

## 60W Constant Current -FMS Series

■ Approve

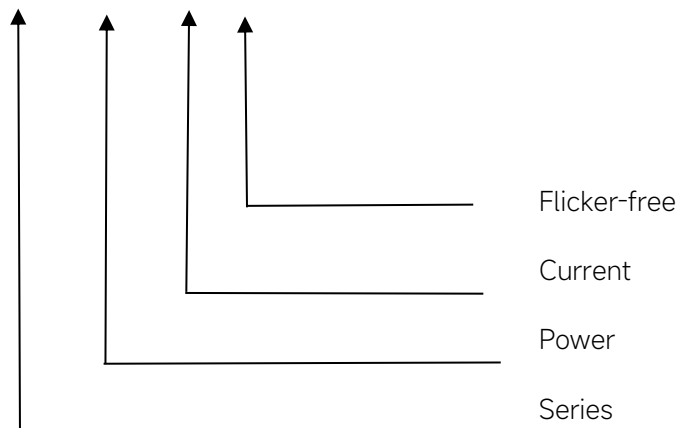
CE SELV

### ◆ Description

FMS-60-700 LD-F is a 60W isolated design constant current LED driver that operates from 198-264Vac input with 400 to 700mA output current. The output current is adjustable by dip-switch. With it's long 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

#### FMS-60-700 LD-F



#### Features

- Class I , Built-in
- Input Voltage :220-240VAC
- Protections: SCP/OLP/OVP
- Power Factor: >0.95@full load
- Efficiency: 90%
- Adjustable Output Current with dip-switch
- 5 years warranty

#### Applications

- Linear light

## ◆ Specification

|             |                                  |   |       |       |         |         |          |          |
|-------------|----------------------------------|---|-------|-------|---------|---------|----------|----------|
| Output      | Constant Current                 | 400mA   | 450mA | 500mA | 550mA   | 600mA   | 650mA    | 700mA    |
|             | Voltage Range                    | 40-120V   |       |       | 40-109V | 40-100V | 40-92.3V | 40-85.7V |
|             | Unload voltage Max.              | 160VDC  |       |       |         |         |          |          |
|             | Current Accuracy                 | ±5%   |       |       |         |         |          |          |
|             | Output HF current ripple(≥1KHz)  | ±5%   |       |       |         |         |          |          |
|             | Output LF current ripple(≤120Hz) | ±3%   |       |       |         |         |          |          |
|             | SVM                              | ≤0.4  |       |       |         |         |          |          |
|             | Pst                              | ≤1  |       |       |         |         |          |          |
|             | Efficiency(Typ.)                 | 90%   |       |       |         |         |          |          |
| Input       | Rated input voltage(V)           | 220-240V  |       |       |         |         |          |          |
|             | Range of input voltage(VAC)      | 176-264VAC  |       |       |         |         |          |          |
|             | Maximum voltage                  | 380VAC@1 h maximum,unit might not operate in this abnormal condition                              |       |       |         |         |          |          |
|             | Frequency(Hz)                    | 50/60 Hz  |       |       |         |         |          |          |
|             | Displacement factor              | >0.95   |       |       |         |         |          |          |
|             | Power Factor                     | >0.95@full load   |       |       |         |         |          |          |
|             | Input Current max                | 0.45A   |       |       |         |         |          |          |
|             | Start-up time                    | < 0.5S  |       |       |         |         |          |          |
|             | No Load Power                    | ≤0.5W   |       |       |         |         |          |          |
|             | THD (Typ.)                       | <10%  |       |       |         |         |          |          |
| Protection  | Over Load Protection             | > 105%  |       |       |         |         |          |          |
|             |                                  | YES/Auto Resume   |       |       |         |         |          |          |
|             | Over Voltage Protection          | > 160VDC  |       |       |         |         |          |          |
|             | 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°C~+50°C   |       |       |         |         |          |          |
|             | Humidity                         | 10%-90%RH   |       |       |         |         |          |          |
|             | Tc                               | 80°C  |       |       |         |         |          |          |
|             | Storage Temperature              | -25°C~+85°C   |       |       |         |         |          |          |
|             | Life time                        | > 50000h@Tc=80,230VAC   |       |       |         |         |          |          |
|             | Noise                            | ≤25dB(A)@20cm   |       |       |         |         |          |          |
| Surface     | Dimension                        | 280X30X21(LXWXH)mm  |       |       |         |         |          |          |
|             | material                         | metal case  |       |       |         |         |          |          |
| Standards   | Safety                           | EN61347- 1, EN61347-2- 13;  |       |       |         |         |          |          |
|             | EMC                              | EN55015, EN61000-3-2, EN61000-3-3, EN61547;EN 62493;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 240VAC 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.Temperature test: tested at high temperature(50°C)/low temperature(-20°C)/normal temperature(25°C)</p> <p>4.Data are typical values obtained from test samples</p> <p>5.Switch and dimmer are not recommended to connect between this product output and luminaries.</p> |                                |

