

## 60W 0-10V Dimming power supply



■ Approve

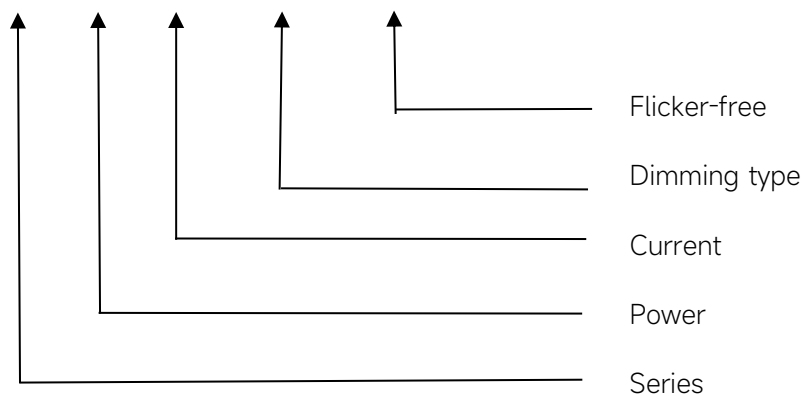


### ◆ Description

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 luminaries 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

|                             | Constant Current (mA)            | 400mA  | 500mA     | 600mA     | 700mA    |  |
|-----------------------------|----------------------------------|--|-----------|-----------|----------|--|
| Output                      | 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      | <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.Switch and dimmer are not recommended to connect between this product output and luminaries.</p> <p>4.The over-temperature protection of the product is provided by the IC.</p> <p>5.All Eaglerise 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> |   |

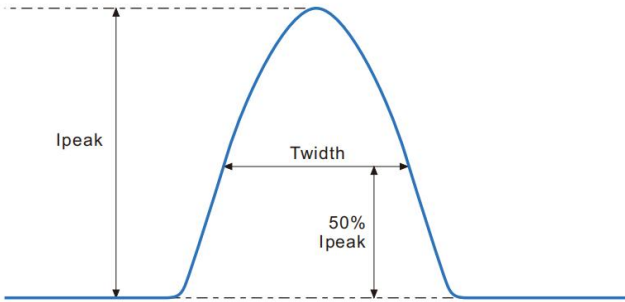
## ◆ Parameter

| Number | Output       |               |                       |           | Switch position |    |
|--------|--------------|---------------|-----------------------|-----------|-----------------|----|
|        | Current (mA) | Voltage (VDC) | Voltage No load (VDC) | Power (W) | 1               | 2  |
| 1      | 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

