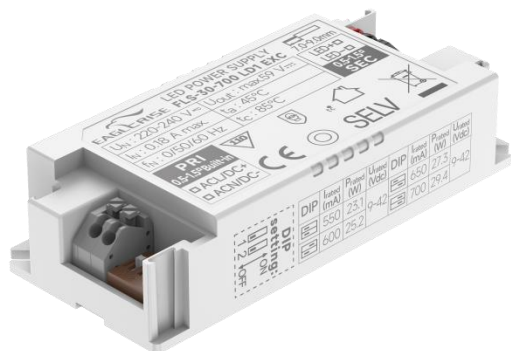


## 30W Constant Current Power Supply



■ Approve



CE CB



EL

SELV

### Features

- For luminaires of protection Class II, SELV, Built-in/Independent
- Input Voltage: 220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor: 0.95(Typ.)
- Efficiency: ≥89%(Typ.)
- Adjustable Output Current with dip-switch
- 5 years warranty
- IP20

### Applications

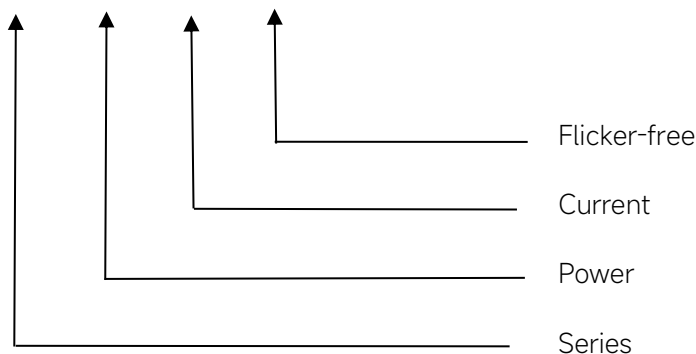
- LED panel, LED down light

### ◆ Description

FLS-30-700 LD1 EXC is a 30W constant current LED driver with 550 to 700mA output current and a forward voltage range from 9 to 42Vdc. The output current is adjustable by DIP Switch. With it's compact dimensions from 88 x 40 x 22 mm. It is easy to integrate in LED Panel and down light products. The side covers are available as accessories and allow to use the LED driver independent.

### ◆ Model code

FLS-30-700 LD1 EXC



## ◆ Specification

|             | Constant Current (mA)            | 550mA                                                                                   | 600mA | 650mA | 700mA |
|-------------|----------------------------------|-----------------------------------------------------------------------------------------|-------|-------|-------|
| Output      | Voltage Range(VDC)               | 9-42V                                                                                   |       |       |       |
|             | Unload voltage Max.(VDC)         | 59V                                                                                     |       |       |       |
|             | Current Accuracy                 | ±5%                                                                                     |       |       |       |
|             | Output HF current ripple(≥1KHz)  | ≤±5%                                                                                    |       |       |       |
|             | Output LF current ripple(≤120Hz) | ≤±3%                                                                                    |       |       |       |
|             | SVM                              | ≤0.4                                                                                    |       |       |       |
|             | Pst                              | ≤1                                                                                      |       |       |       |
|             | Efficiency(Typ.)                 | ≥89% @Full Load,230V                                                                    |       |       |       |
|             | EOFI                             | 100%                                                                                    |       |       |       |
| Input       | Rated input voltage(VAC)         | 220-240V                                                                                |       |       |       |
|             | Range of input voltage(VAC)      | 198-264VAC                                                                              |       |       |       |
|             | Maximum voltage                  | 300VAC@1 h maximum,unit might not operate in this abnormal condition                    |       |       |       |
|             | Range of input voltage(VDC)      | 176-280VDC                                                                              |       |       |       |
|             | Frequency(Hz)                    | 0/50/60 Hz                                                                              |       |       |       |
|             | Displacement factor              | ≥0.95 @Full Load,230V                                                                   |       |       |       |
|             | Power Factor                     | 0.95 @Full Load,230V                                                                    |       |       |       |
|             | Input Current max                | 0.18A Max                                                                               |       |       |       |
|             | Start-up time                    | < 0.5S                                                                                  |       |       |       |
|             | No Load Power                    | ≤0.5W                                                                                   |       |       |       |
|             | THD (Typ.)                       | <10% @Full Load,230V                                                                    |       |       |       |
| Protection  | Over Load Protection             | 103-130%                                                                                |       |       |       |
|             |                                  | YES/Auto Resume                                                                         |       |       |       |
|             | Over Voltage Protection          | >59V                                                                                    |       |       |       |
|             |                                  | YES/Auto Resume                                                                         |       |       |       |
| capability  | Short circuit Protection         | YES/Auto Resume                                                                         |       |       |       |
|             | Surge capability (L-N)           | 1KV                                                                                     |       |       |       |
| Environment | Surge capability (L/N-Ground)    | NA                                                                                      |       |       |       |
|             | Operating Temperature            | -20°C~+45°C                                                                             |       |       |       |
|             | Humidity                         | 20%-90%RH                                                                               |       |       |       |
|             | Tc                               | 85°C                                                                                    |       |       |       |
|             | Storage Temperature              | -25°C~+60°C                                                                             |       |       |       |
|             | Life time                        | > 50000h@Tc=80°C                                                                        |       |       |       |
|             | Noise                            | ≤20dB(A)@10cm                                                                           |       |       |       |
| Surface     | Dimension                        | 88X40X22mm (With side caps):122X40X22mm                                                 |       |       |       |
|             | material                         | PC                                                                                      |       |       |       |
| Standards   | Safety                           | GB19510. 1, GB19510. 14;IEC61347- 1, IEC61347-2- 13;EN61347- 1, EN61347-2- 13; EN62384; |       |       |       |