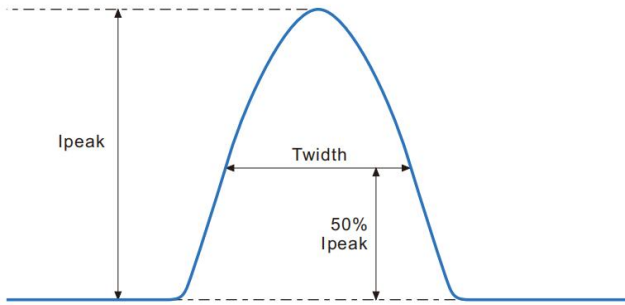
## ◆ Parameter

| Number | Output       |               |                       |           | Switch position |    |    |    |
|--------|--------------|---------------|-----------------------|-----------|-----------------|----|----|----|
|        | Current (mA) | Voltage (VDC) | Voltage No load (VDC) | Power (W) | 1               | 2  | 3  | 4  |
| 1      | 400mA        | 40-120VDC     | 160VDC                | 48        | --              | -- | -- | -- |
| 2      | 450mA        | 40-120VDC     |                       | 54        | ON              | -- | -- | -- |
| 3      | 500mA        | 40-120VDC     |                       | 60        | --              | ON | -- | -- |
| 4      | 550mA        | 40-109VDC     |                       | 60        | ON              | ON | -- | -- |
| 5      | 600mA        | 40-100VDC     |                       | 60        | ON              | -- | ON | -- |
| 6      | 650mA        | 40-92.3VDC    |                       | 60        | ON              | ON | ON | -- |
| *7     | 700mA        | 40-85.7VDC    |                       | 60        | ON              | ON | ON | ON |

