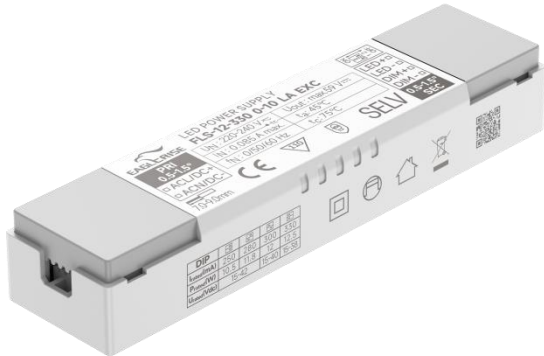


## 12W 0-10V+RX+PWM Dimming power supply



■ Approve

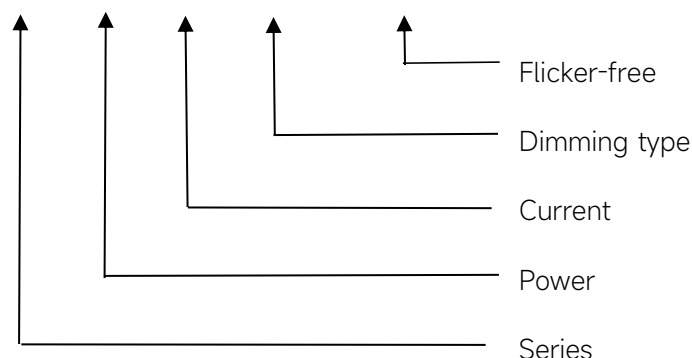


### ◆ Description

FLS-12-330 0-10 LA EXC is a 12W constant current LED driver with 250 to 330mA output current and a forward voltage range from 15 to 42Vdc. The output current is adjustable by DIP Switch. With it's dimensions from 126 x 30 x 20.5 mm. It is easy to integrate in LED strips, LED panel, spot and down light products. To ensure trouble-free operation, protection is provided against output short circuit and over Load.

### ◆ Model code

#### FLS-12-330 0-10 LA EXC



### Features

- For luminaires of protection Class II, SELV, Independent
- Input Voltage 220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor : 0.95
- Efficiency : 84%
- Support 0-10V,RX,PWM Dimming
- 5 years warranty

### Applications

- LED panel、Spot light、Down light

## ◆ Specification

|             |                                  |                                                                      |     |       |       |
|-------------|----------------------------------|----------------------------------------------------------------------|-----|-------|-------|
| Output      | Constant Current (mA)            | 250                                                                  | 280 | 300   | 330   |
|             | Voltage Range (VDC)              | 15-42                                                                |     | 15-40 | 15-38 |
|             | Unload voltage Max.              | 59VDC                                                                |     |       |       |
|             | Current Accuracy                 | ±5%                                                                  |     |       |       |
|             | Output LF current ripple(≤120Hz) | ±5%                                                                  |     |       |       |
|             | SVM                              | ≤0.4                                                                 |     |       |       |
|             | P <sub>st</sub>                  | ≤1                                                                   |     |       |       |
|             | Efficiency(Typ.)                 | 84%@280mA,Full Load,230VAC                                           |     |       |       |
|             | EOFI                             | 100%                                                                 |     |       |       |
| Input       | Rated input voltage              | 220-240V                                                             |     |       |       |
|             | Range of input voltage           | 198-264VAC                                                           |     |       |       |
|             | Maximum voltage                  | 300VAC@1 h maximum,unit might not operate in this abnormal condition |     |       |       |
|             | Rated input voltage(DC)          | 176-280VDC                                                           |     |       |       |
|             | Frequency(Hz)                    | 0/50/60 Hz                                                           |     |       |       |
|             | Displacement factor              | ≥0.7                                                                 |     |       |       |
|             | Power Factor                     | 0.95@Full Load,230VAC                                                |     |       |       |
|             | Input Current                    | 0.085A                                                               |     |       |       |
|             | Start-up time                    | < 0.5S                                                               |     |       |       |
|             | No Load Power                    | ≤0.5W                                                                |     |       |       |
|             | Standby Power                    | ≤0.5W                                                                |     |       |       |
|             | Network standby power            | ≤0.5W                                                                |     |       |       |
|             | THD (Typ.)                       | <10%@Full Load,230VAC                                                |     |       |       |
|             |                                  |                                                                      |     |       |       |
| Dimming     | Dimming                          | YES                                                                  |     |       |       |
|             | Dimming mode                     | 0-10V,RX,PWM                                                         |     |       |       |
|             | Dimming depth                    | 1%                                                                   |     |       |       |
|             | Dimming current range            | 1-100%                                                               |     |       |       |
| Protection  | Over Load Protection             | 103-120%                                                             |     |       |       |
|             |                                  | YES/Auto Resume                                                      |     |       |       |
|             | Over Voltage Protection          | > 59VDC                                                              |     |       |       |
|             |                                  | YES/Auto Resume                                                      |     |       |       |
| capability  | Short circuit Protection         | YES/Auto Resume                                                      |     |       |       |
|             |                                  |                                                                      |     |       |       |
| capability  | Surge capability (L-N)           | 1KV                                                                  |     |       |       |
|             | Surge capability (L/N-Ground)    | NA                                                                   |     |       |       |
| Environment | Operating Temperature            | -20°C~+45°C                                                          |     |       |       |
|             | Humidity                         | 20%-90%RH                                                            |     |       |       |
|             | Tc                               | 75°C                                                                 |     |       |       |
|             | Storage Temperature              | -25°C~+60°C                                                          |     |       |       |
|             | Lifetime                         | >50000h,@Tc=75°C                                                     |     |       |       |

