80W Constant Current – DIP-Switch

Features

- For luminaries of protection Class I or II, SELV, built-in
- Input Voltage ： 220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor ： > 0.95
- Efficiency ： ⩾91%
- 5 years warranty

Applications

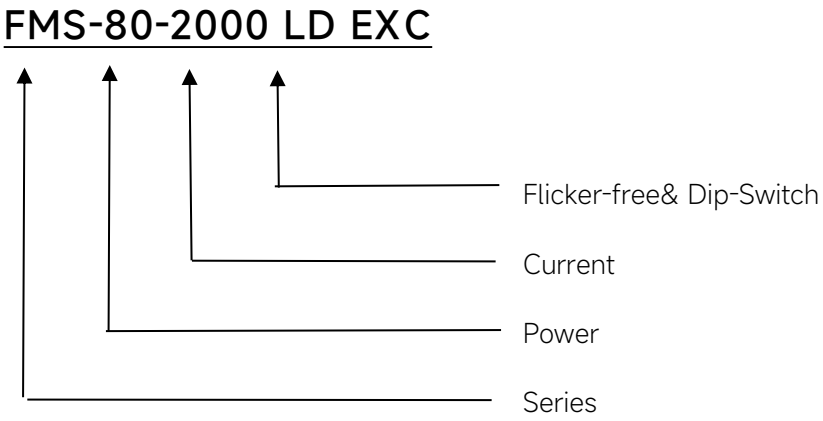
- Linear light

■Approve

◆ Description

FMS-80-2000 LD EXC is a 80W constant current LED driver that operates from 198-264Vac input with 1500 to 2000mA output current. The output current is selectable by DIP Switch. With it's 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



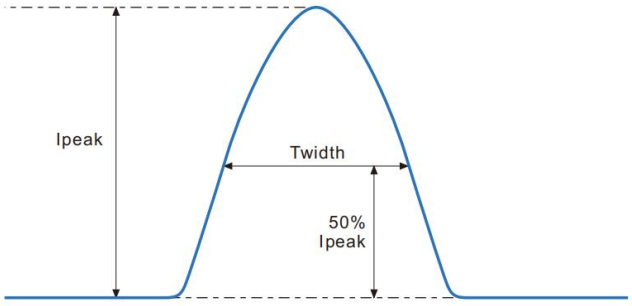
◆ Specification

Output	Constant Current	1500mA	1600mA	1700mA	1800mA	1900mA	2000mA
	Voltage Range	15-51	15-50	15-47	15-44	15-42	15-40
	Unload voltage Max.	59VDC					
	Current Accuracy	±5%					
	Output HF current ripple(≥1KHz)	±3%					
	Output LF current ripple(≤120Hz)	±3%					
	SVM	≤0.4					
	Pst	≤1					
	Efficiency(Typ.)	91%					
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 voltage(VDC)	176-280VDC					
	Frequency(Hz)	0/50/60 Hz					
	Power Factor	＞0.95					
	Input Current max	0.5A					
	Start-up time	＜0.5S					
	No Load Power	≤0.5W					
	THD (Typ.)	＜10%.					
Protection	Over Load Protection	103-160%					
		YES/Auto Resume					
	Over Voltage Protection	＞59VDC					
		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℃~+50℃					
	Humidity	20%-90%RH					
	Tc	85℃					
	Storage Temperature	-25℃~+80℃					
	Life time	＞50000h@Tc=85℃,230VAC					
	Noise	≤25dB(A)@20cm					
Surface	Dimension	280X30X21(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 61347.2.13					
	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	1.All parameters NOT specially mentioned are measured at 230VAC input , full load and 25℃ 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.The DC input for this product is only used for emergency lighting and applies to functional and safety requirements，EMC is not considered.. 4.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. 5.The over-temperature protection of the product is provided by the IC. 6.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.	

◆ Inrush Current

I^{peak}	Twidth	B10	B16	B20	C10	C16	C20
49.6A	**314μs**	5pcs	8pcs	10pcs	8pcs	13pcs	17pcs



