

40W Constant Current – DIP-Switch



■ Approve

CE CB SELV



Features

- For luminaires of protection Class I or II, SELV, built-in
- Input Voltage : 220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor : > 0.95
- Efficiency: 90% @ 700~850mA;
89% @ 900~1050mA
- 5 years warranty

Applications

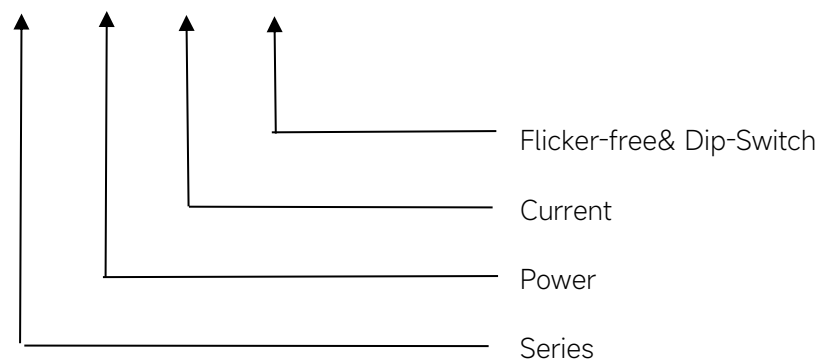
- Linear light

◆ Description

FMS-40-1050 LD EXC is a 40W constant current LED driver that operates from 198-264Vac input with 700 to 1050mA output current. The output current is selectable by DIP Switch. With its dimensions from 210 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-40-1050 LD EXC



◆ Specification

Output	Constant Current	700mA	750mA	800mA	...	1000mA	1050mA
	Voltage Range	15-51VDC				15-40VD	15-38VDC
	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.)	90%@700~850mA;89%@900~1050mA					
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	0.28A					
	Start-up time	< 0.5S					
	No Load Power	≤0.5W					
	THD (Typ.)	< 10%.					
Protection	Over Load Protection	101-160%					
		YES/Auto Resume					
	Over Voltage Protection	> 59VDC					
		YES/Auto Resume					
capability	Short circuit Protection	YES/Auto Resume					
capability	Surge capability (L-N)	2KV					
	Surge capability (L/N-Ground)	2KV					
Environment	Operating Temperature	-20°C~+60°C					
	Humidity	20%-90%RH					
	Tc	80°C					
	Storage Temperature	-25°C~+80°C					
	Life time	> 50000h@Tc=80°C,230VAC					
	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					
	EMC	GB/T17743, GB17625. 1;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°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.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.	

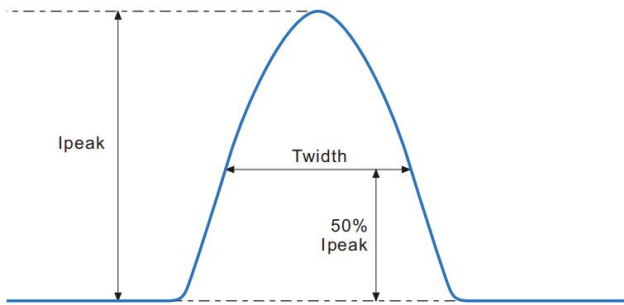
◆ Parameter

Number	Output				Switch position		
	Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)	1	2	3
1	700mA	15-51VDC	59	35.7	--	--	--
2	750mA			38.3	ON	--	--
3	800mA			40.8	--	ON	--
4	850mA	15-48VDC		40.8	ON	ON	--
5	900mA	15-46VDC		41.4	--	--	ON
6	950mA	15-44VDC		41.8	ON	--	ON
7	1000mA	15-40VDC		40	--	ON	ON
*8	1050mA	15-38VDC		39.9	ON	ON	ON