|           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                    |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           | Noise                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ≤25dB(A)@20cm                                                                                                                                                      |
| Surface   | Dimension                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 126X30X20.5mm                                                                                                                                                      |
|           | material                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | PC                                                                                                                                                                 |
| Standards | Safety                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | GB19510. 1, GB19510. 14;IEC61347- 1, IEC61347-2- 13;AS/NZS 61347- 1, AS/NZS 61347-2- 13;AS 61347.2.13;EN62384;                                                     |
|           | EMC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | GB/T17743, GB17625. 1;EN55015, EN61000-3-2, EN61000-3-3, EN61547;EN55015, EN61000-3-2, EN61000-3-3, EN61547,EN 62493;EN61000-4-5;EN61000-4-2,3,4,5,6,8,11, EN61547 |
|           | ErP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 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.Data are typical values obtained from test samples.</p> <p>4.DALI protocol comprises 16 groups and 64 addresses.Up to 32 drivers can perform the PUSH dimming at the same time when utilizing one push button.</p> <p>5.EL compatible with IEC 61347-2-13 Annex J, compatible with EN 60598-2-22 emergency lighting fixtures, compatible with EN 50172 central battery system applications.</p> <p>6.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>7.The over-temperature protection of the product is provided by the IC.</p> <p>8.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> |                                                                                                                                                                    |

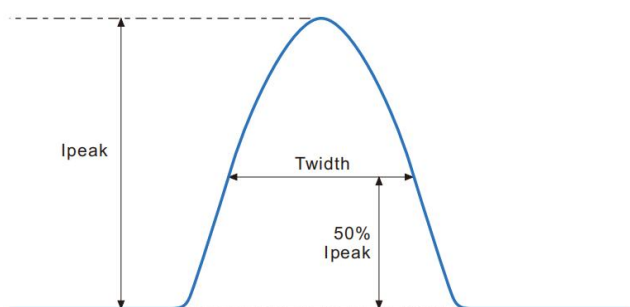
## ◆ Parameter

| Number | Output          |                  |                             |              | Switch position |    |
|--------|-----------------|------------------|-----------------------------|--------------|-----------------|----|
|        | Current<br>(mA) | Voltage<br>(VDC) | Voltage<br>No load<br>(VDC) | Power<br>(W) | 1               | 2  |
| 1      | 250mA           | 15-42            | 59VDC                       | 10.5         | --              | -- |
| 2      | 280mA           |                  |                             | 11.8         | ON              | -- |
| 3      | 300mA           | 15-40            |                             | 12           | --              | ON |
| 4      | 330mA           | 15-38            |                             | 12.5         | ON              | ON |