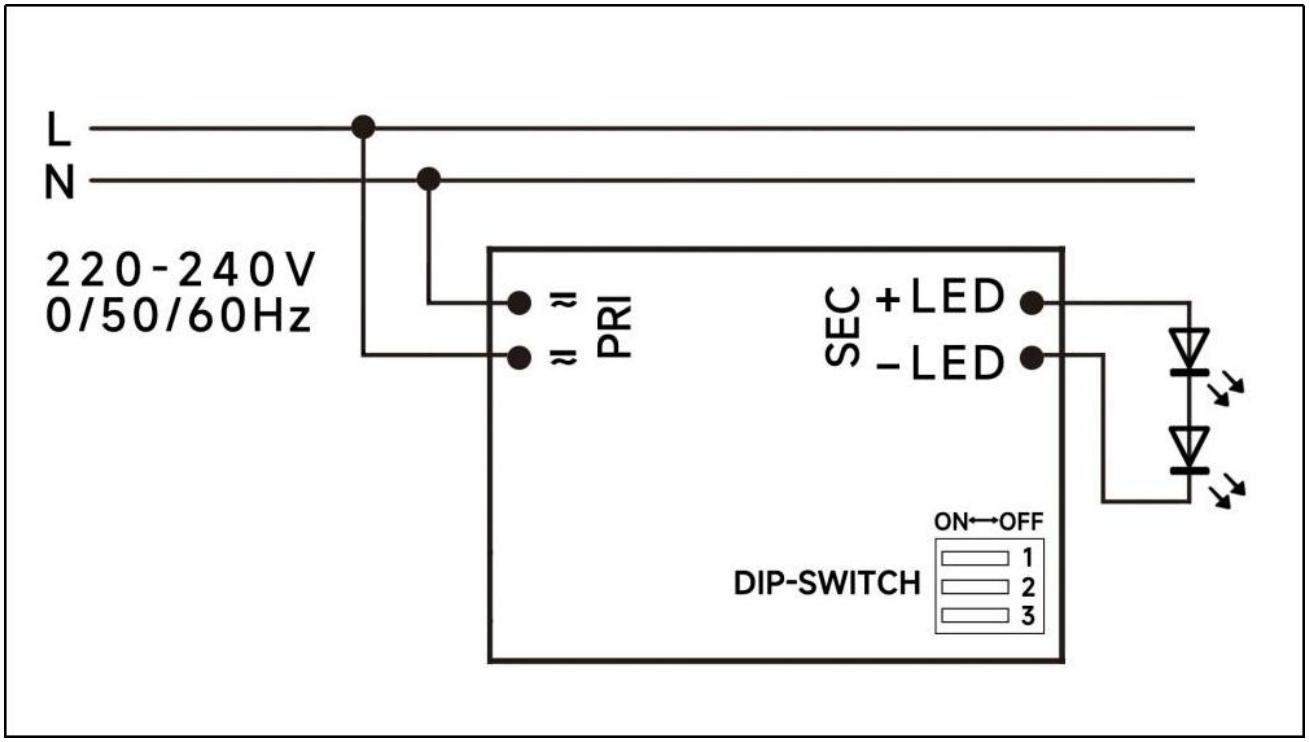
Remarks:
1.The number of drives mounted under different MCBs in the table is the maximum value. Please do not exceed this number during installation.
2.Different brands and models of miniature circuit breakers, the number of drives mounted will be slightly different.

◆ Parameter

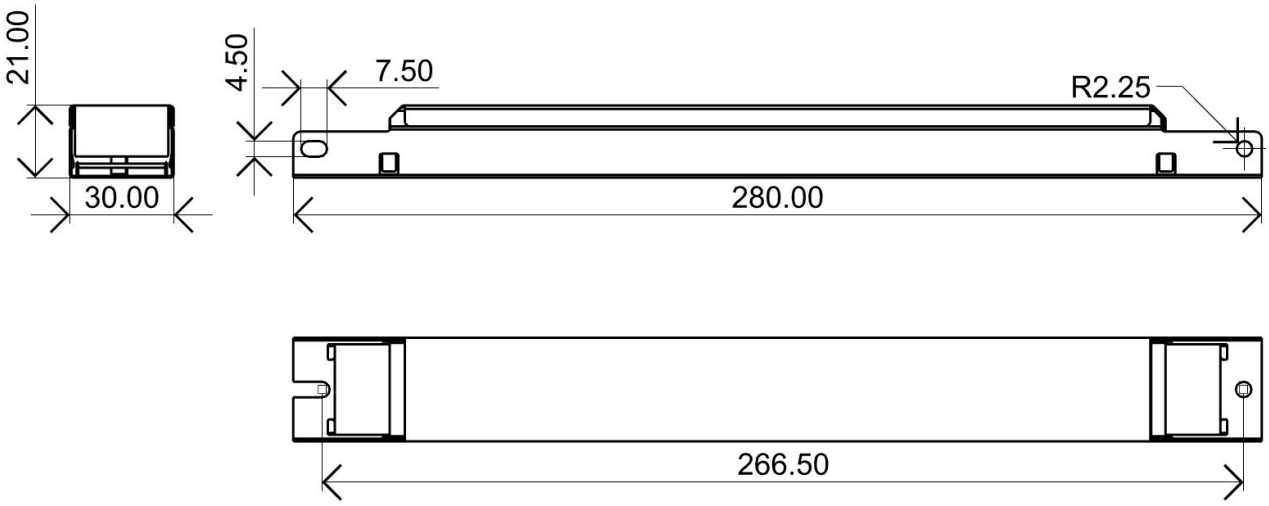
Number	Output				Switch position		
	Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)	1	2	3
1	1500mA	15-51VDC		76.5	--	--	--
2	1600mA	15-50VDC		80	ON	--	--
3	1700mA	15-47VDC		79.9	--	ON	--
4	1800mA	15-44VDC		79.2	ON	ON	--
5	1900mA	15-42VDC		79.8	--	ON	ON
*6	2000mA	15-40VDC		80	ON	ON	ON

