

## 60W 0-10V Dimming power supply



■ Approve



### Features

- Class I, Built-in
- Input Voltage: 220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor : 0.9
- Efficiency : 88%(Typ.)
- Support 0-10V Dimming
- 5 years warranty
- IP20

### Applications

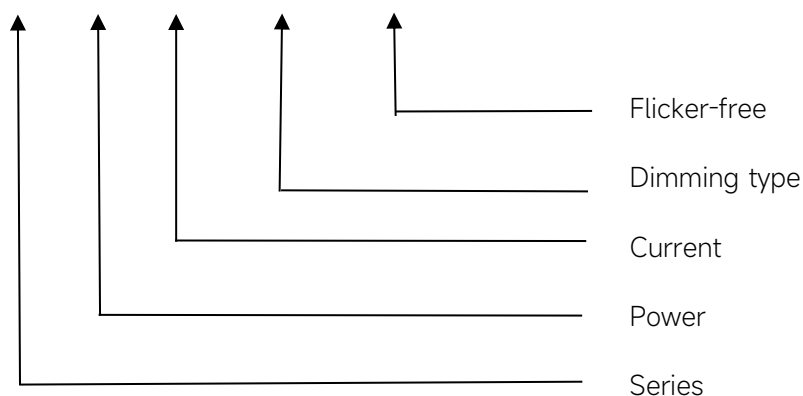
- LED panel light
- LED spot light

## ◆ Description

FMS-60-350 0-10 LD-F is a 60W constant current LED driver that operates from 198-264Vac input with 200 to 350mA output current and a forward voltage range from 70 to 300Vdc. 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-60-350 0-10 LD-F**



## ◆ Specification

Output	Constant Current (mA)	200mA	250mA	300mA	350mA
	Voltage Range(VDC)	70-300V	70-240V	70-200V	70-180V
	Unload voltage Max.(VDC)	350V			
	Current Accuracy	±8%			
	Output HF current ripple(≥1KHz)	±5%			
	Output LF current ripple(≤120Hz)	±5%			
	Auxiliary Output Voltage	12V			
	Auxiliary Output Current	150 mA			
	SVM	≤0.4			
	Pst	≤1			
	Efficiency(Typ.)	88%@full Load,230V			
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	>0.9@full Load,230V			
	Input Current max	0.4A			
	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%			
Protection	Over Load Protection	103-130%		103-180%	
		YES/Auto Resume			
	Over Voltage Protection	350VDC			
		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...+50°C			
	Humidity	20%-90%RH			
	Tc	90°C			
	Storage Temperature	-25°C...+60°C			

	Life time	>50000h@Tc=80°C
	Noise	≤25dB(A)@20cm
Surface	Dimension	280 x 30 x 21mm
	material	metal case
statutory	Safety Standards	GB19510. 1, GB19510. 14; IEC61347- 1, IEC61347-2- 13; EN 60598-2-22; EN61347- 1, EN61347-2- 13; EN62384;
	EMC	GB/T17743, GB17625. 1; EN55015, EN61000-3-2, EN61000-3-3, EN61547; EN61000-4-5; EN61000-4-2,3,4,5,6,8,11, EN61547
	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 &amp; Noise are measured at 20MHz of bandwidth by using a 300mm twisted pair-wire terminated with a 0.1uF &amp; 47 uF parallel capacitor.</p> <p>3.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>4.The current with load range cannot exceed 130% of the maximum power at full load.</p> <p>5.The over-temperature protection of the product is provided by the IC.</p> <p>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.</p>	

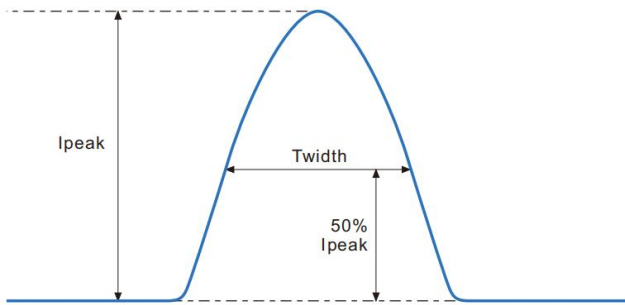
## ◆ Parameter

Number	Output				Switch position	
	Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)	1	2
1	200mA	70-300V	350	60W	--	--
2	250mA	70-240V		60W	ON	--
3	300mA	70-200V		60W	--	ON
*4	350mA	70-180V		63W	ON	ON

