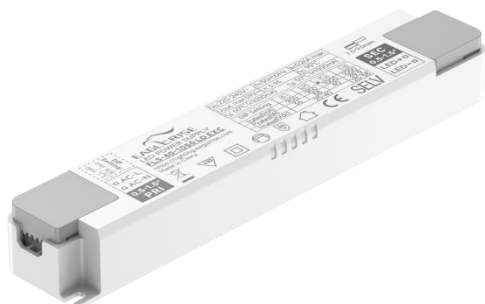


## 40W Constant Current power supply



■ Approve

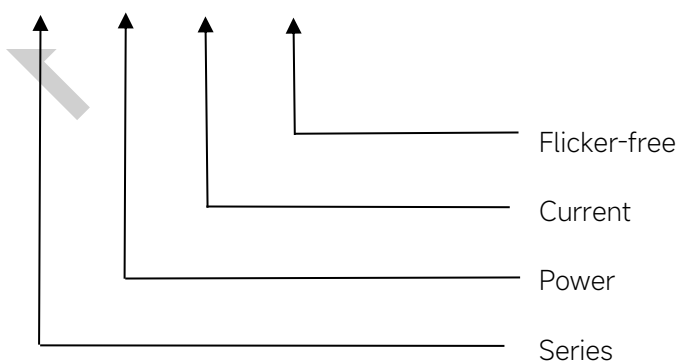
CE CB EN CCC SELV

### ◆ Description

FLS-40-1050 LD EXC is a 40W constant current LED driver with 900 to 1050mA output current. With its compact dimensions from 163 x 30 x 21mm. It is easy to integrate in LED Panel, spot and down lights product.

### ◆ Model code

#### FLS-40-1050 LD EXC



#### Features

- Class II, SELV, Independent
- Input Voltage: 220-240VAC
- Protections: SCP/OVP/OTP
- Power Factor: >0.95
- Efficiency: >90%
- 5 years warranty
- IP20

#### Applications

- LED panel, LED down light
- LED spot light

## ◆ Specification

|             |                                  |                                                                      |       |           |          |
|-------------|----------------------------------|----------------------------------------------------------------------|-------|-----------|----------|
| Output      | Constant Current (mA)            | 900mA                                                                | 950mA | 1000mA    | 1050mA   |
|             | Voltage Range(VDC)               | 25-40VDC                                                             |       |           | 25-38VDC |
|             | Unload voltage Max.              | 59VDC                                                                |       |           |          |
|             | Current Accuracy                 | ±5%                                                                  |       |           |          |
|             | Output HF current ripple(≥1KHz)  | ±5%                                                                  |       |           |          |
|             | Output LF current ripple(≤120Hz) | ±5%                                                                  |       |           |          |
|             | SVM                              | ≤0.4                                                                 |       |           |          |
|             | Pst                              | ≤1                                                                   |       |           |          |
|             | Efficiency(Typ.)                 | >90%@Full load,230V                                                  |       |           |          |
| Input       | Rated input voltage              | 220-240VAC                                                           |       |           |          |
|             | Range of input voltage           | 198-264VAC                                                           |       |           |          |
|             | Maximum voltage                  | 300VAC@1 h maximum,unit might not operate in this abnormal condition |       |           |          |
|             | Frequency(Hz)                    | 50/60 Hz                                                             |       |           |          |
|             | Power Factor                     | >0.95@Full load,230V                                                 |       |           |          |
|             | Input Current max (mA)           | 260mA                                                                |       |           |          |
|             | Start-up time                    | <0.5S                                                                |       |           |          |
|             | No Load Power                    | ≤0.5W                                                                |       |           |          |
|             | THD (Typ.)                       | <10%@Full load,230V                                                  |       |           |          |
| Protection  | Over Voltage Protection          | 59VDC<br>YES/Auto Resume                                             |       |           |          |
|             | Short circuit Protection         | YES/Auto Resume                                                      |       |           |          |
|             | Over Temperature Protection      | YES/Auto Resume                                                      |       |           |          |
|             |                                  |                                                                      |       |           |          |
| Capability  | Surge capability (L-N)           | 1KV                                                                  |       |           |          |
|             | Surge capability (L/N-Ground)    | NA                                                                   |       |           |          |
| Environment | Operating Temperature            | -20℃~+60℃                                                            |       | -20℃~+50℃ |          |
|             | Humidity                         | 20%-90%RH                                                            |       |           |          |
|             | Tc                               | 95℃                                                                  |       |           |          |
|             | Storage Temperature              | -25℃~+60℃                                                            |       |           |          |
|             | Life time                        | > 50000h@Tc=85℃                                                      |       |           |          |
|             | Noise                            | ≤20dB(A)@10cm                                                        |       |           |          |
| Surface     | Dimension                        | 163X30X21(LXWXH)mm                                                   |       |           |          |
|             | material                         | PC                                                                   |       |           |          |
| Standards   | Safety                           | IEC61347- 1, IEC61347-2- 13;EN61347- 1, EN61347-2- 13;EN61347- 1,    |       |           |          |
|             | EMC                              | EN55015, EN61000-3-2, EN61000-3-3,                                   |       |           |          |
|             | ErP                              | 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.