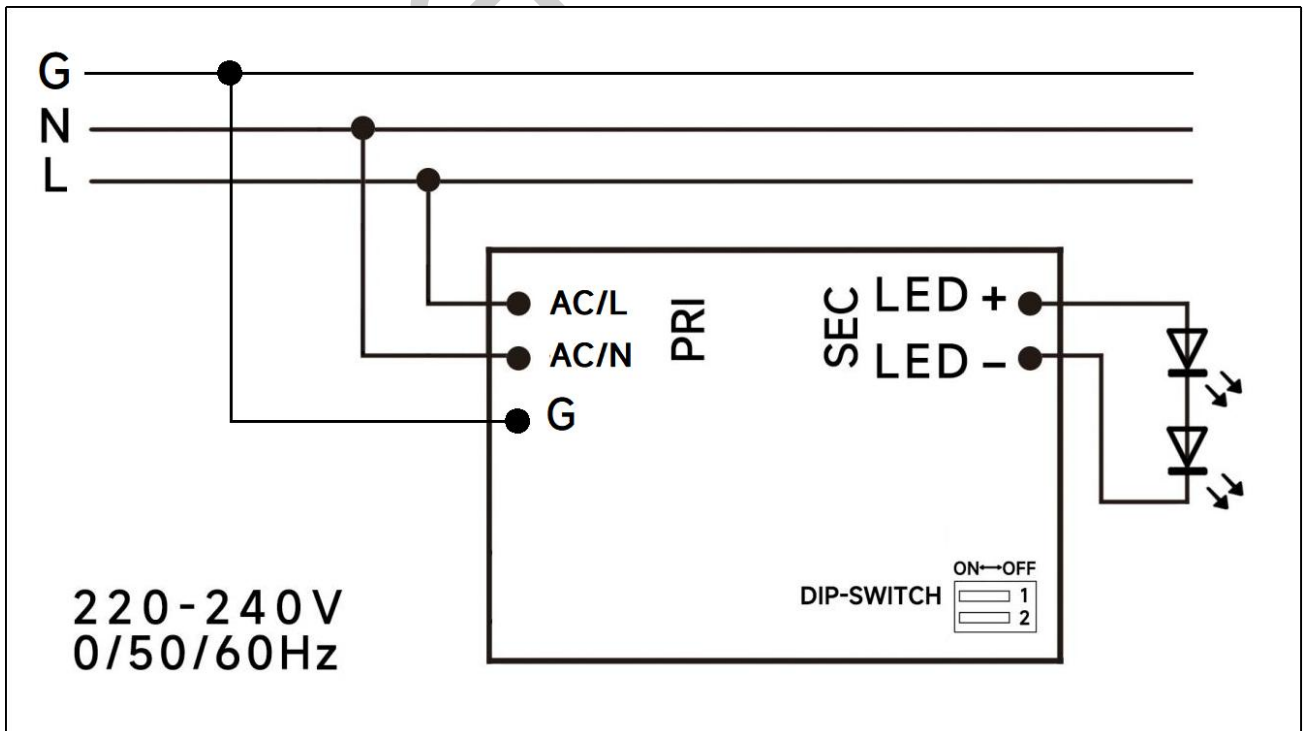
| $I_{peak}$ | Twidth      | B10   | B16   | B20   | C10   | C16   | C20   |
|------------|-------------|-------|-------|-------|-------|-------|-------|
| 32.2A      | 240 $\mu$ s | 10pcs | 16pcs | 20pcs | 17pcs | 27pcs | 34pcs |



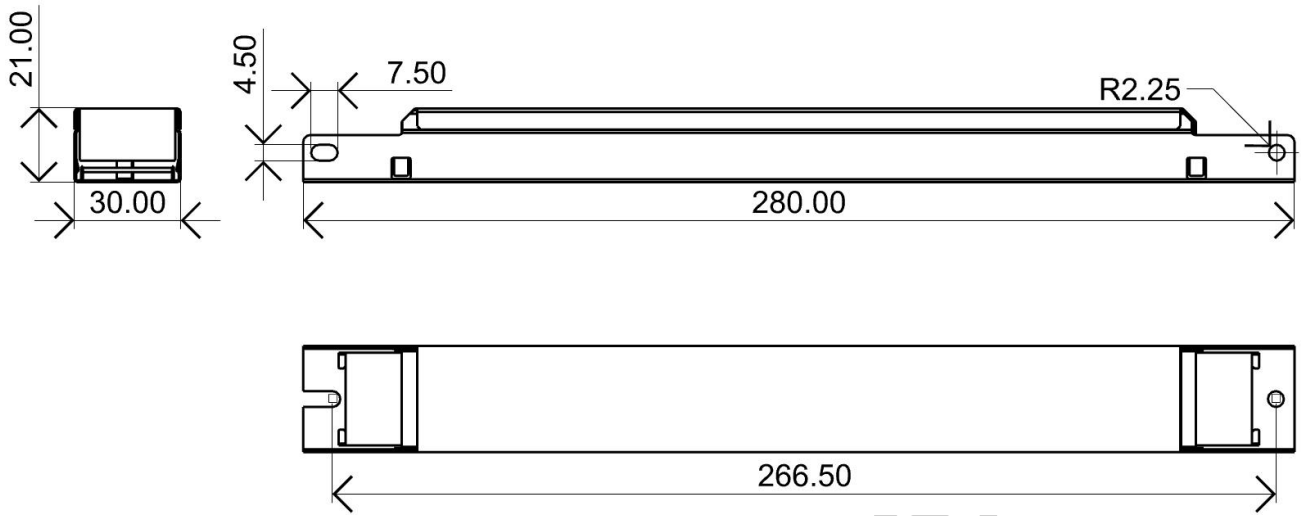
Remarks:

- 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

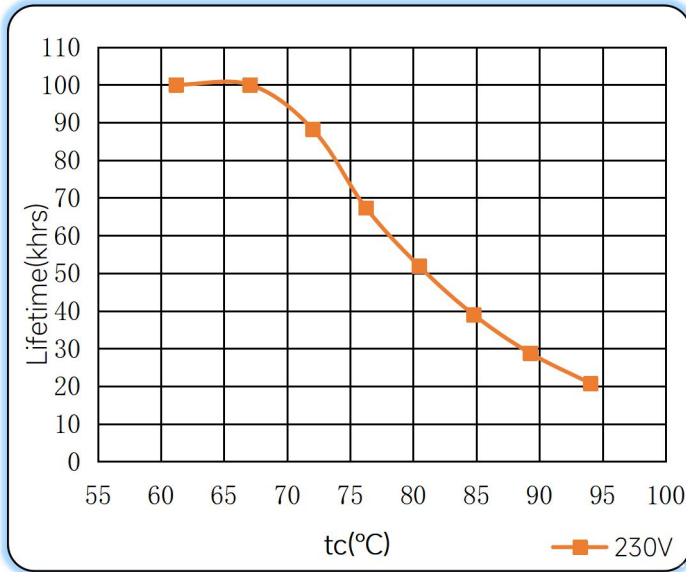


### ◆ Wiring & Connections

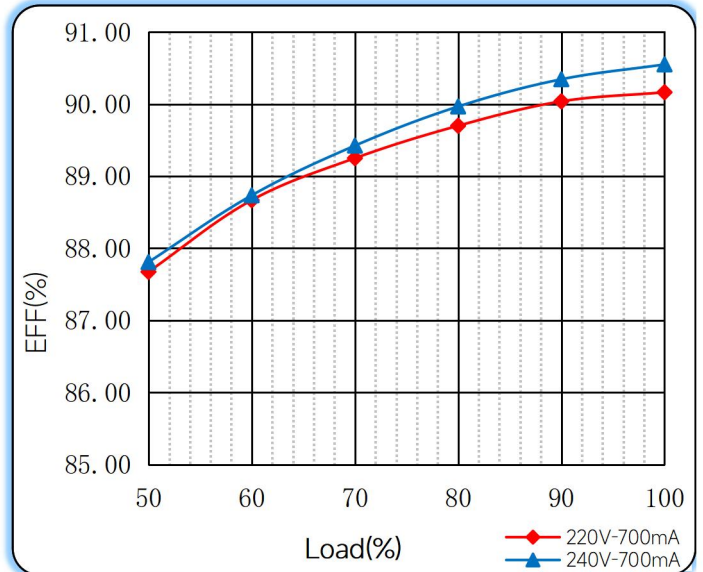
| Specification item |                           | Value (Unit )             |
|--------------------|---------------------------|---------------------------|
| Input              | Input wire cross-section  | 0.5...1.5 mm <sup>2</sup> |
|                    | Input wire gauge.         | 16...20 AWG 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

