

60W 0-10V Dimming power supply



■ Approve

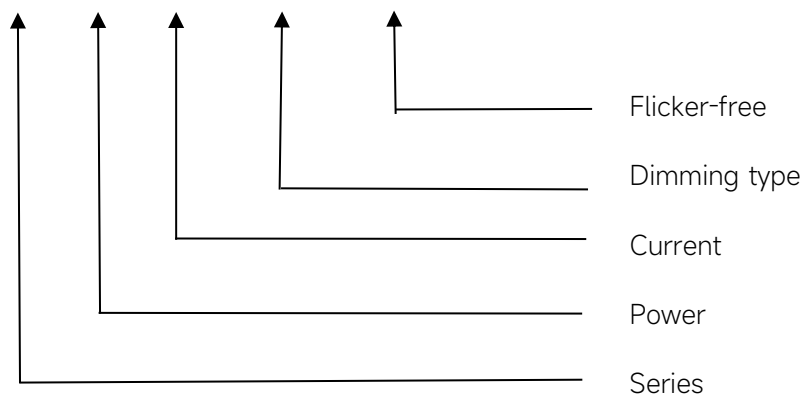


◆ Description

FMS-60-700 0-10 LD-F is a 60W constant current LED driver that operates from 198-264Vac input with 400 to 700mA output current and a forward voltage range from 40 to 150Vdc. The output current is adjustable by DIP Switch. With its compact dimensions from 280x 30 x 21mm. It is easy to integrate in LED Panel products. To ensure trouble-free operation, it provides protection against output short circuit, overload and over Voltage.

◆ Model code

FMS-60-700 0-10 LD-F



Features

- For luminaires of protection Class I , SELV , Built-in
- Input Voltage: 220-240VAC, 176-280VDC
- Protections: SCP/OLP/OVP/OTP
- Power Factor : 0.6C-0.95
- Efficiency : 88%(Typ.)
- Support 0-10V Dimming
- 5 years warranty
- IP20
- EOfi=100%

Applications

- LED panel light
- LED spot light

◆ Specification

Output	Constant Current (mA)	400mA	500mA	600mA	700mA
	Voltage Range(VDC)	40-150VDC	40-120VDC	40-100VDC	40-86VDC
	Unload voltage Max.(VDC)	200V			
	Current Accuracy	±5%			
	Output HF current ripple(≥1KHz)	±5%			
	Output LF current ripple(≤120Hz)	±5%			
	Auxiliary Output Voltage	12V			
	Auxiliary Output Current	50 mA			
	SVM	≤0.4			
	Pst	≤1			
	Efficiency(Typ.)	88%@full Load,220-240V			
	EOFI	100%			
Input	Rated input voltage(VAC)	220-240V			
	Range of input voltage(VAC)	198-264VAC			
	Range of input voltage(VDC)	176-280VDC			
	Maximum voltage	300VAC@1 h maximum,unit might not operate in this abnormal condition			
	Frequency(Hz)	0/50/60 Hz			
	Displacement factor	> 0.9			
	Power Factor	0.6C-0.95			
	Input Current max	0.38A			
	Start-up time	< 0.5S			
	No Load Power	≤1W			
	Standby Power	≤0.5W			
	Network standby power	≤0.5W			
	THD (Typ.)	<10%@full Load,220-240V			
Dimming	Dimming	YES			
	Dimming mode	0-10V			
	Dimming depth	1%			
	Dimming current range	1-100%			
	Over Load Protection	YES/Auto Resume			
	Over Voltage Protection	> 200VDC			
		YES/Auto Resume			
	Short circuit Protection	YES/Auto Resume			
capability	Surge capability (L-N)	1KV			
	Surge capability (L/N-Ground)	2KV			
Environment	Operating Temperature	-20°C...+60°C			
	Humidity	20%-90%RH			
	Tc	90°C			
	Storage Temperature	-25°C...+60°C			