|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
|      | EMC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | GB/T17743, GB17625. 1;EN55015, EN61000-3-2, EN61000-3-3, EN61547;EN61000-4-2,3,4,5,6,8,11, EN61547;EN61000-4-5 |
|      | 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.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 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> |                                                                                                                |

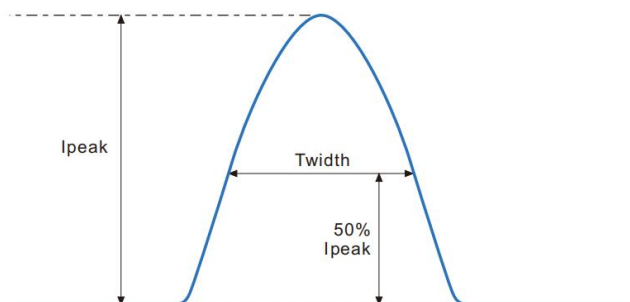
## ◆ Parameter

| Number | Output       |               |                       |           | Switch position |    |
|--------|--------------|---------------|-----------------------|-----------|-----------------|----|
|        | Current (mA) | Voltage (VDC) | Voltage No load (VDC) | Power (W) | 1               | 2  |
| 1      | 550mA        | 9-42VDC       | 59                    | 23.1      | --              | -- |
| 2      | 600mA        |               |                       | 25.2      | ON              | -- |
| 3      | 650mA        |               |                       | 27.3      | --              | ON |
| *4     | 700mA        |               |                       | 29.4      | ON              | ON |

\* Factory default

## ◆ Inrush Current

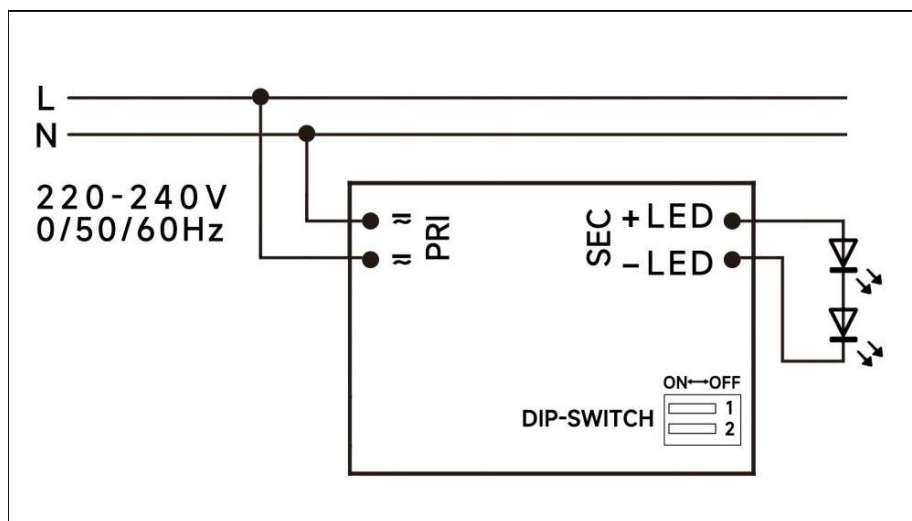
| $I_{peak}$ | Twidth                      | B10   | B16   | B20   | C10   | C16   | C20   |
|------------|-----------------------------|-------|-------|-------|-------|-------|-------|
| 20.8A      | <b>140<math>\mu</math>s</b> | 28pcs | 45pcs | 57pcs | 44pcs | 71pcs | 88pcs |