\* Factory default

## ◆ Inrush Current

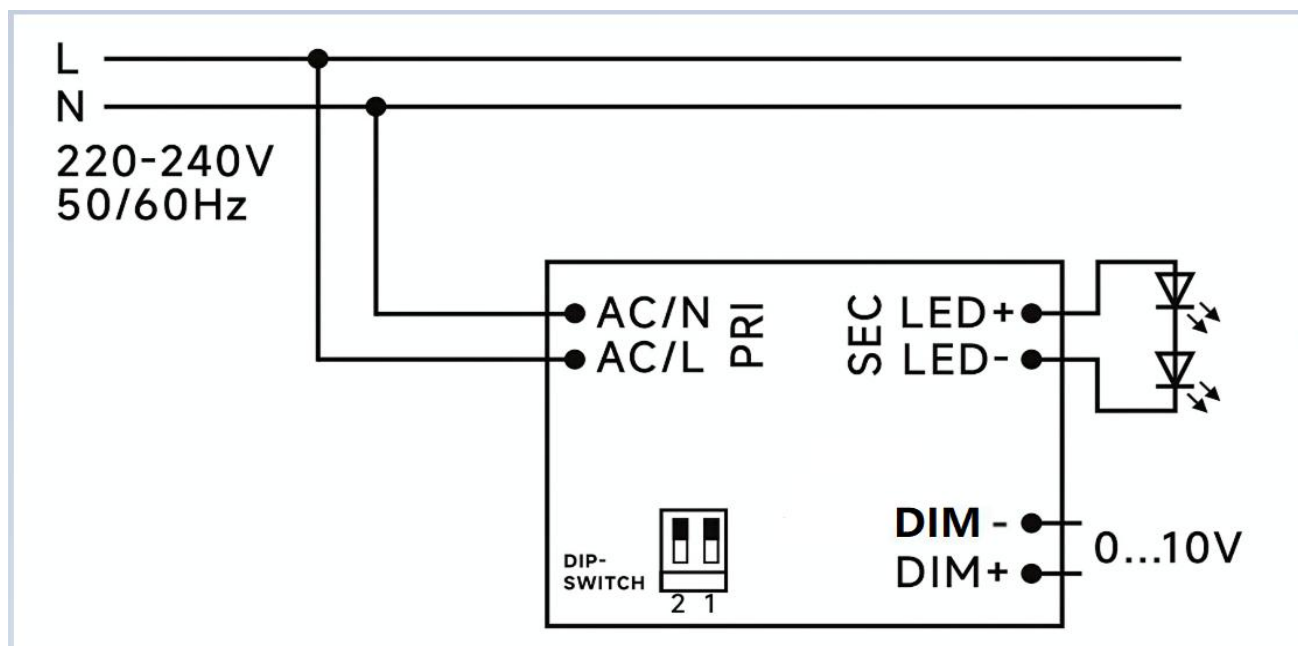
| $I_{peak}$ | Twidth     | B10   | B16    | B20    | C10   | C16    | C20    |
|------------|------------|-------|--------|--------|-------|--------|--------|
| 2.56A      | 36 $\mu$ s | 94pcs | 150pcs | 188pcs | 94pcs | 150pcs | 188pcs |