* Factory default

◆ Wiring diagram



◆ 2D diagram



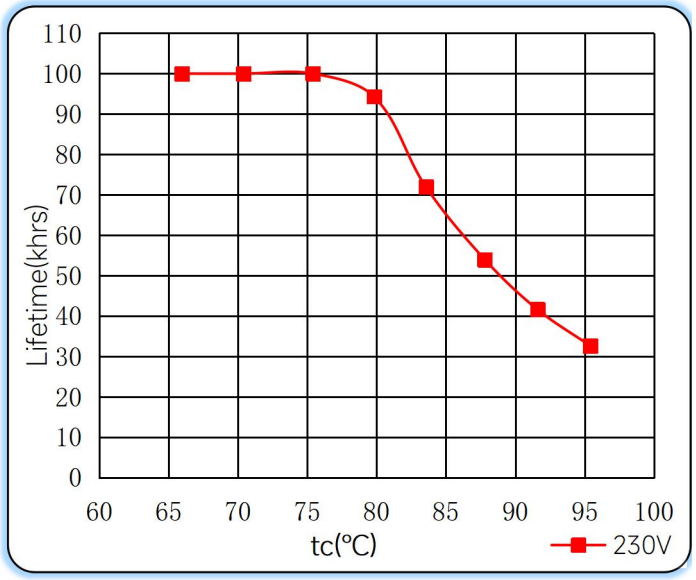
◆ Wiring & Connections

Specification item		Value （Unit ）
Input	Input wire cross-section	0.5...1.5 mm^2 （With side caps：0.75...1.5 mm^2）
	Input wire gauge.	16...20 AWG （With side caps：16...22 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

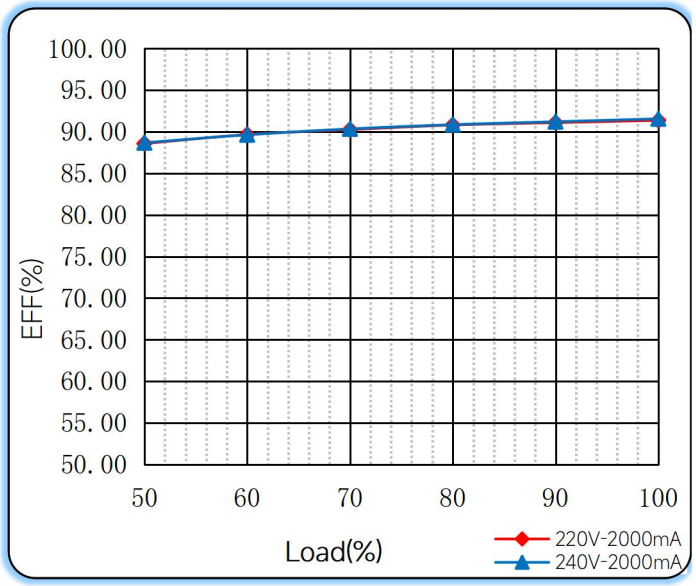
Note:Solid wire is risky to use on an angled terminal.Stranded wire is recommended for this kind of use.