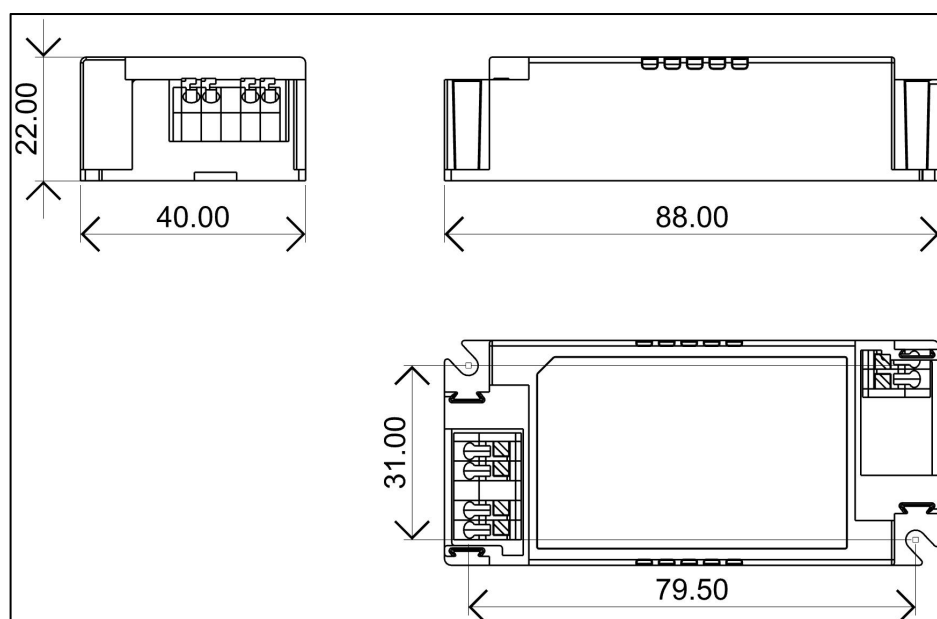
### Remarks:

- 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.