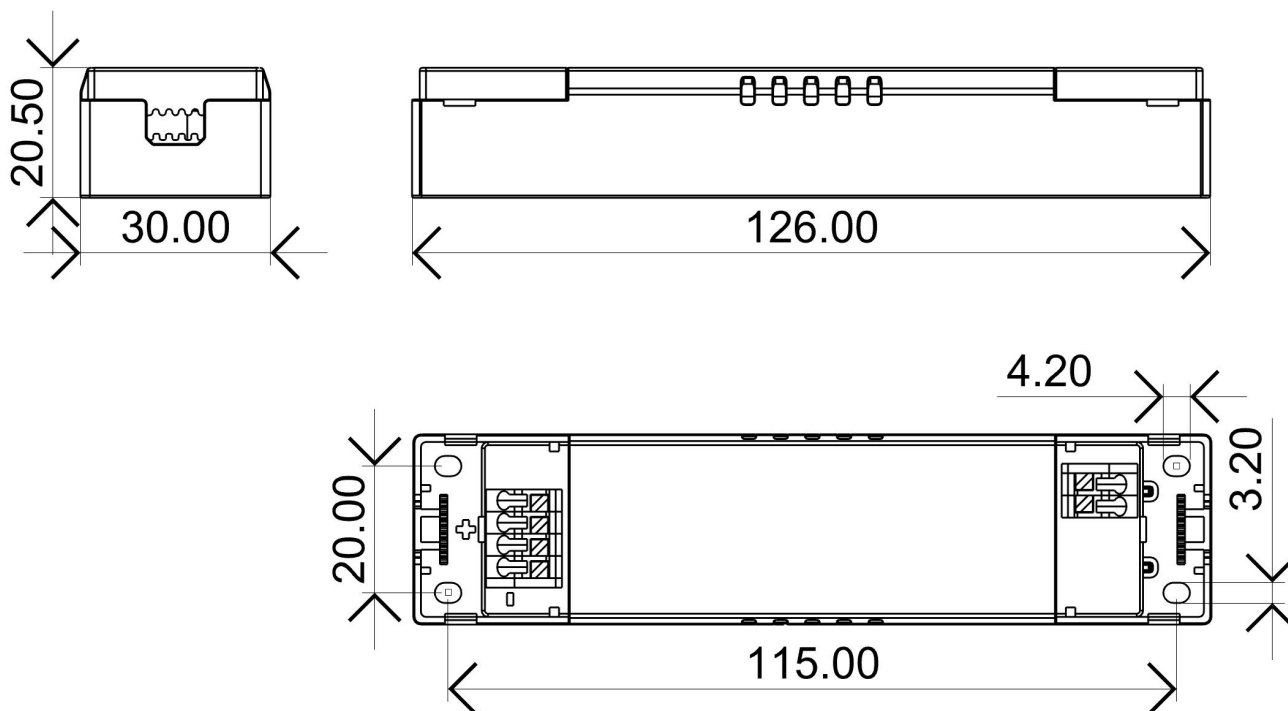
### Remarks:

- 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   | 8...9mm                   |
| Output             | Output wire cross-section | 0.5...1.5 mm <sup>2</sup> |
|                    | Output wire gauge.        | 16...20 AWG               |
|                    | Output wire strip length  | 8...9mm                   |

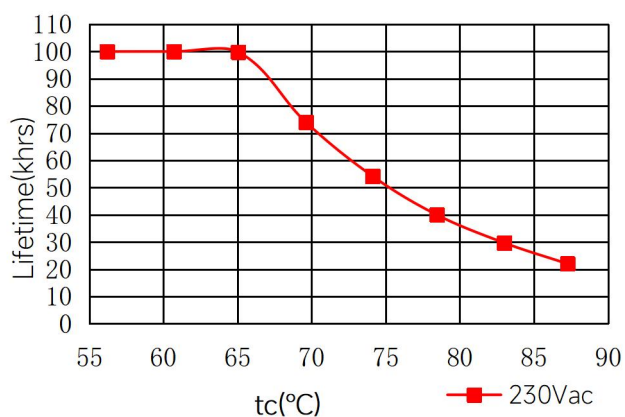
Note: Solid wire is risky to use on an angled terminal. Stranded wire is recommended for this kind of use.

## ◆ Packaging

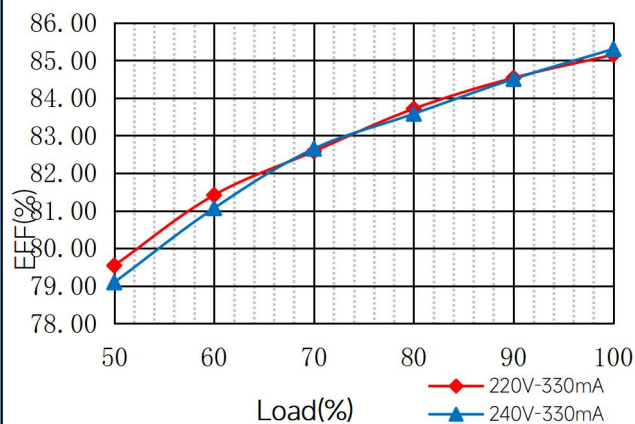
| Model                        | Product Dimensions(mm) | weight/piece | Outer carton dimension(mm) | Quantity/carton | Net weight/carton(Kg) | Gross weight/carton(Kg) |
|------------------------------|------------------------|--------------|----------------------------|-----------------|-----------------------|-------------------------|
| FLS-12-330<br>0-10 LA<br>EXC | 126X30X20.5mm          | 52.7         | 370*275*215mm              | 189             | 10.86                 | 11.57                   |