* Factory default

◆ Inrush Current

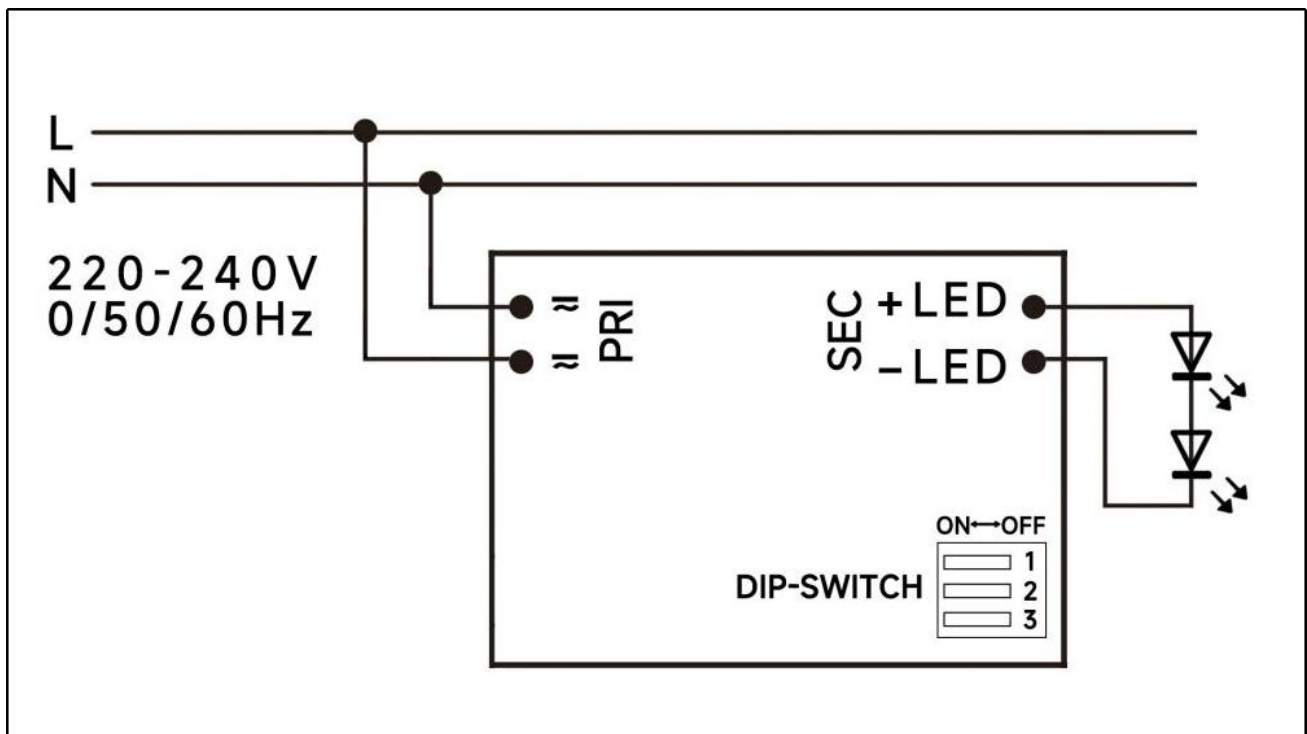
I_{peak}	Twidth	B10	B16	B20	C10	C16	C20
16.8A	162 μ s	28pcs	45pcs	57pcs	28pcs	45pcs	57pcs



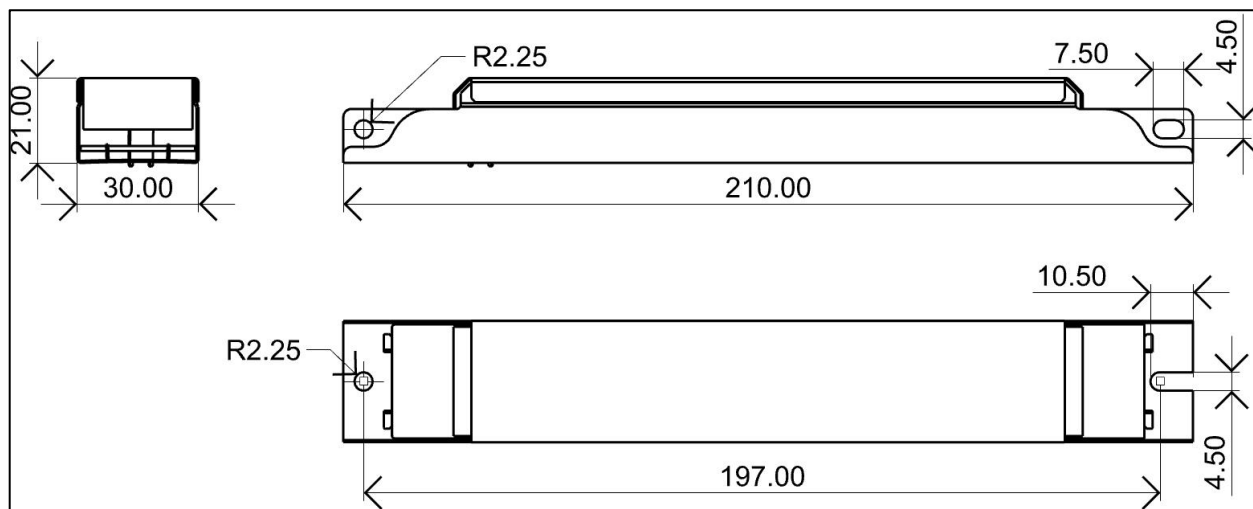
Remarks:

- 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



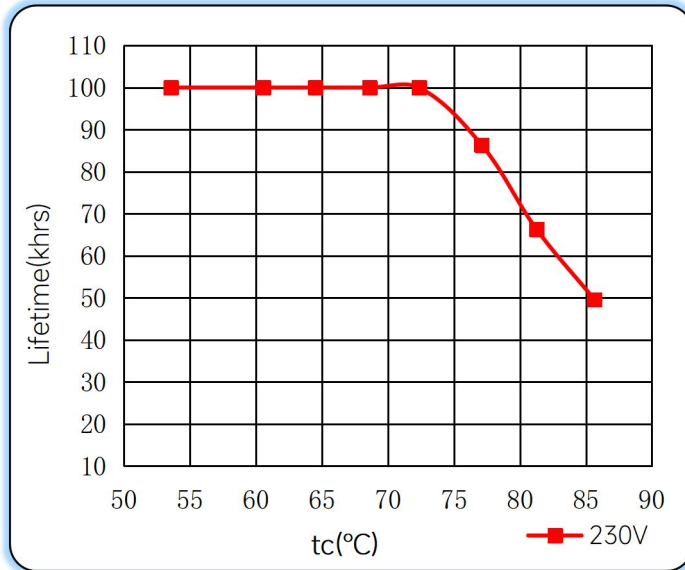
◆ Wiring & Connections

Specification item		Value (Unit)
Input	Input wire cross-section	0.5...1.5 mm ² (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

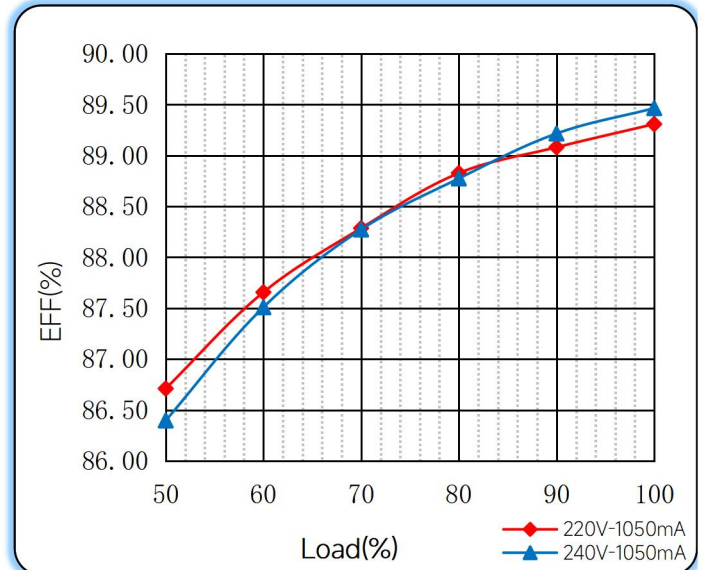
Note: Solid wire is risky to use on an angled terminal. Stranded wire is recommended for this kind of use.