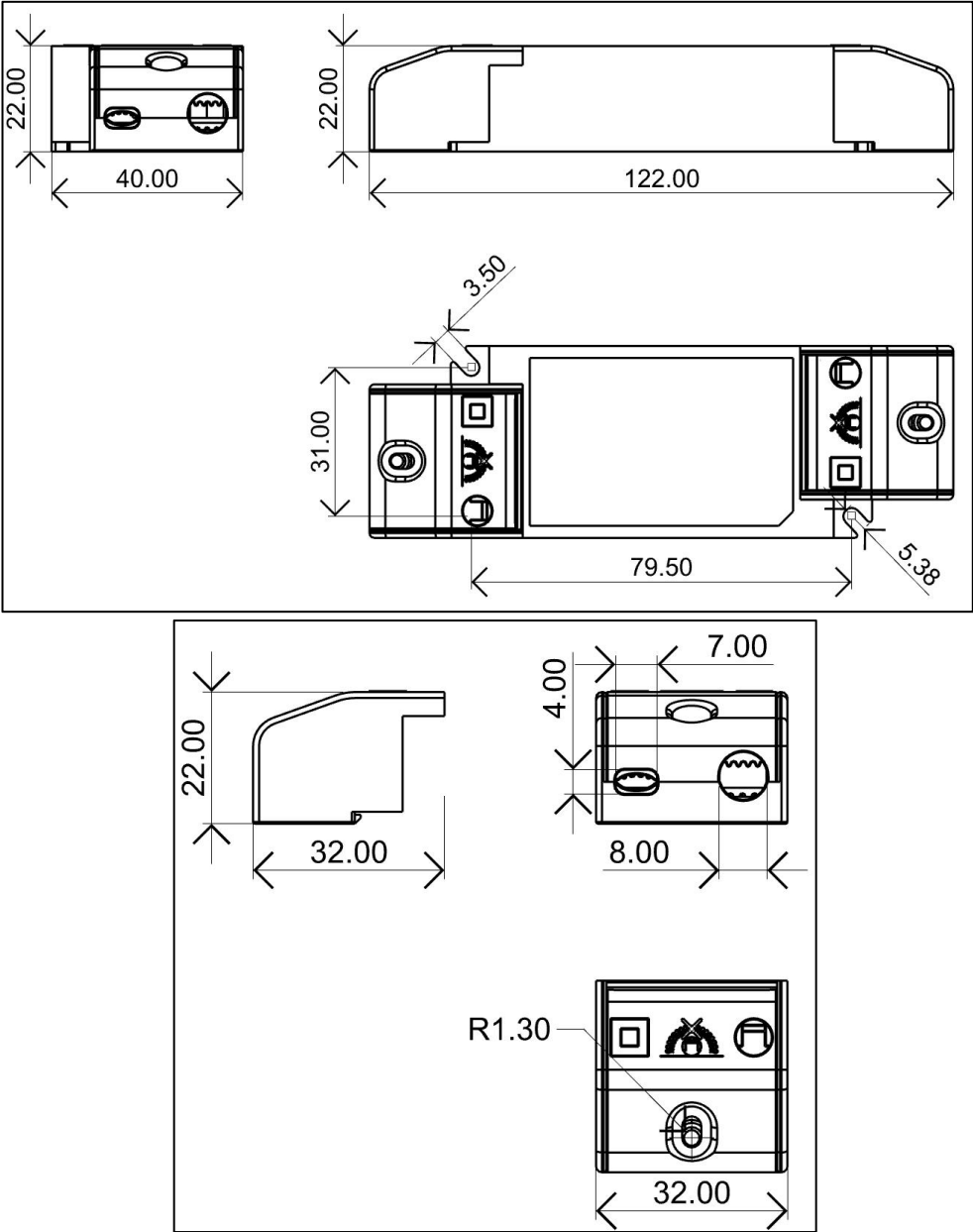
## ◆ Wiring diagram



## ◆ 2D diagram



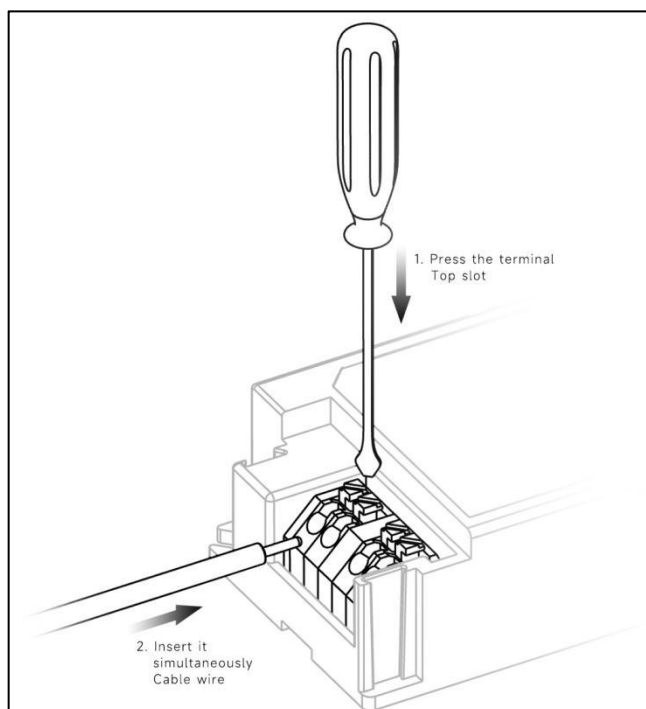
With side caps



B caps

|             |                                      |
|-------------|--------------------------------------|
| 132021T0256 | Small, Grey ,with "Don't Cover" mark |
| 1270100280  | Screws                               |

Terminal



## ◆ Wiring & Connections

| Specification item |                           | Value (Unit )                                                           |
|--------------------|---------------------------|-------------------------------------------------------------------------|
| Input              | Input wire cross-section  | 0.5...1.5 mm <sup>2</sup> (With side caps: 0.75...1.5 mm <sup>2</sup> ) |
|                    | Input wire gauge.         | 16...20 AWG (With side caps: 16...22 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

| Small side cap of small hole | Wire type               |
|------------------------------|-------------------------|
| 0.5mm <sup>2</sup>           | H03VVH2-F 2 core&3 core |
|                              | H03VV-F 2 core&3 core   |
| 0.75mm <sup>2</sup>          | H03VVH2-F 2 core&3 core |
|                              | H03VV-F 2 core&3 core   |
|                              | H05VV-F 2 core          |
| 1.0mm <sup>2</sup>           | H05VVH2-F 2 core        |
| 1.5mm <sup>2</sup>           | CCC 08(RV-90)           |