# ◆ Curve for FLS-12-330 0-10 LA EXC, $I_o=330\text{mA}$

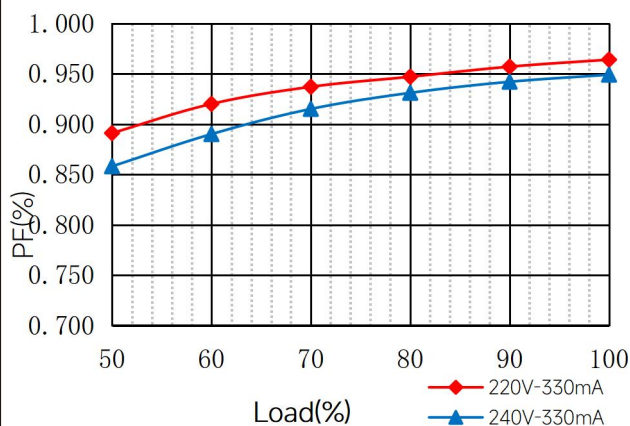
Lifetime vs. Temperature Curve



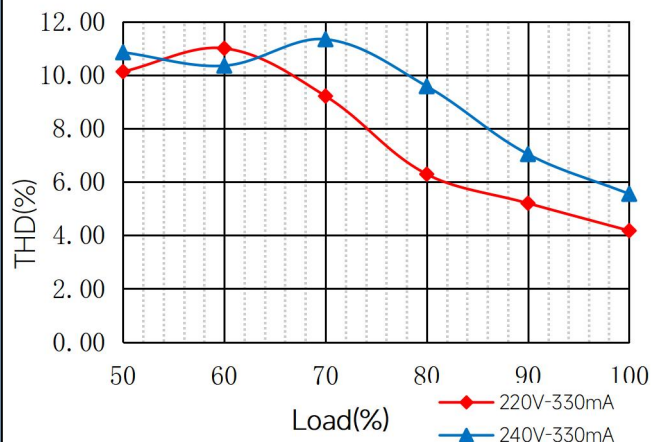
Efficiency vs. Load



Power Factor Characteristics

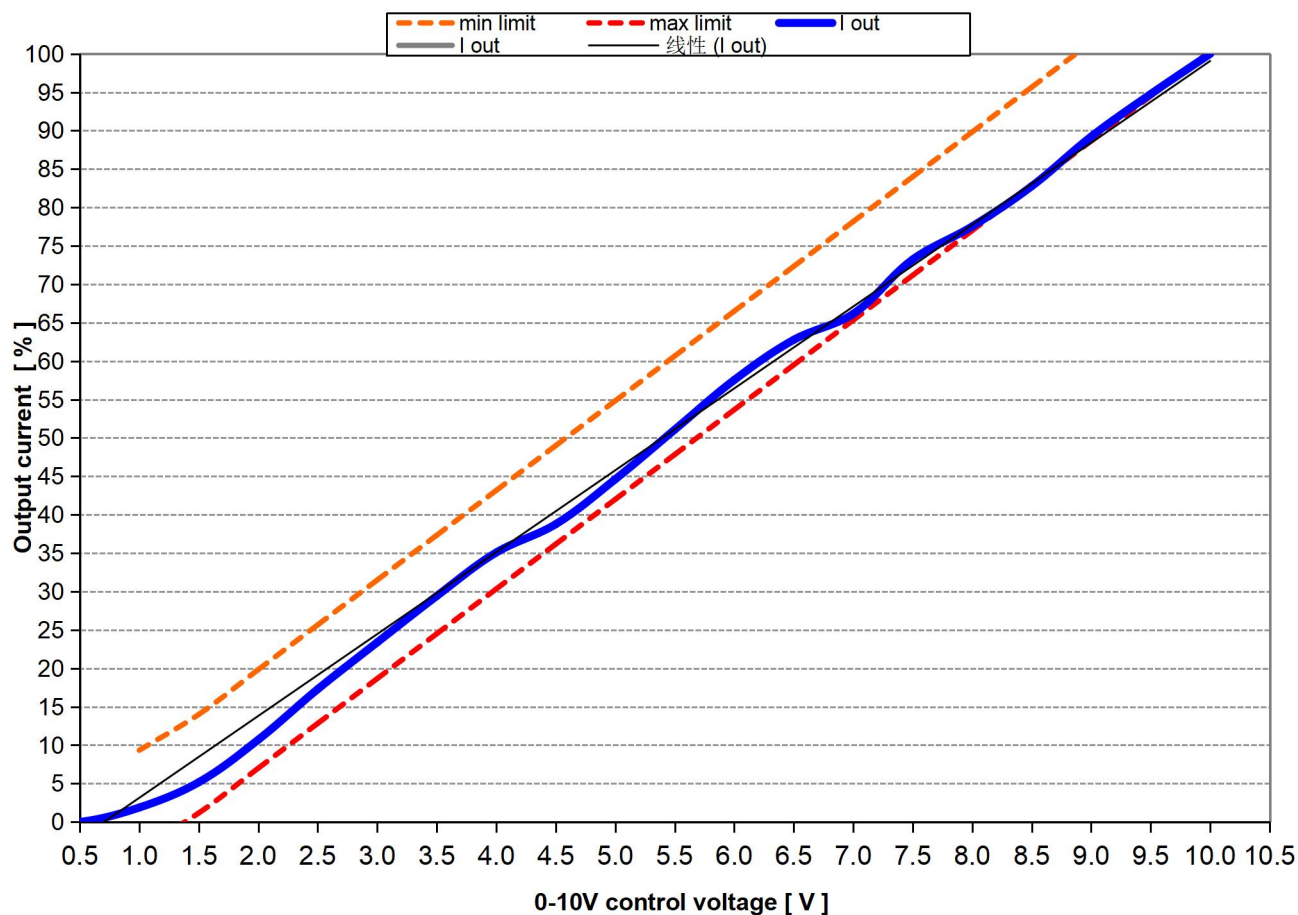