◆ Curve for FMS-80-2000 LD EXC, Io=2000mA

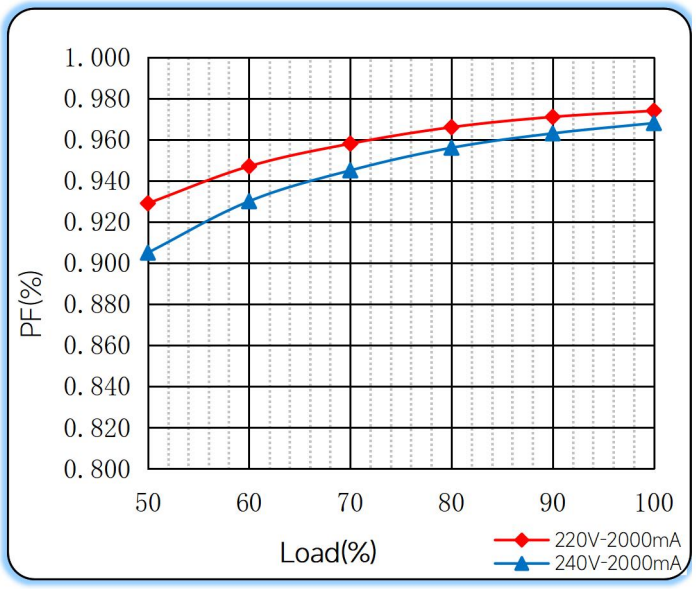
Lifetime vs. Temperature Curve



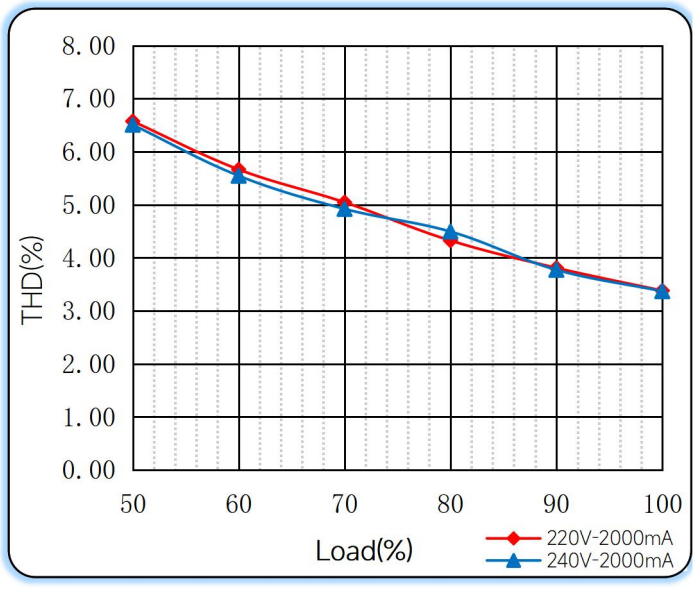
Efficiency vs. Load



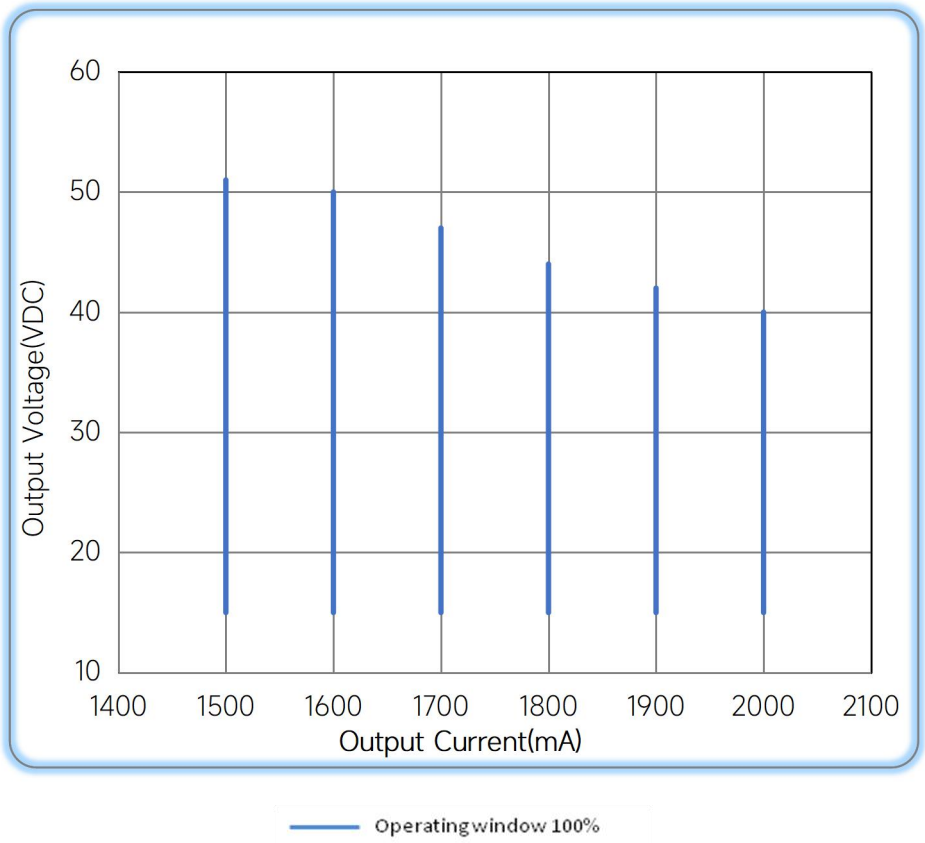
Power Factor Characteristics



THD vs. Load



◆ Operating window



◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2023/08/15
Voltage Range	15-54	15-51	B	2024/03/21

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

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