\* Factory default

## ◆ Inrush Current

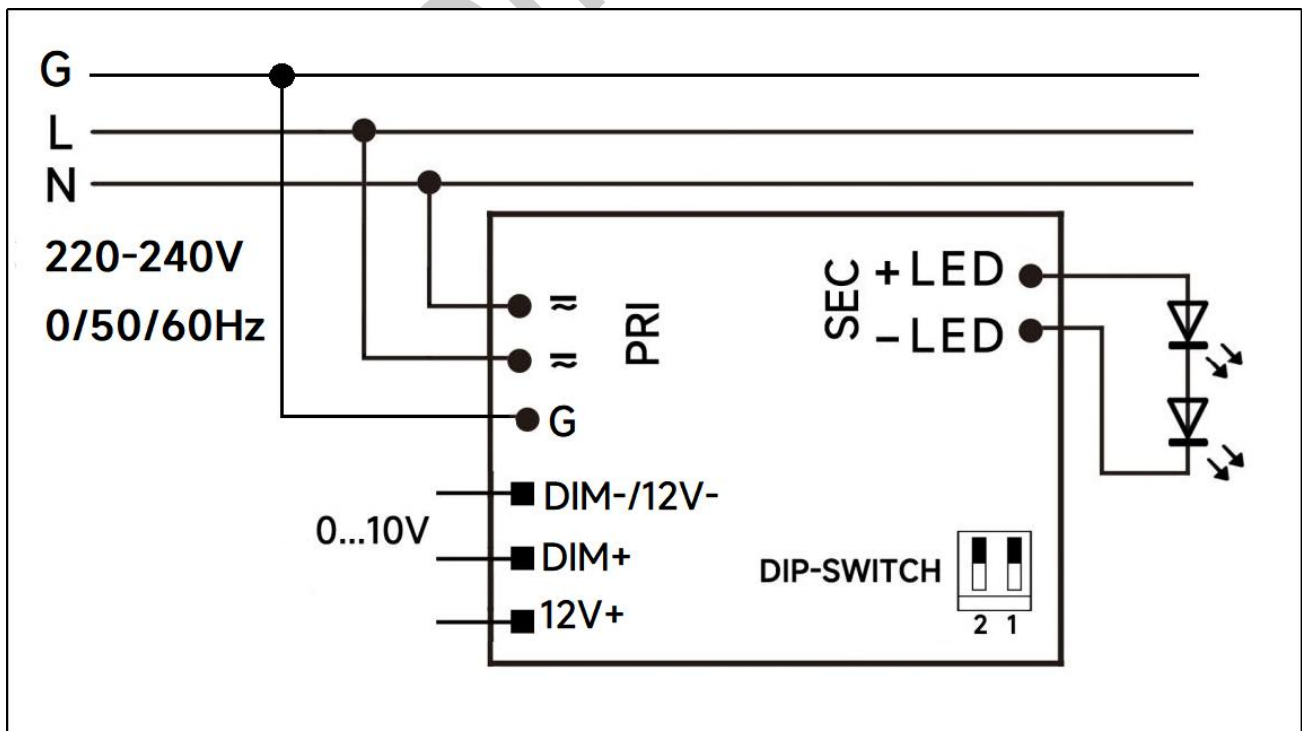
$I_{peak}$	Twidth	B10	B16	B20	C10	C16	C20
33.5A	210 $\mu$ s	11pcs	18pcs	23pcs	19pcs	30pcs	38pcs



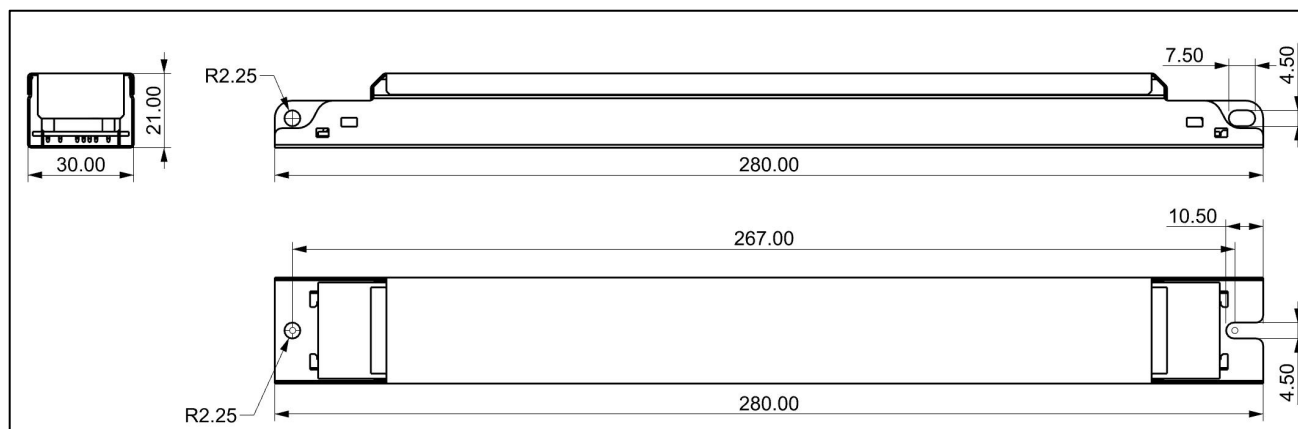
### Remarks:

- 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



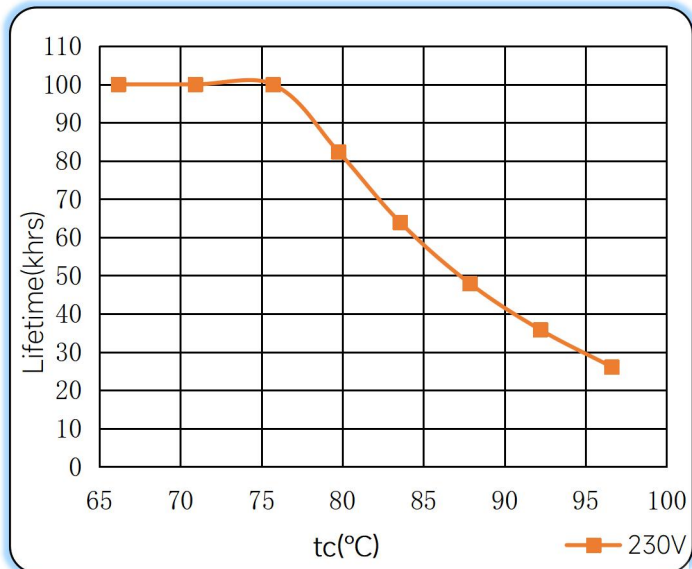
## ◆ Wiring & Connections

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

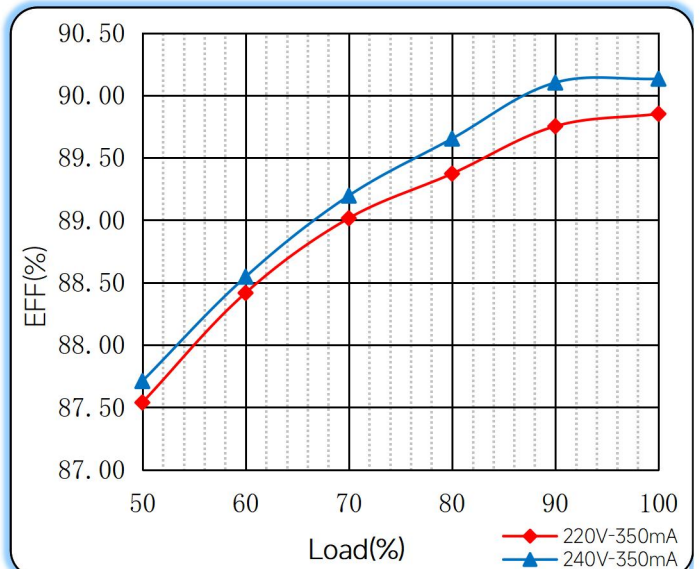
Note: Solid wire is risky to use on an angled terminal. Stranded wire is recommended for this kind of use.

