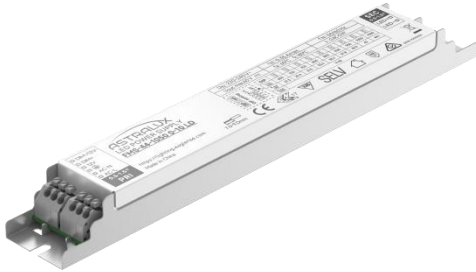


## 44W 0-10V Dimming power supply



■ Approve



### Features

- Class I, SELV , Built-in
- Input Voltage 220-240VAC
- Protections: SCP/OLP/OVP
- Power Factor : 0.6C-0.95
- Efficiency : 88%(Typ.)
- Support 0-10V Dimming
- 5 years warranty
- IP20

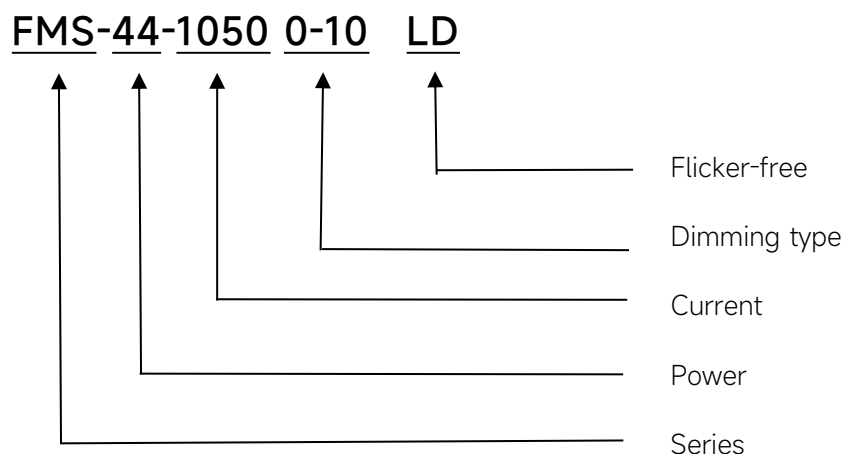
### Applications

- LED panel light

### ◆ Description

FMS-44-1050 0-10 LD is a 44W constant current LED driver that operates from 198-264Vac input with 650 to 1050mA output current and a forward voltage range from 9 to 42Vdc. The output current is adjustable by DIP Switch. With its compact dimensions from 220 x 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



## ◆ Specification

|             |                                  |                         |       |       |     |        |
|-------------|----------------------------------|-------------------------|-------|-------|-----|--------|
| Output      | Constant Current (mA)            | 650mA                   | 700mA | 750mA | ... | 1050mA |
|             | Voltage Range(VDC)               | 9-42V                   |       |       |     |        |
|             | Unload voltage Max.(VDC)         | 60V                     |       |       |     |        |
|             | 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  |       |       |     |        |
| Input       | Rated input voltage(VAC)         | 220-240VAC              |       |       |     |        |
|             | Range of input voltage(VAC)      | 198-264VAC              |       |       |     |        |
|             | Range of input voltage(VDC)      | 176-280VDC              |       |       |     |        |
|             | Frequency(Hz)                    | 0/50/60 Hz              |       |       |     |        |
|             | Displacement factor              | > 0.9                   |       |       |     |        |
|             | Power Factor                     | 0.6C-0.95               |       |       |     |        |
|             | Input Current max                | 0.35A                   |       |       |     |        |
|             | Start-up time                    | < 0.5S                  |       |       |     |        |
|             | No Load Power                    | ≤0.5W                   |       |       |     |        |
|             | 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%                |       |       |     |        |
|             |                                  | YES/Auto Resume         |       |       |     |        |
|             | Over Voltage Protection          | 60VDC                   |       |       |     |        |
|             |                                  | YES/Auto Resume         |       |       |     |        |
|             | Short circuit Protection         | YES/Auto Resume         |       |       |     |        |
| Environment | Operating Temperature            | -20°C...+60°C           |       |       |     |        |
|             | Humidity                         | 20%-90%RH               |       |       |     |        |
|             | Tc                               | 85°C                    |       |       |     |        |
|             | Storage Temperature              | -25°C...+60°C           |       |       |     |        |
|             | Life time                        | >50000h@Tc=80°C         |       |       |     |        |
| Surface     | Dimension                        | 220 x 30 x 21mm         |       |       |     |        |