\* Factory default

◆ **Inrush Current**

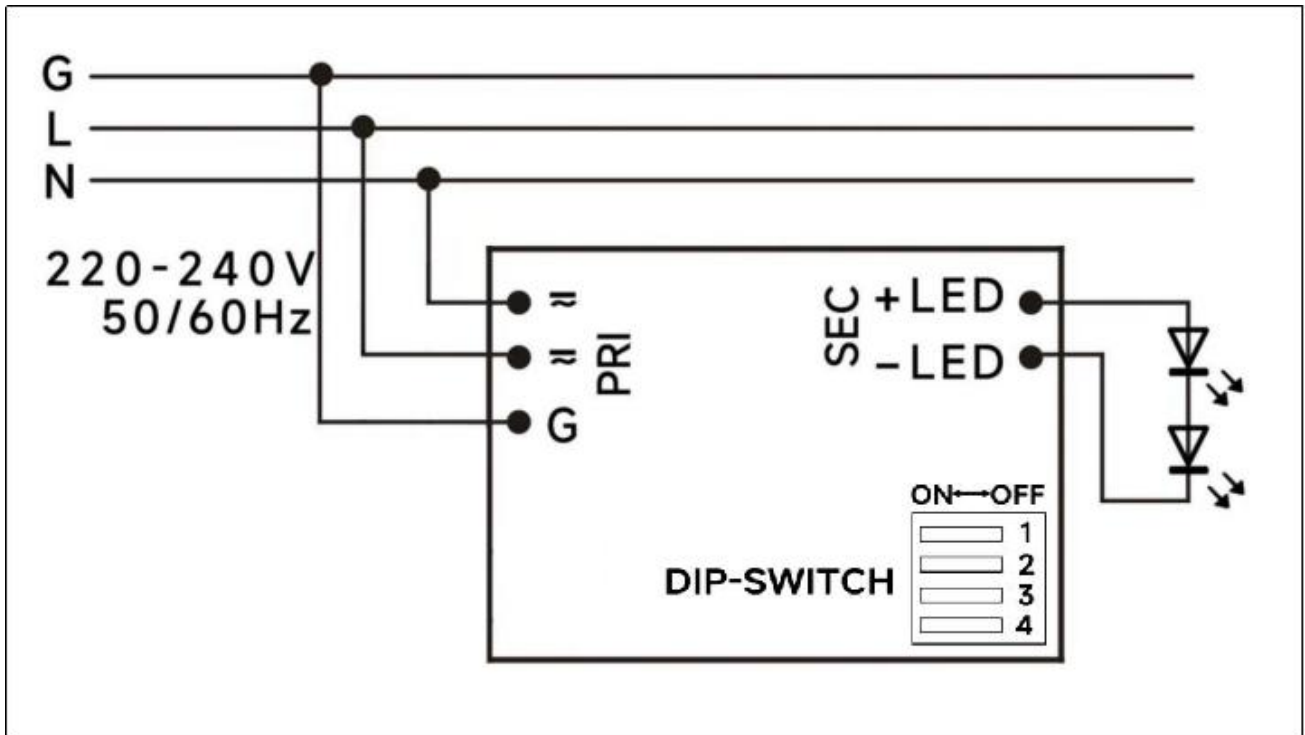
| <b>I<sub>peak</sub></b> | <b>T<sub>width</sub></b> | <b>B10</b> | <b>B16</b> | <b>B20</b> | <b>C10</b> | <b>C16</b> | <b>C20</b> |
|-------------------------|--------------------------|------------|------------|------------|------------|------------|------------|
| 41.2A                   | <b>218μs</b>             | 9pcs       | 14pcs      | 18pcs      | 15pcs      | 24pcs      | 30pcs      |