THD vs. Load

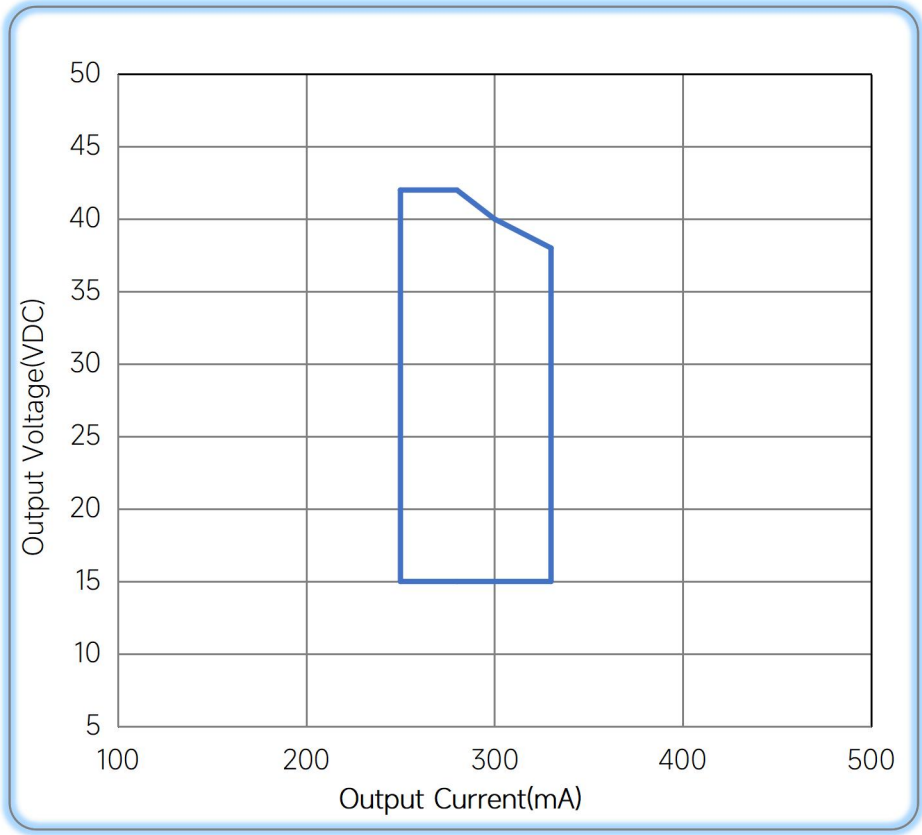


## ◆ Dimming Curve

Output @ 0-10V control voltage



◆ Operating window



Operating window 100%

◆ 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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EAGLERISE



Manual