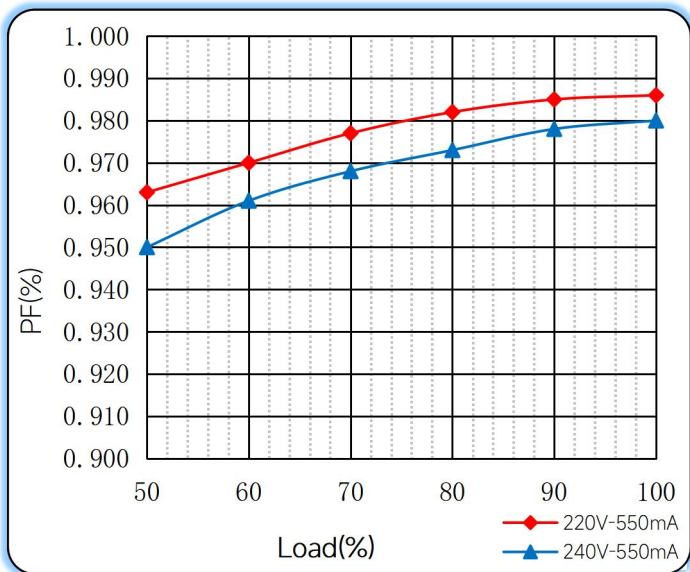
Lifetime vs. Ambient Temperature Curve



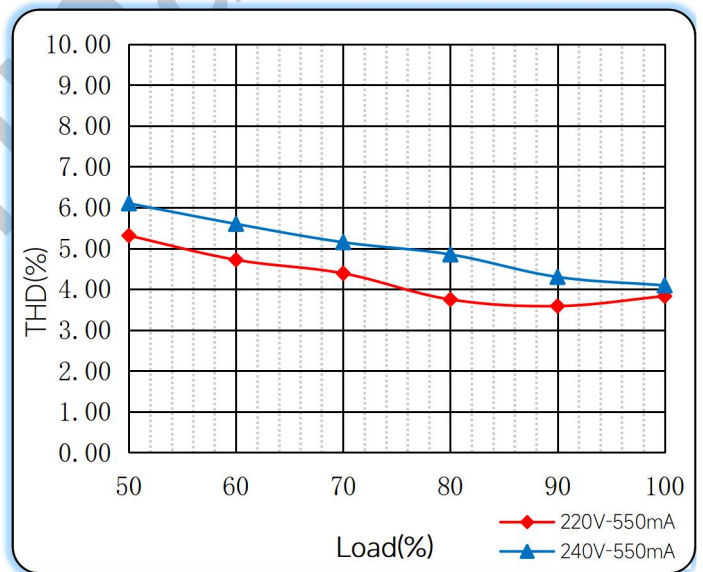
Efficiency vs. Load



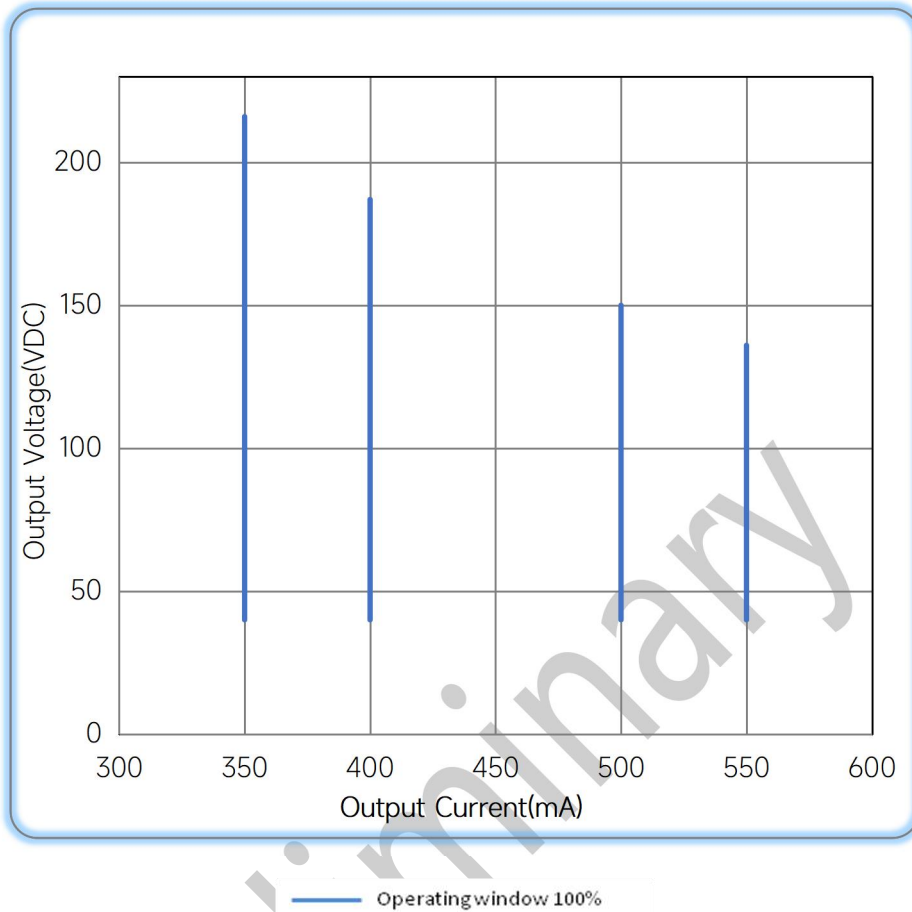
Power Factor Characteristics



THD vs. Load



◆ **Operating window**



◆ **Revision Updates**

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2024/06/12

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

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