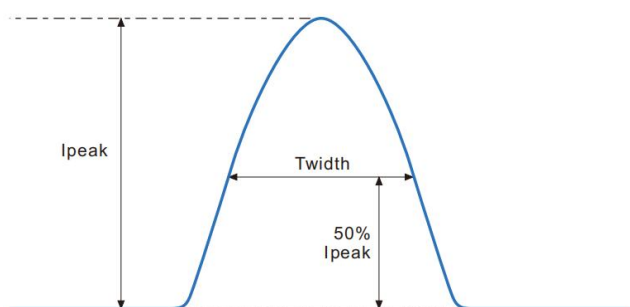
## ◆ Parameter

| Number | Output       |               |                       |           | Switch position |    |
|--------|--------------|---------------|-----------------------|-----------|-----------------|----|
|        | Current (mA) | Voltage (VDC) | Voltage No load (VDC) | Power (W) | 1               | 2  |
| 1      | 900          | 25-40VDC      | 59                    | 36        | --              | -- |
| 2      | 950          |               |                       | 38        | ON              | -- |
| 3      | 1000         |               |                       | 40        | --              | ON |
| *4     | 1050         | 25-38VDC      |                       | 39.9      | ON              | ON |

\* Factory default

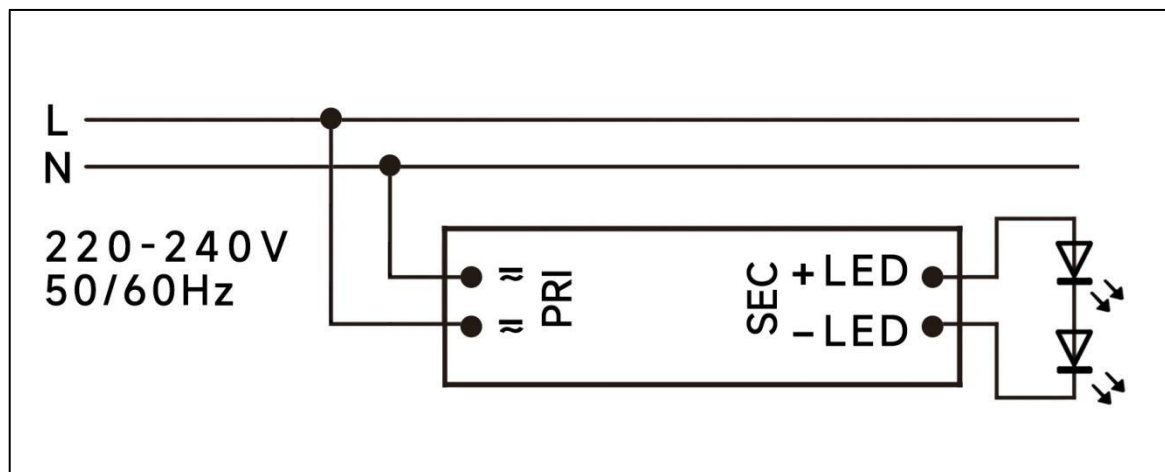
## ◆ Inrush Current

| I <sub>peak</sub> | T <sub>width</sub> | B10   | B16   | B20   | C10   | C16   | C20   |
|-------------------|--------------------|-------|-------|-------|-------|-------|-------|
| 26.3A             | 122μs              | 26pcs | 42pcs | 52pcs | 30pcs | 49pcs | 61pcs |