|           |                                                                                                                                                                                                                                                                  |                                |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| Standards | IEC61347- 1, IEC61347-2- 13;EN61347- 1, EN61347-2- 13;EN61347- 1, EN61347-2- 13, EN62384;<br>GB/T17743, GB17625. 1;GB19510. 1, GB19510. 14;EN55015, EN61000-3-2, EN61000-3-3, EN61547;<br>BS EN IEC 55015, BS EN IEC 61000-3-2, BS EN 61000-3-3, BS EN 61547     |                                |
| Others    | ErP                                                                                                                                                                                                                                                              | 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.<br>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. |                                |

## ◆ Parameter

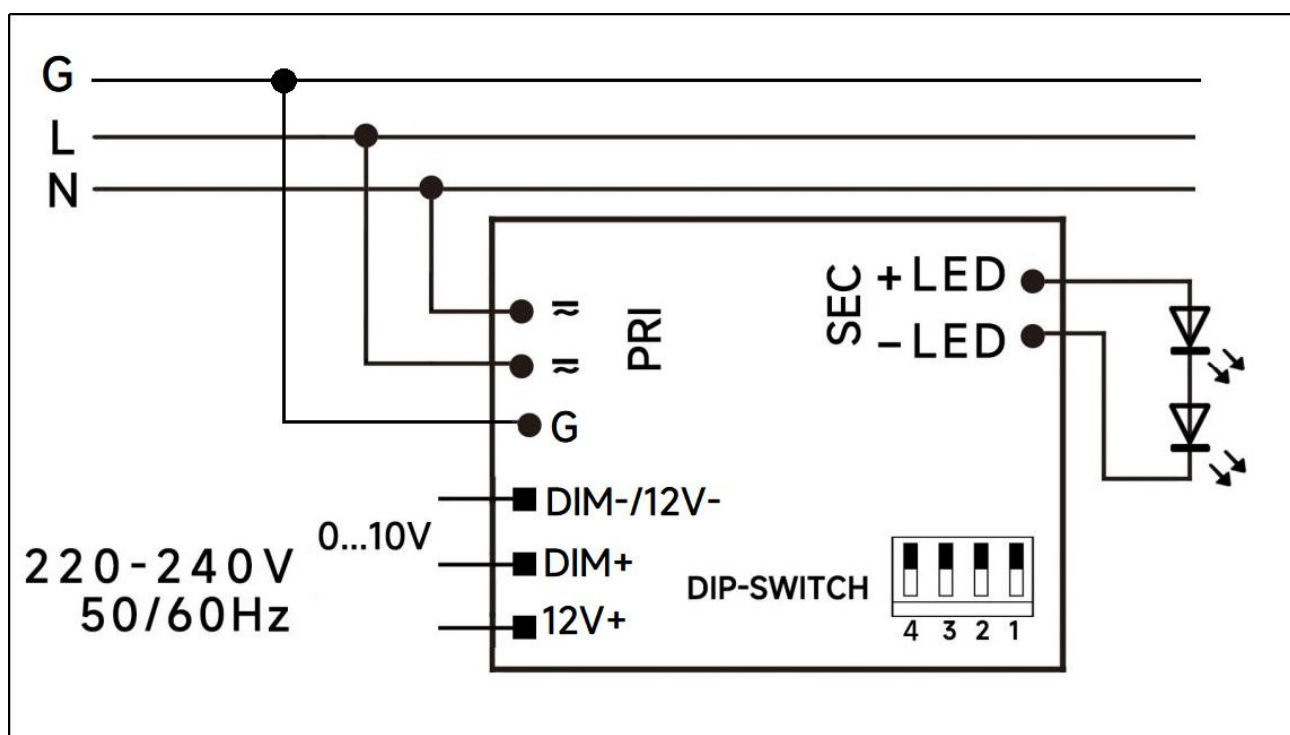
| Number | Output          |                  |                             |              | Switch position |    |    |    |
|--------|-----------------|------------------|-----------------------------|--------------|-----------------|----|----|----|
|        | Current<br>(mA) | Voltage<br>(VDC) | Voltage<br>No load<br>(VDC) | Power<br>(W) | 1               | 2  | 3  | 4  |
| 1      | 650mA           | 9-42V            | 60V                         | 27.3         | --              | -- | -- | -- |
| 2      | 700mA           |                  |                             | 29.4         | --              | -- | -- | ON |
| 3      | 750mA           |                  |                             | 31.5         | --              | -- | ON | -- |
| 4      | 800mA           |                  |                             | 33.6         | --              | -- | ON | ON |
| 5      | 850mA           |                  |                             | 35.7         | --              | ON | -- | -- |
| 6      | 900mA           |                  |                             | 37.8         | --              | ON | -- | ON |
| 7      | 950mA           |                  |                             | 39.9         | --              | ON | ON | -- |
| 8      | 1000mA          |                  |                             | 42           | --              | ON | ON | ON |
| *9     | 1050mA          |                  |                             | 44.1         | ON              | ON | ON | ON |