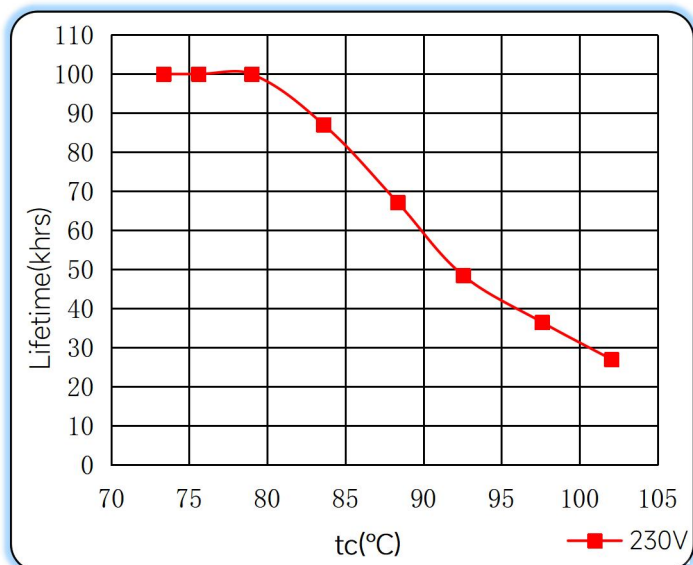
  

| Small side cap of big hole | Wire type                    |
|----------------------------|------------------------------|
| 0.75mm <sup>2</sup>        | H05VV-F 2 core&3 core&4 core |
| 1.0mm <sup>2</sup>         | H05VV-F 2 core&3core         |
| 1.5mm <sup>2</sup>         | H05VV-F 2 core&3core         |

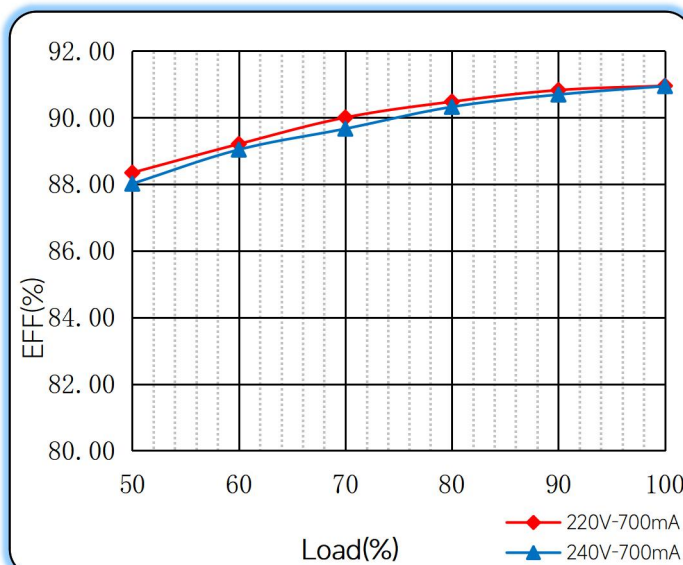
Note: Solid wire is risky to use on an angled terminal. Stranded wire is recommended for this kind of use.