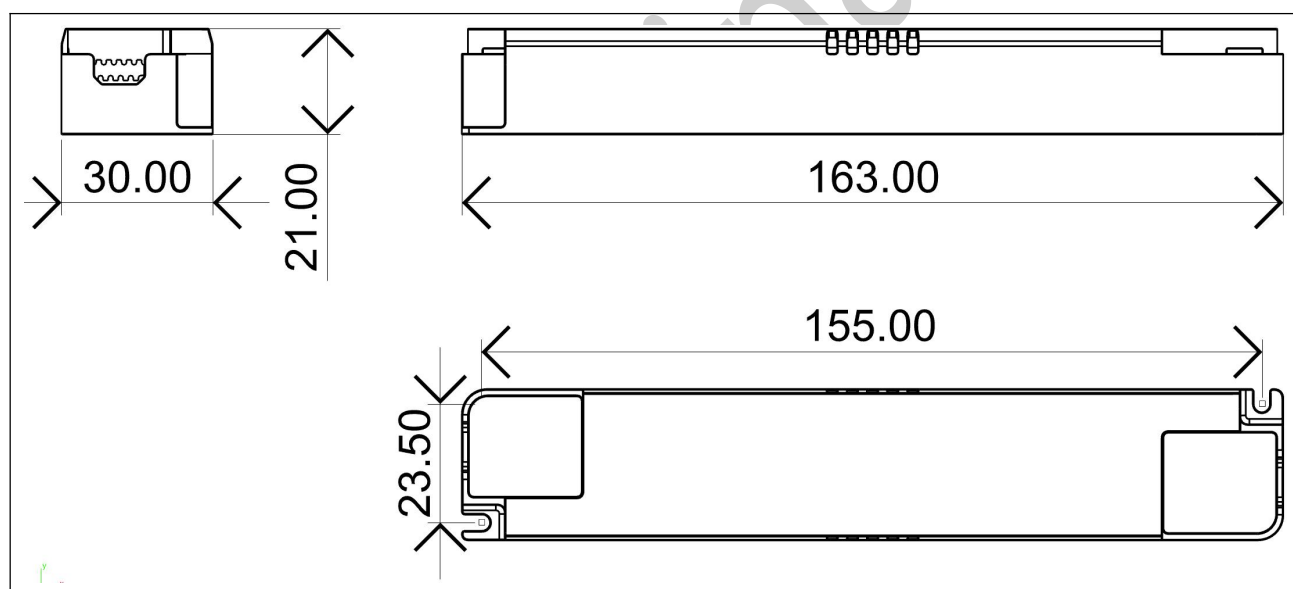

**Remarks:**

- 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

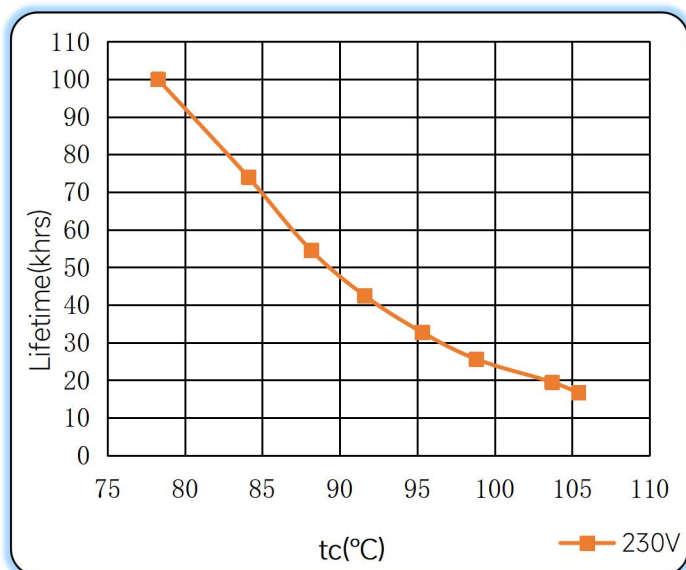
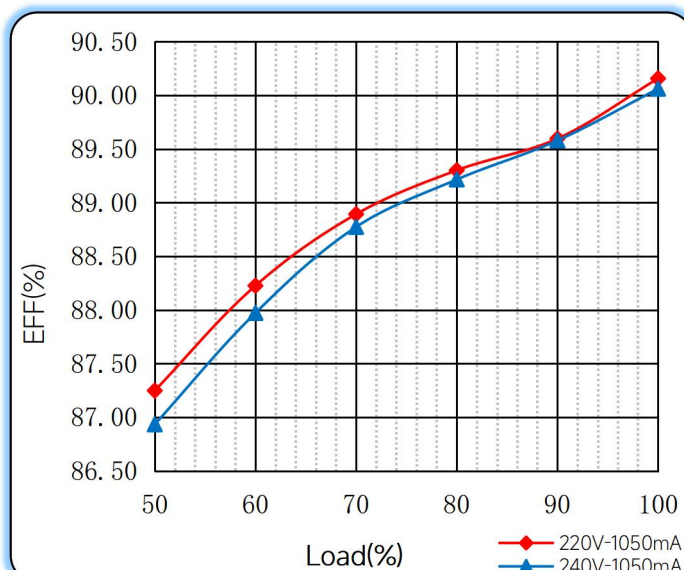
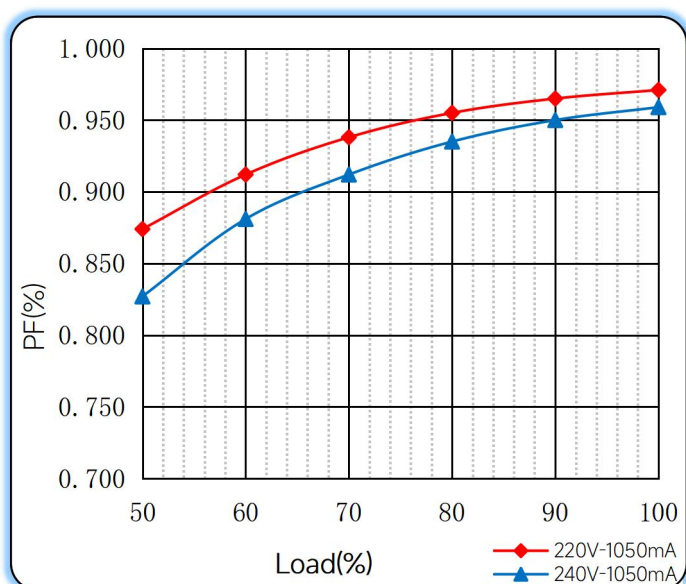
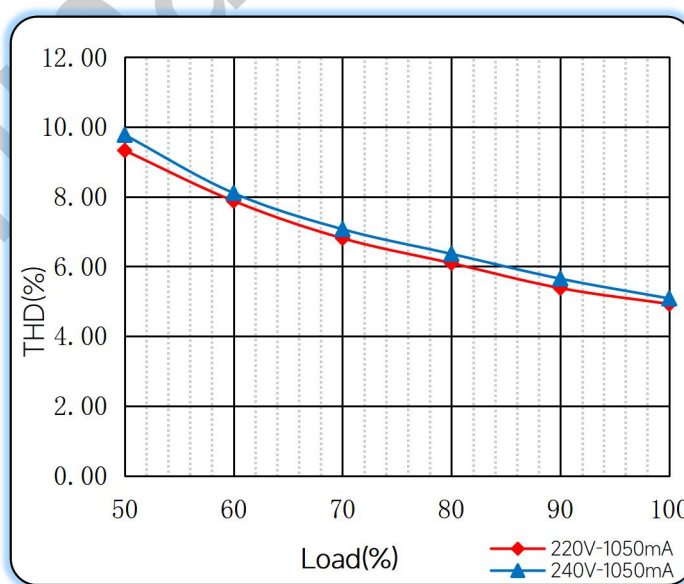
| Specification item |                           | Value (Unit )             |
|--------------------|---------------------------|---------------------------|
| Input              | Input wire cross-section  | 0.5...1.5 mm <sup>2</sup> |
|                    | Input wire gauge.         | 16...20 AWG 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