◆ **Curve for FMS-60-700 0-10 LD-F, I<sub>o</sub>=700mA**

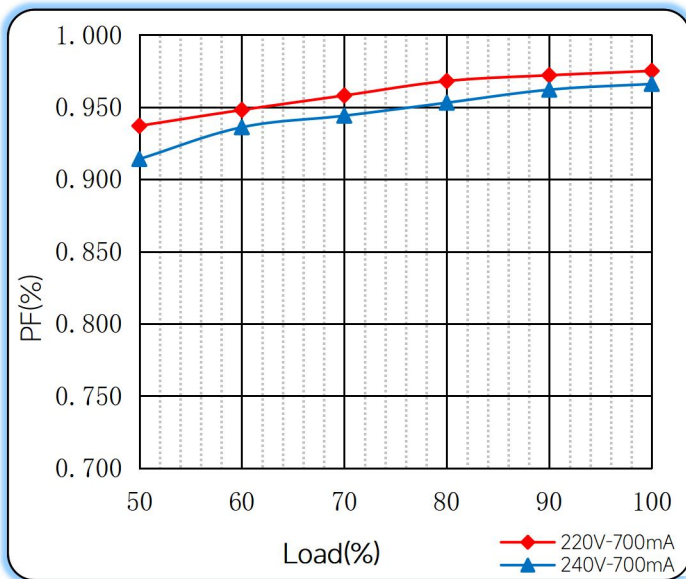
Lifetime vs. Temperature Curve



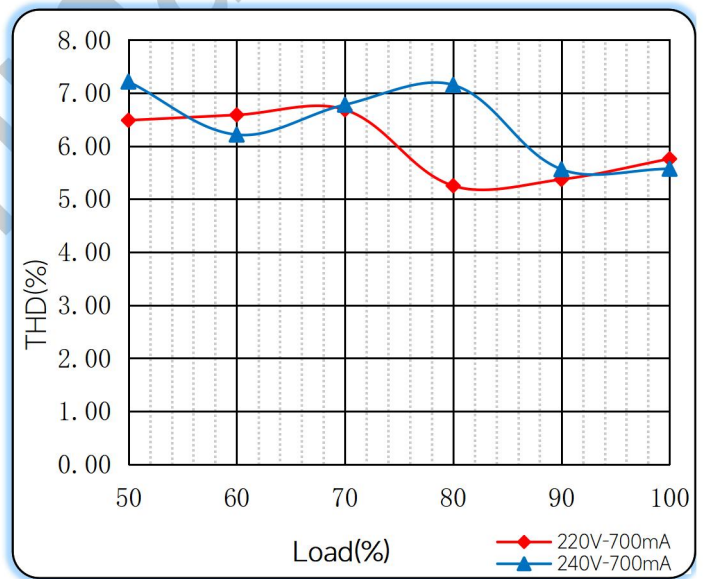
Efficiency vs. Load



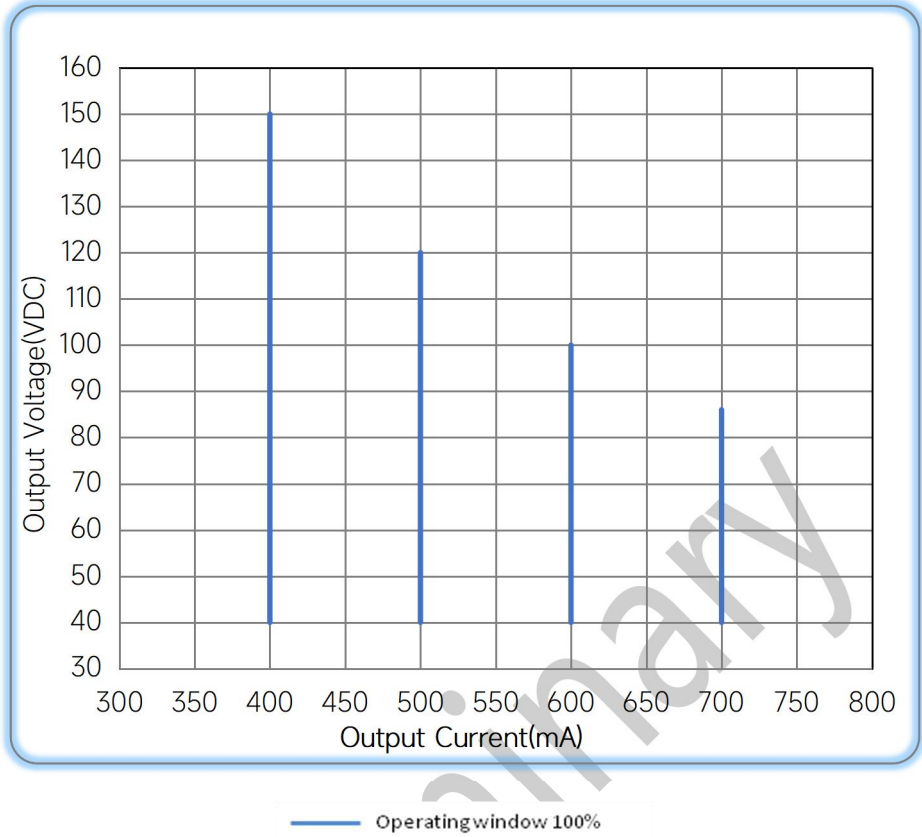
Power Factor Characteristics



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 Eaglerise Electric & Electronic (China) Co., Ltd.

Tel: +86-0757-86256822, +86-0757-86256831

E-mail: sales@eaglerise.com

Website : <https://lighting.eaglerise.com>



EAGLERISE



Manual