\* Factory default

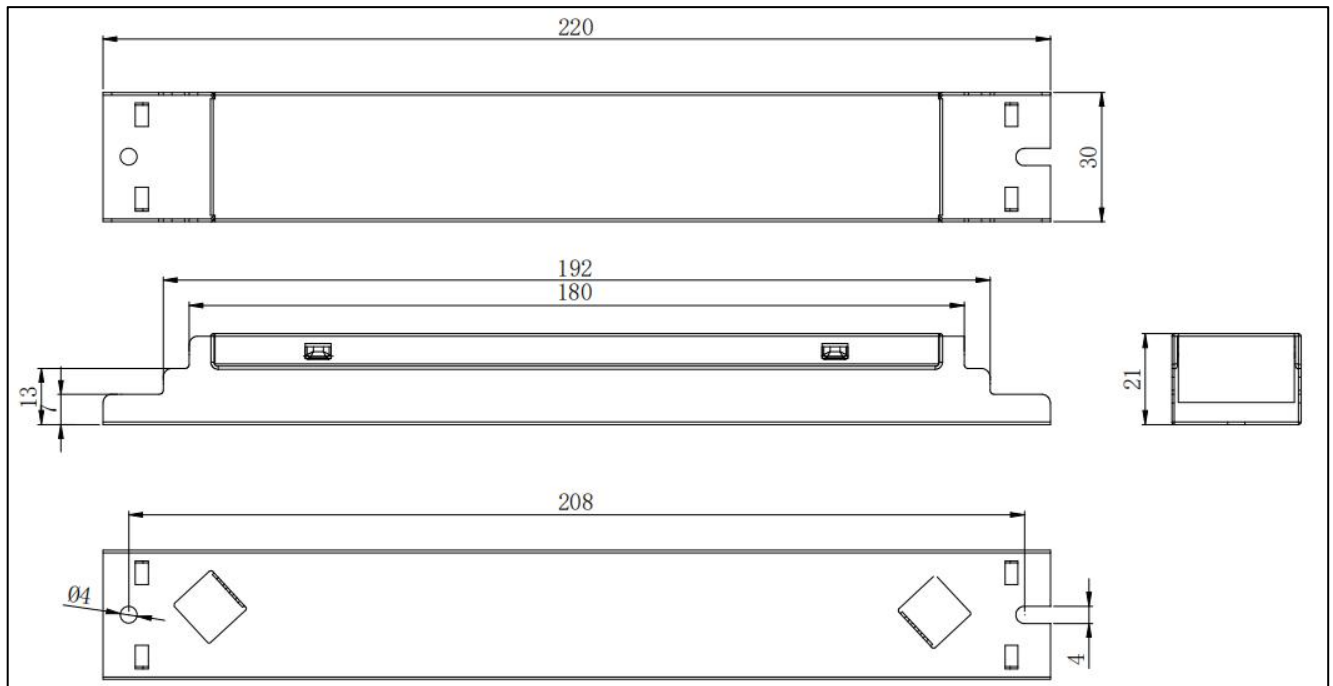
## ◆ Circuit Breaker

| I <sub>peak</sub> | T <sub>width</sub> | B10   | B16   | B20   | C10   | C16   | C20   |
|-------------------|--------------------|-------|-------|-------|-------|-------|-------|
| 6.8A              | 126μs              | 22pcs | 36pcs | 45pcs | 22pcs | 36pcs | 45pcs |