## ◆ Recommended wire

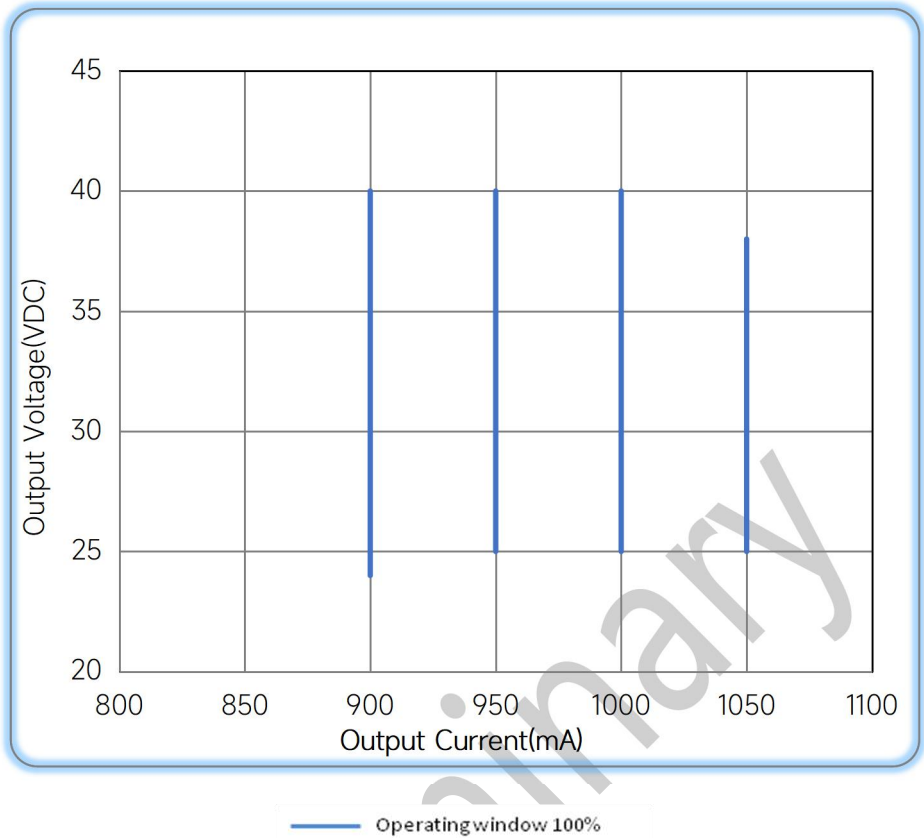
| Wire cross-section          | Wire type       |
|-----------------------------|-----------------|
| 2*0.5mm <sup>2</sup>        | H03VVH2-F 2core |
| 2*0.75mm <sup>2</sup>       | H03VVH2-F 2core |
| 1.5mm <sup>2</sup>          | CCC 08(RV-90)   |
| 16AWG(1.25mm <sup>2</sup> ) | UL1015          |

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

# ◆ Curve for FLS-40-1050 LD EXC, $I_o=1050\text{mA}$

**Lifetime vs. Temperature Curve**

**Efficiency vs. Load**

**Power Factor Characteristics**

**THD vs. Load**


◆ Operating window



◆ Revision Updates

| ITEM    | BEFORE    | AFTER                                       | VERSION | DATE       |
|---------|-----------|---------------------------------------------|---------|------------|
| Initial |           |                                             | A       | 2023/04/03 |
| Ta/Tc   | 45°C/80°C | 50°C@900-950mA<br>60°C@1000-1050mA<br>/90°C | B       | 2023/12/14 |
| Tc      | 90°C      | 95°C                                        | C       | 2024/06/14 |

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

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