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

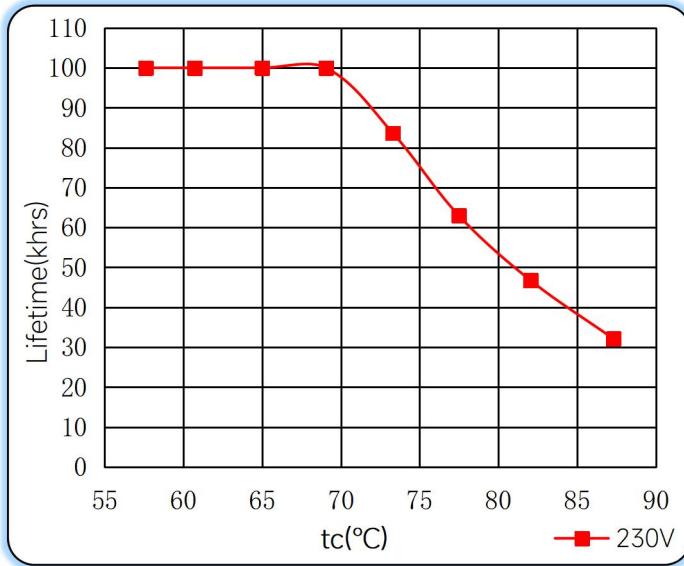
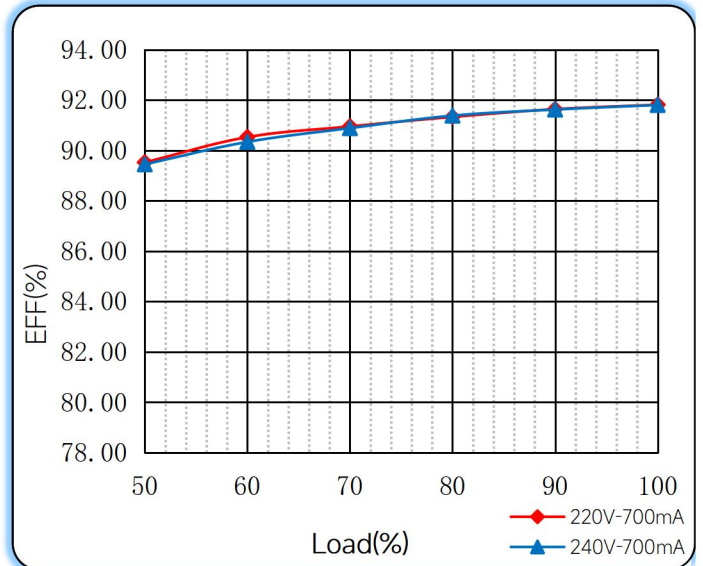
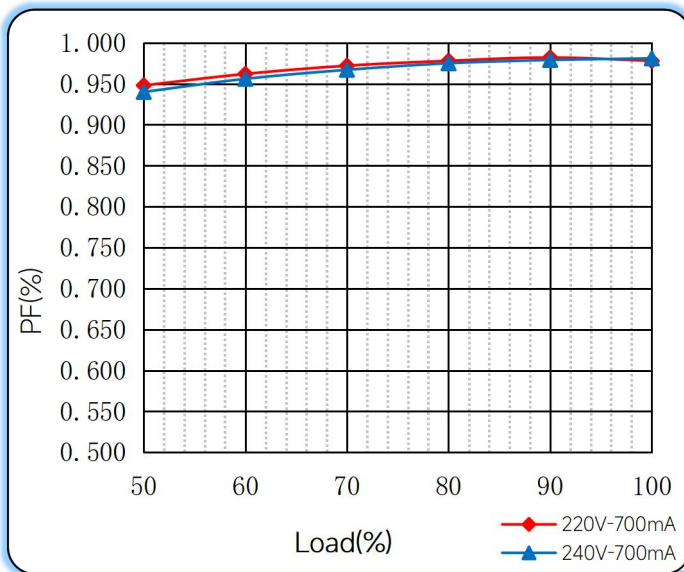
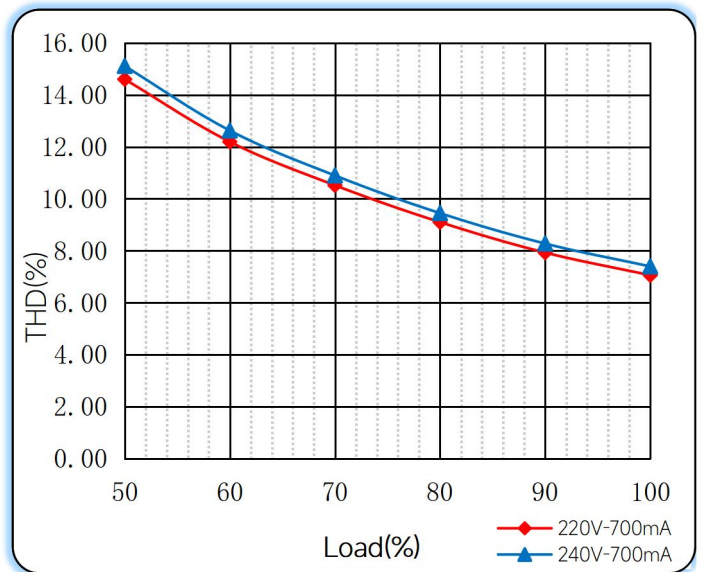
| Specification item |                           | Value (Unit )             |
|--------------------|---------------------------|---------------------------|
| Input              | Input wire cross-section  | 0.5...1.5 mm <sup>2</sup> |
|                    | Input wire gauge.         | 16...20 AWG 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