	Life time	>50000h@Tc=80°C
	Ripple&Noise	≤25dB(A)@20cm
Surface	Dimension	280 x 30 x 21mm
	material	PC
statutory	Safety Standards	GB19510. 1, GB19510. 14; IEC61347- 1, IEC61347-2- 13; EN 60598-2-22; EN61347- 1, EN61347-2- 13; AS/NAS 61347- 1, AS/NAS 61347-2- 13; EN61347- 1, EN61347-2- 13, EN62384; 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;
	Energy Efficiency	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.Switch and dimmer are not recommended to connect between this product output and luminaries. 4.The over-temperature protection of the product is provided by the IC. 5.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.	

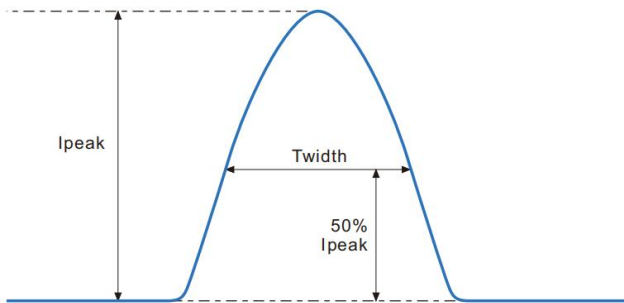
◆ Parameter

Number	Output				Switch position	
	Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)	1	2
1	400mA	40-150VDC	200	60W	--	--
2	500mA	40-120VDC		60W	ON	--
3	600mA	40-100VDC		60W	--	ON
*4	700mA	40-86VDC		60.2W	ON	ON

* Factory default

◆ Inrush Current

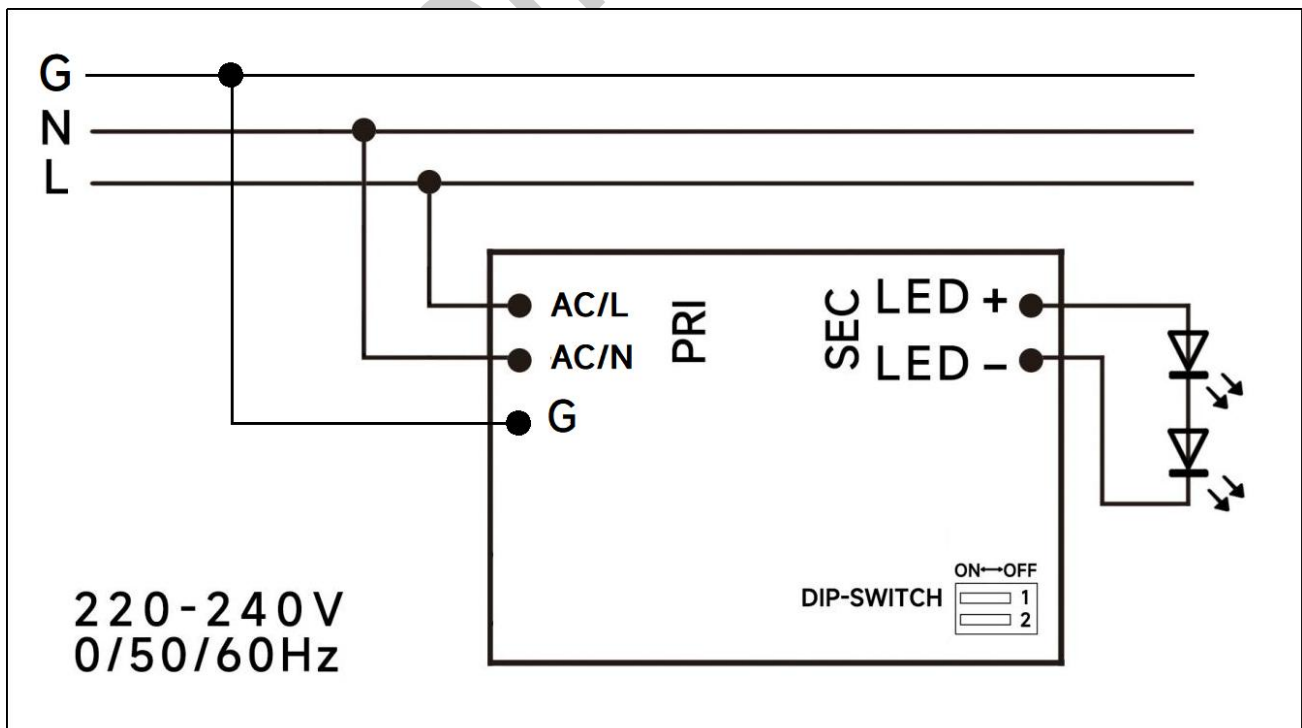
I_{peak}	Twidth	B10	B16	B20	C10	C16	C20
32.2A	240μs	10pcs	16pcs	20pcs	17pcs	27pcs	34pcs