◆ Curve for FMS-40-1050 LD EXC, $I_o=1050\text{mA}$

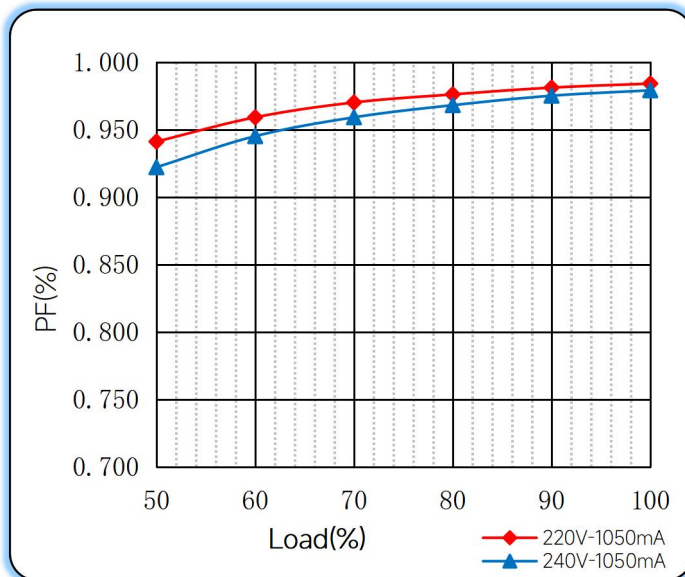
Lifetime vs. Temperature Curve



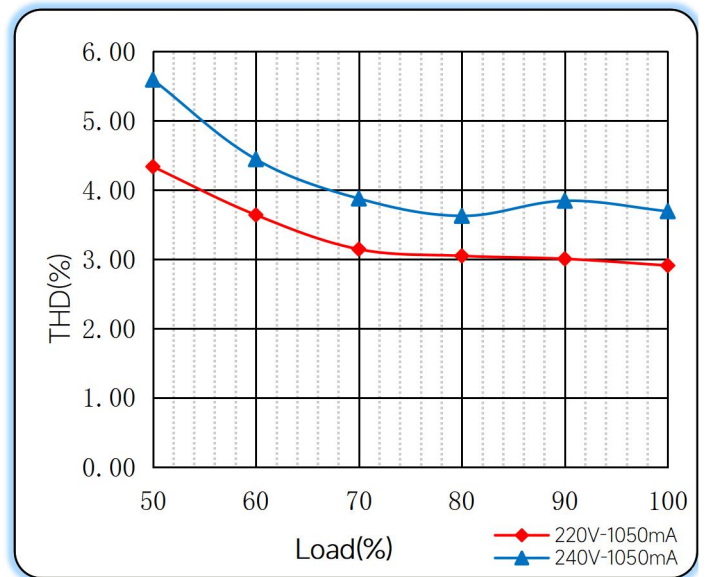
Efficiency vs. Load



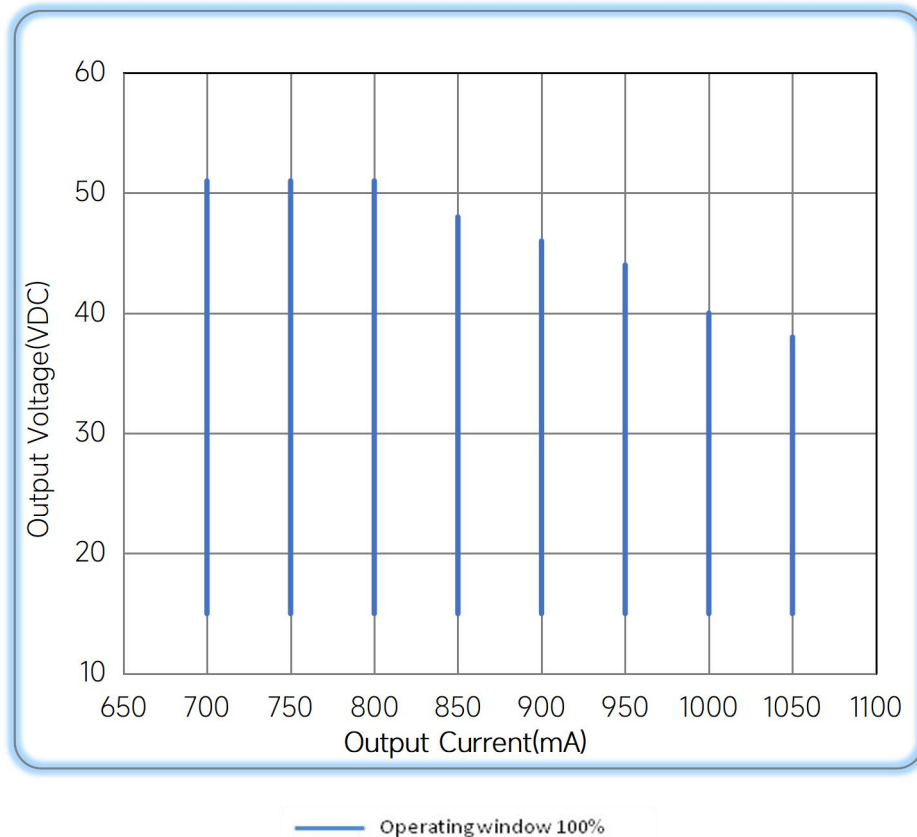
Power Factor Characteristics



THD vs. Load



◆ Operating window



◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2023/08/15
Efficiency(Typ.)	90%	90%@700~850mA; 89%@900~1050mA	B	2024/01/24
Voltage Range	15-54	15-51	C	2024/04/18

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

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