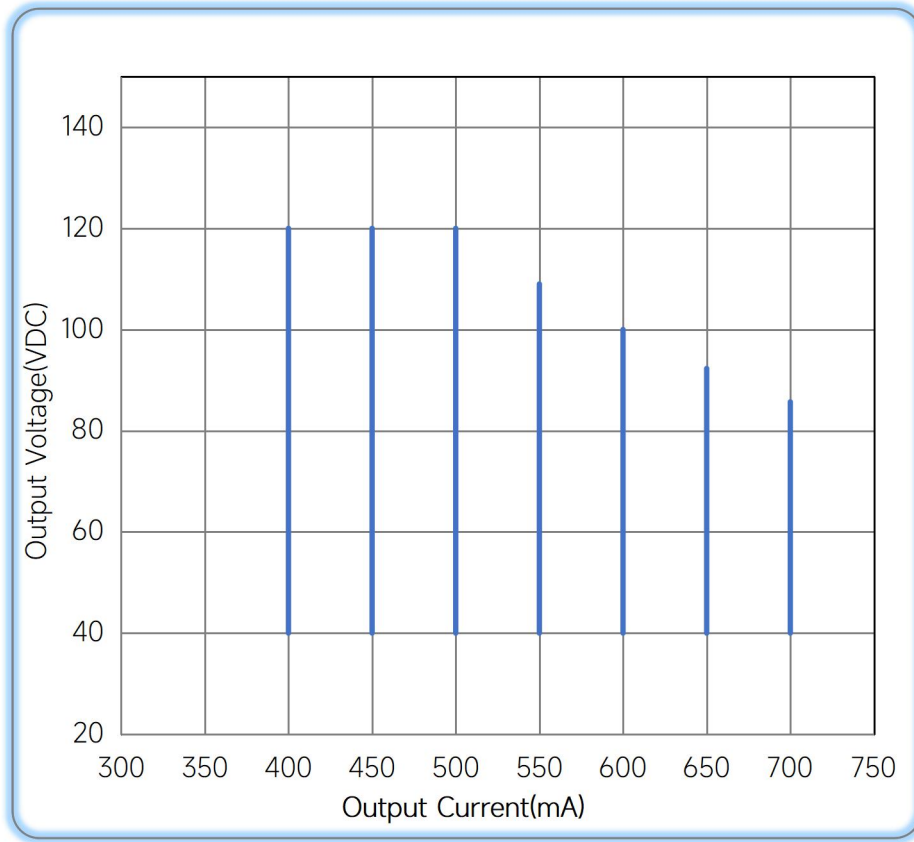
## ◆ Packaging

| Model              | Product Dimensions(mm) | weight/piece | Outer carton dimension(mm)                | Quantity/carton | Net weight/carton(Kg) | Gross weight/carton(Kg) |
|--------------------|------------------------|--------------|---|-----------------|-----------------------|-------------------------|
| FMS-60-700<br>LD-F | 280X30X21              | 0.1868       | Inside:295X255X200<br>Outside:310X265*210 | 56              | 10.4608               | 11.0008                 |

### ◆ Curve for FMS-60-700 LD-F, $I_o=700mA$

**Lifetime vs. Temperature Curve**

**Efficiency vs. Load**

**Power Factor Characteristics**

**THD vs. Load**


◆ **Operating window**



— Operating window 100%

◆ **Revision Updates**

| ITEM    | BEFORE | AFTER | VERSION | DATE       |
|---------|--------|-------|---------|------------|
| Initial |        |       | A       | 2024/11/05 |
|         |        |       |         |            |

Remark: The final interpretation of the contents of the specification belongs to Eaglerise Electric & Electronic (China) Co., Ltd.

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Manual