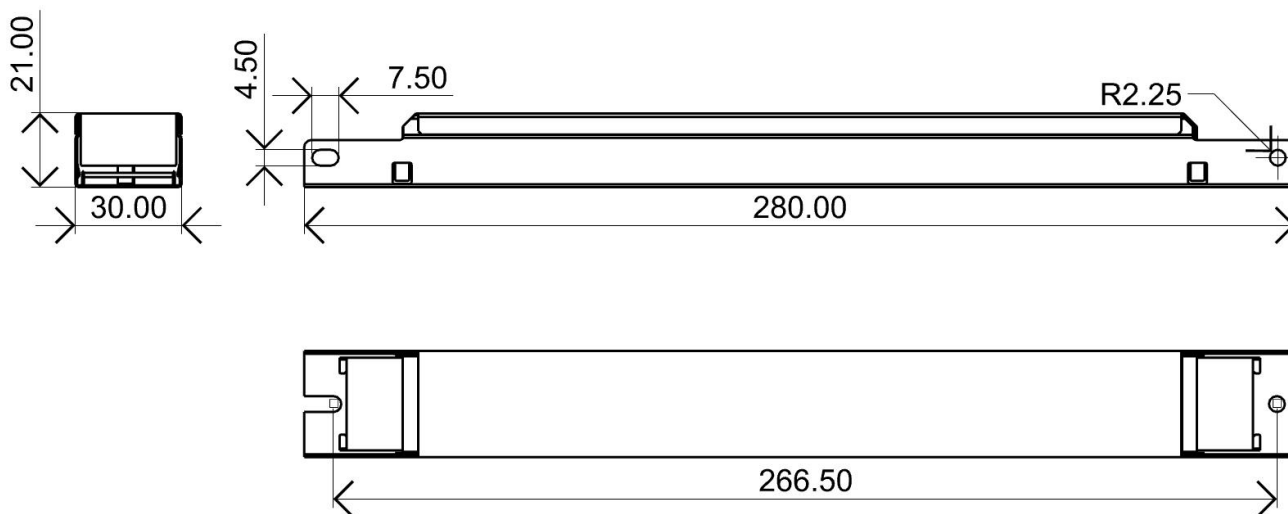
Remarks:

- 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

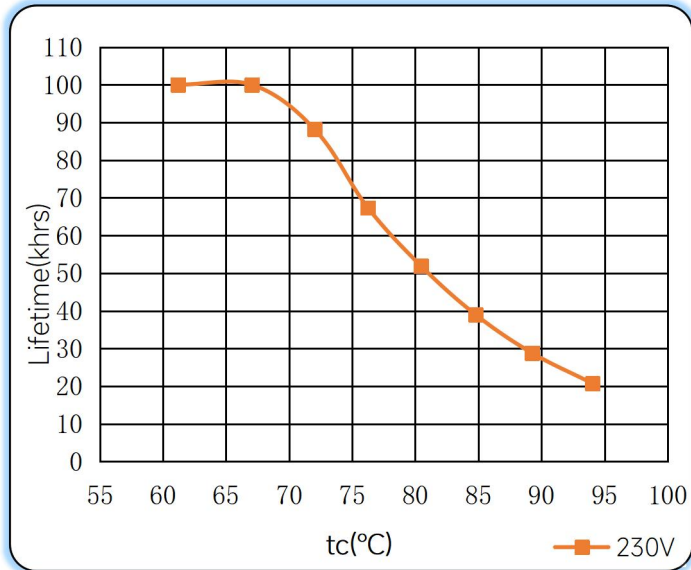


◆ Wiring & Connections

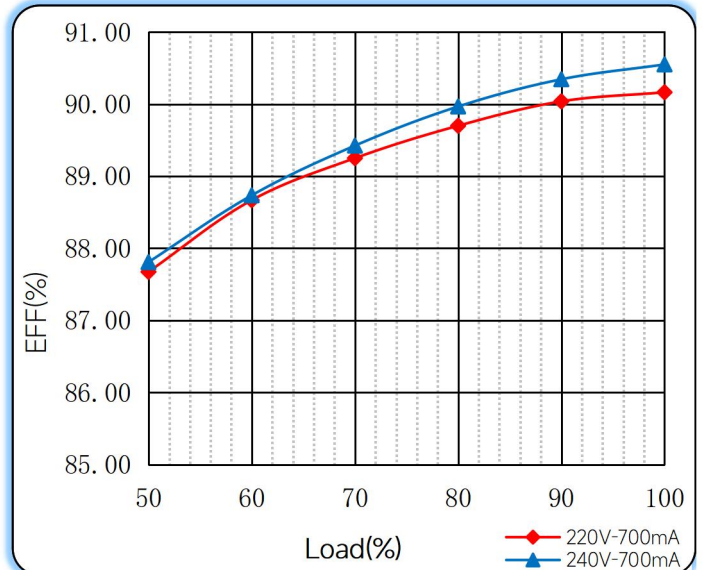
Specification item		Value (Unit)
Input	Input wire cross-section	0.5...1.5 mm ²
	Input wire gauge.	16...20 AWG
	Input wire strip length	7...9mm
Output	Output wire cross-section	0.5...1.5 mm ²
	Output wire gauge.	16...20 AWG
	Output wire strip length	7...9mm