## ◆ Wiring diagram



## ◆ 2D diagram

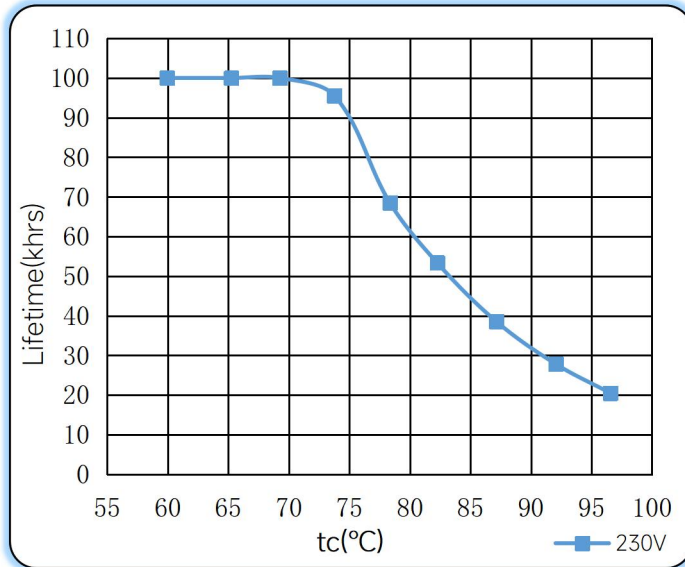


## ◆ Wiring & Connections

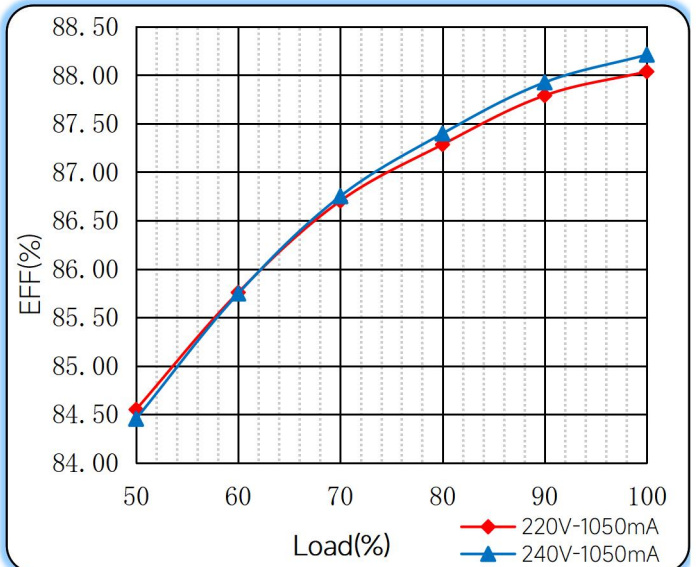
| Specification item |                           | Value (Unit )             |
|--------------------|---------------------------|---------------------------|
| Input              | Input wire cross-section  | 0.5...1.5 mm <sup>2</sup> |
|                    | Input wire gauge.         | 16...20 AWG               |
|                    | 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-44-1050 0-10 LD, $I_o=1050\text{mA}$