## ◆ Curve for FLS-30-700 LD1 EXC, $I_o=700\text{mA}$

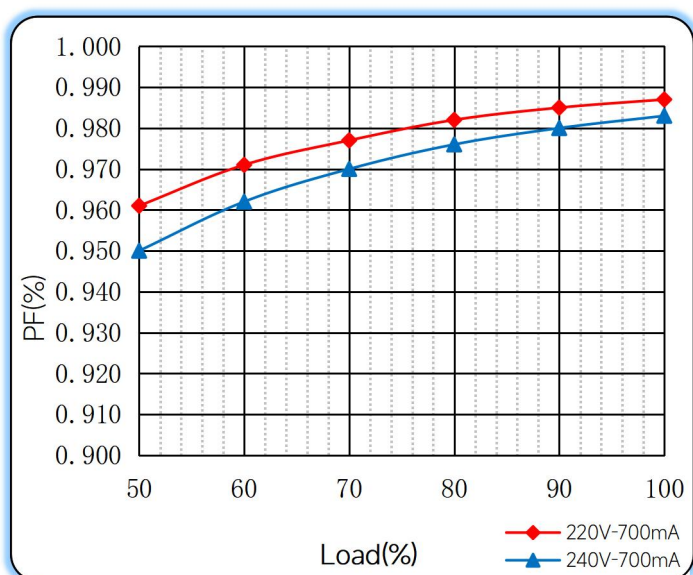
### Lifetime vs. Temperature Curve



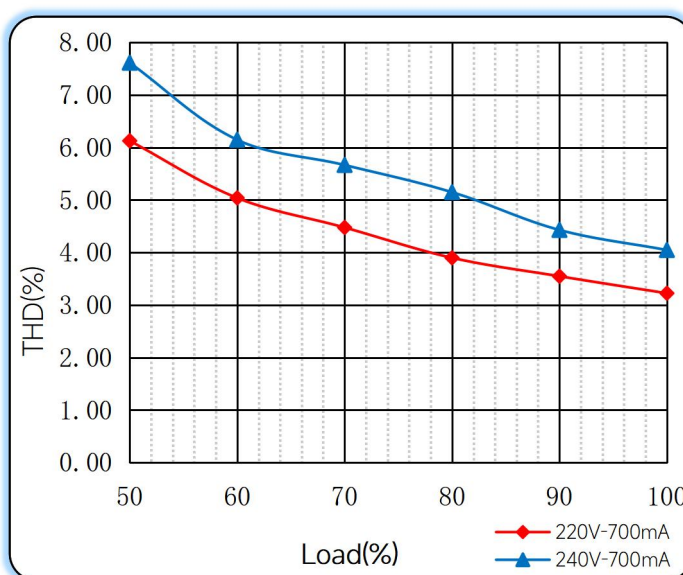
### Efficiency vs. Load



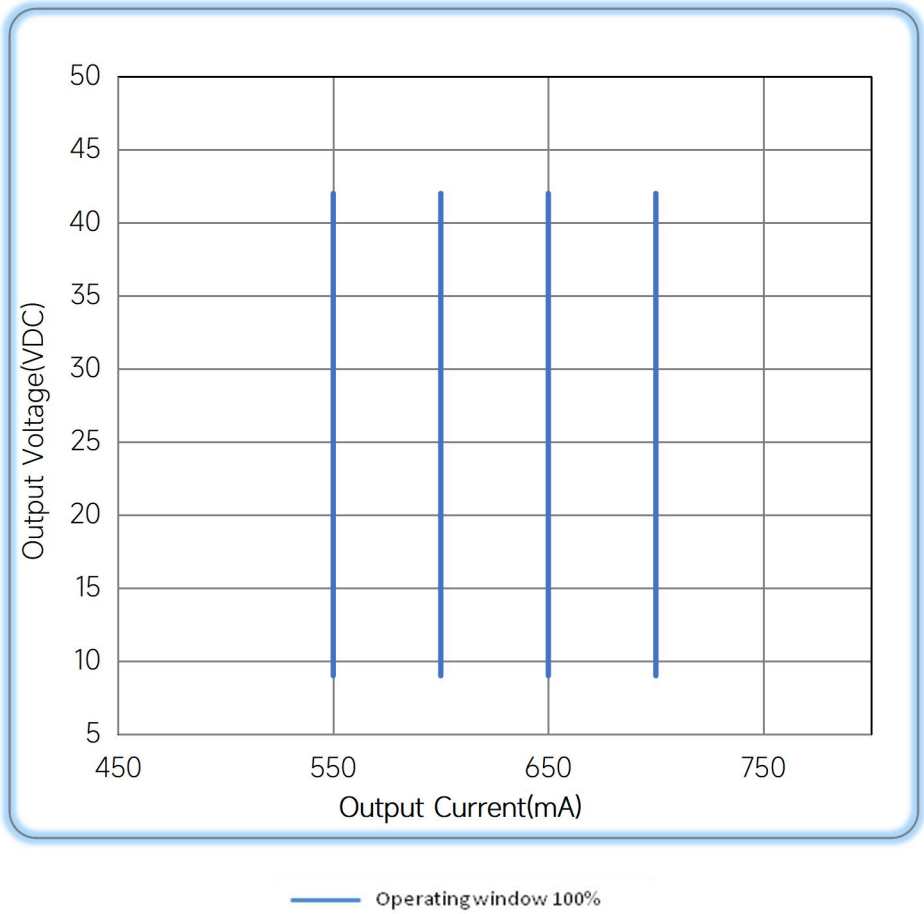
### Power Factor Characteristics



### THD vs. Load



◆ Operating window



◆ Revision Updates

| ITEM    | BEFORE | AFTER | VERSION | DATE       |
|---------|--------|-------|---------|------------|
| Initial |        |       | A       | 2024/02/23 |
|         |        |       |         |            |
|         |        |       |         |            |

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

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