## Curve for FMS-60-350 0-10 LD-F, $I_o=350\text{mA}$

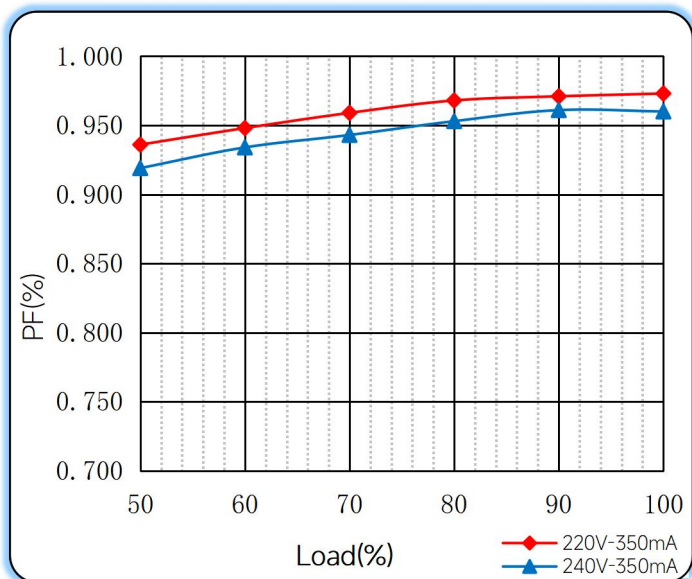
Lifetime vs. Temperature Curve



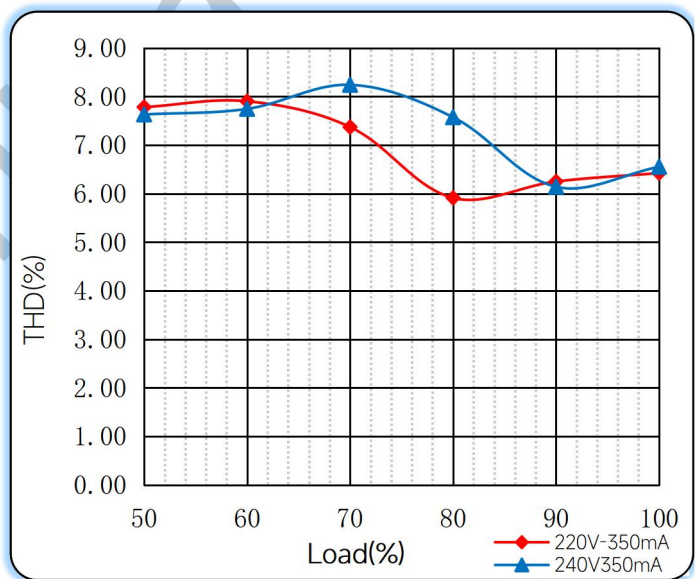
Efficiency vs. Load



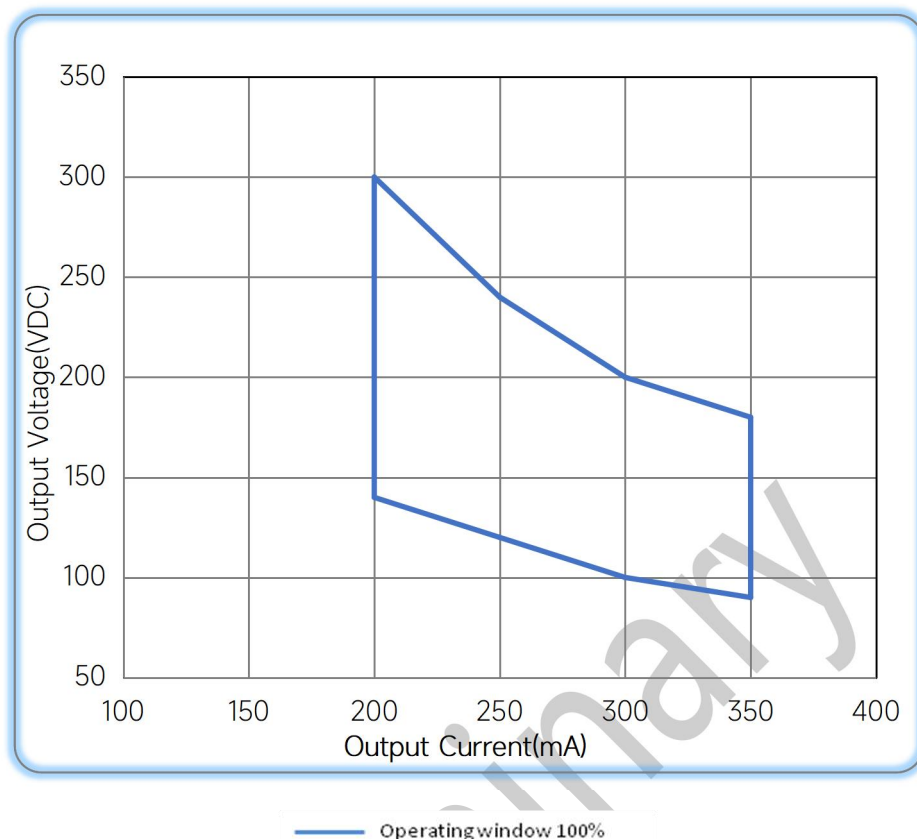
Power Factor Characteristics



THD vs. Load



## ◆ Operating window



## ◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2023/05/03
Current Accuracy	±5%	±8%	B	2023/11/27

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

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