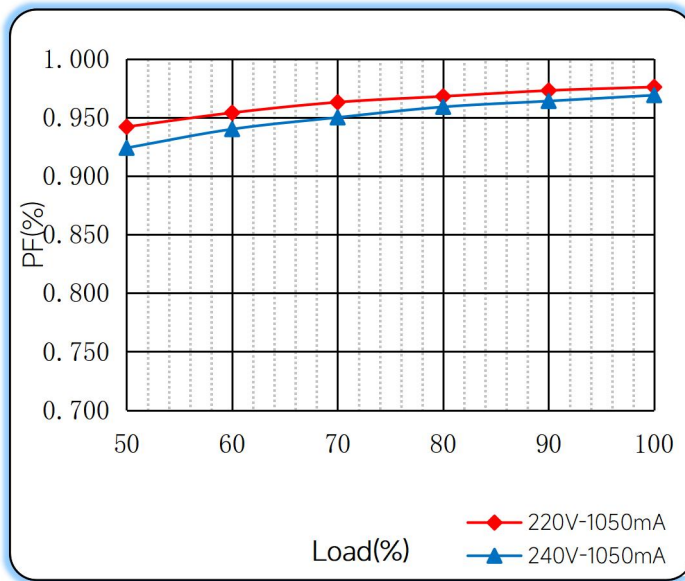
Lifetime vs. Temperature Curve



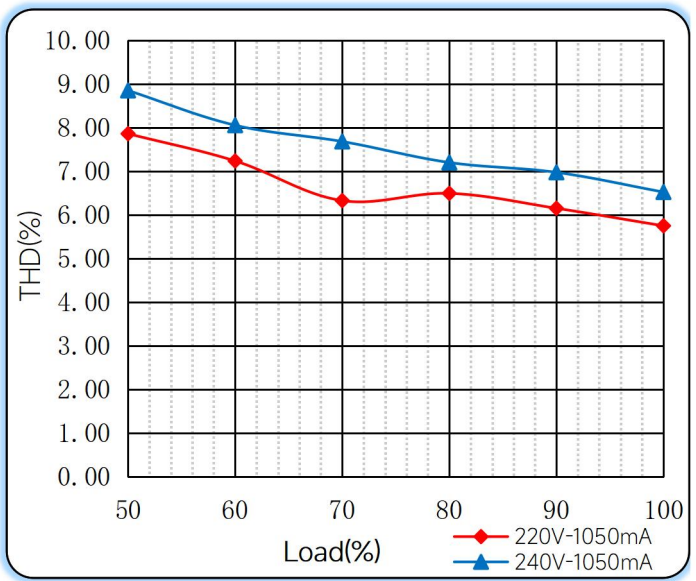
Efficiency vs. Load



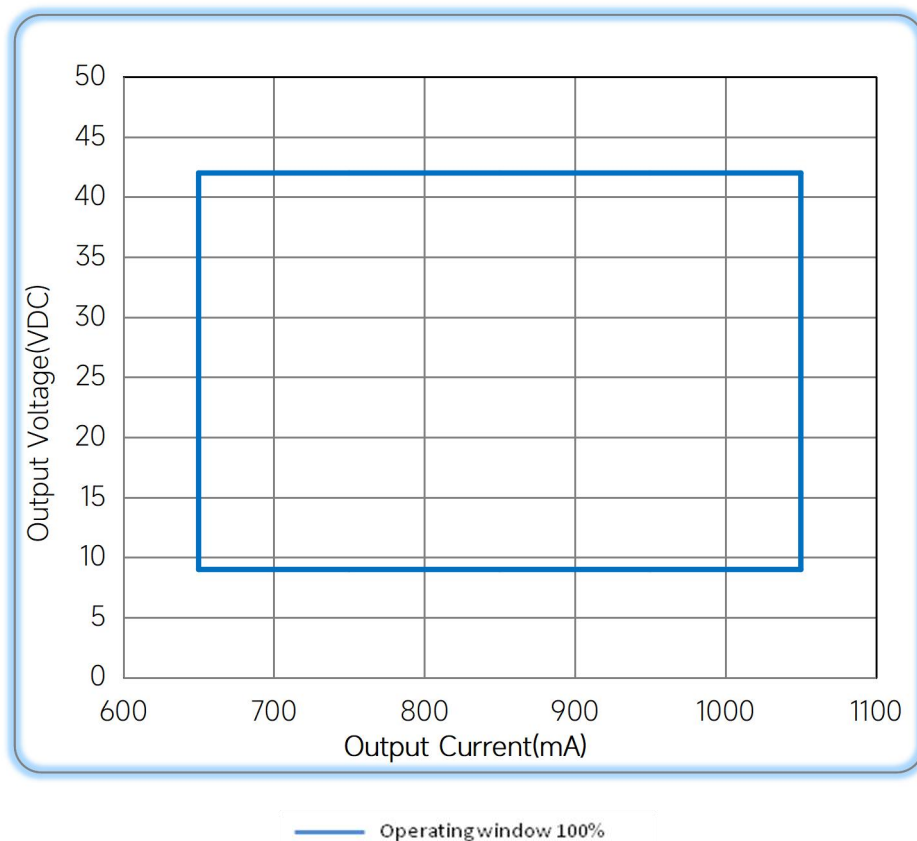
Power Factor Characteristics



THD vs. Load



## ◆ Operating window



## ◆ Revision Updates

| ITEM    | BEFORE | AFTER | VERSION | DATE       |
|---------|--------|-------|---------|------------|
| Initial |        |       | A       | 2023/05/03 |
|         |        |       |         |            |

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

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