◆ Curve for FMS-60-700 0-10 LD-F, $I_o=700\text{mA}$

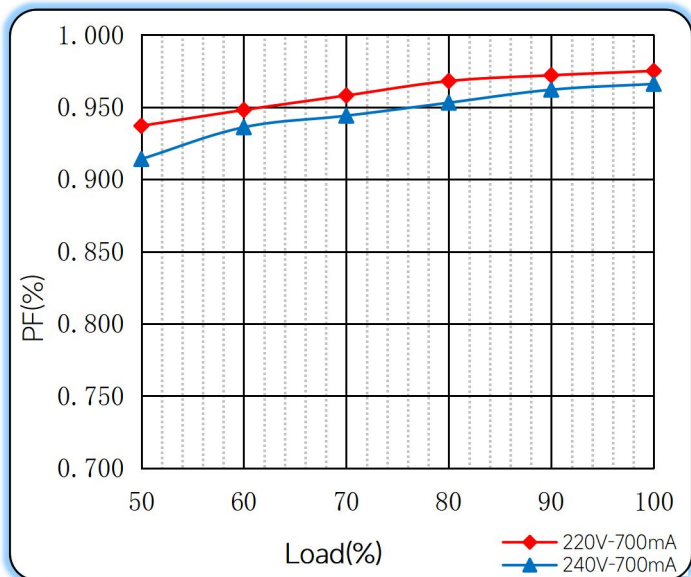
Lifetime vs. Temperature Curve



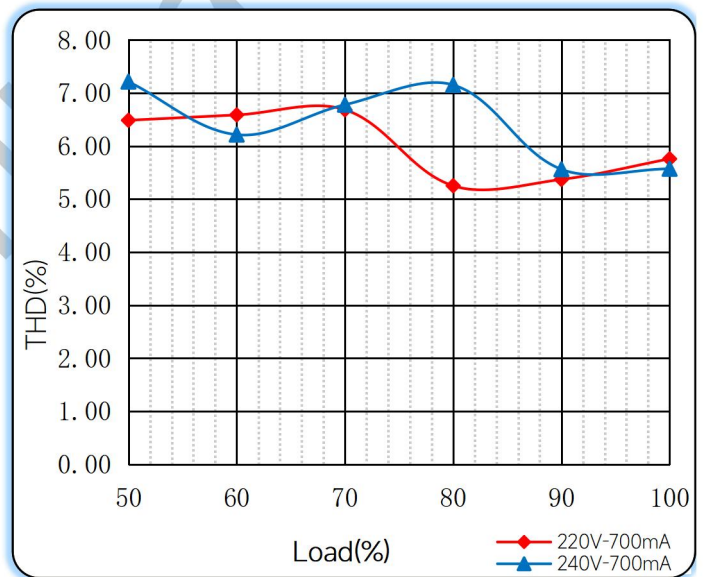
Efficiency vs. Load



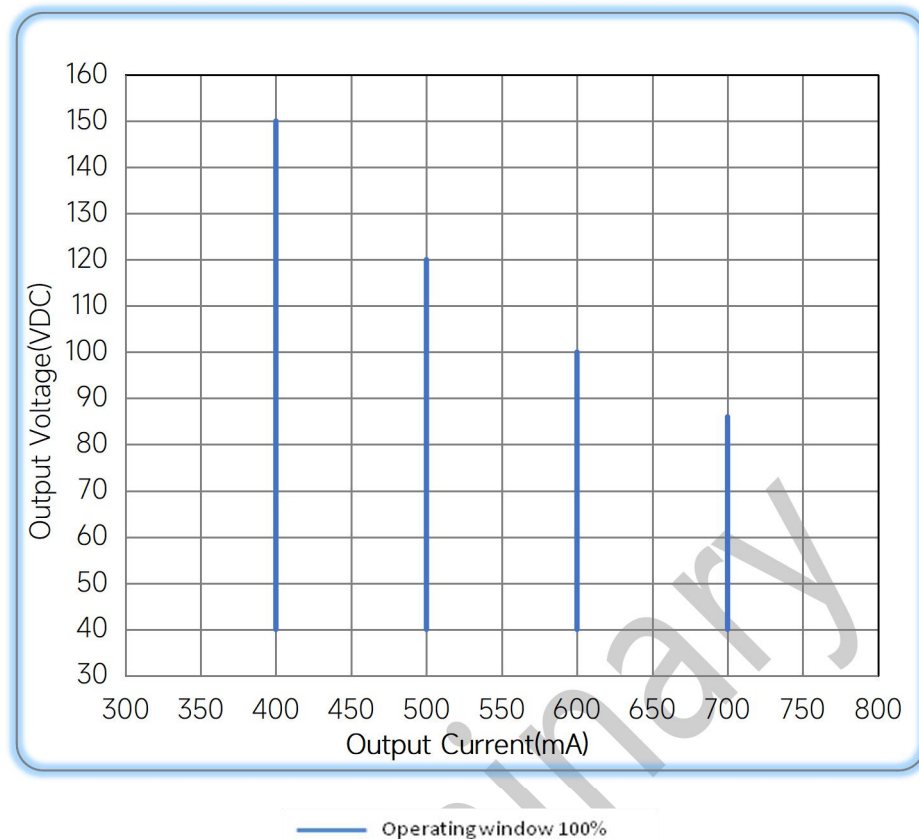
Power Factor Characteristics



THD vs. Load



◆ Operating window



◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2024/07/19
No Load Power	≤0.5W	≤1W	B	2024/09/03

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

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