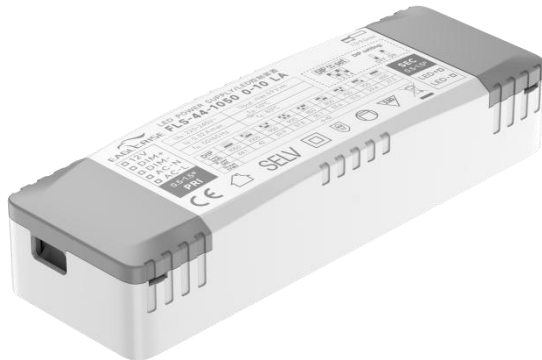


# 15W 0-10V+RX+PWM Dimming power supply



**Approve**

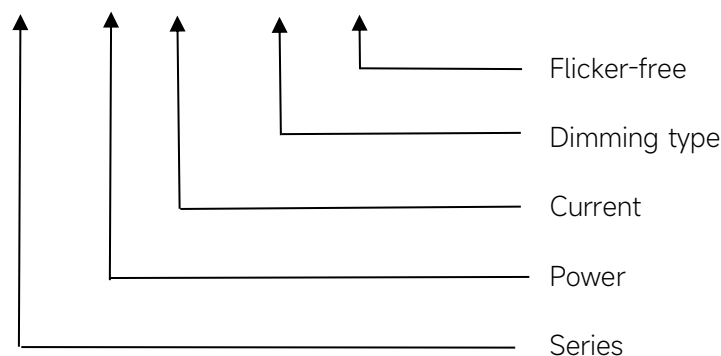


**Description**

FLS-15-350 0-10 LA is a 15W constant current LED driver that operates from 198-264Vac input with 120 to 350mA 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 125 x 45 x 26mm it is easy to integrate in LED Panel and down light products. To ensure trouble-free operation, protection is provided against output short circuit and over Load.

**Model code**

FLS-15-350 0-10 LA



**Features**

- For luminaries of protection
- Class I, II, SELV, independent
- Input Voltage 220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor: 0.4C-0.95
- Efficiency:  $\geq 80\%$
- Support 0-10V,RX,PWM Dimming
- 5 years warranty

**Applications**

- LED panel light, Down light

## ◆ Specification

|                             | Constant Current (mA)            | 120                        | 150        | 180 | 200 | 220 | 250 | 300 | 350 |
|-----------------------------|----------------------------------|----------------------------|------------|-----|-----|-----|-----|-----|-----|
| Output                      | Voltage Range(VDC)               | 9-42VDC                    |            |     |     |     |     |     |     |
|                             | Unload voltage Max.(VDC)         | 59VDC                      |            |     |     |     |     |     |     |
|                             | Current Accuracy                 | ±10%                       |            | ±8% |     |     | ±6% |     |     |
|                             | Output HF current ripple(≥1KHz)  | ±5%                        |            |     |     |     |     |     |     |
|                             | Output LF current ripple(≤120Hz) | ±3%                        |            |     |     |     |     |     |     |
|                             | Auxiliary Output Voltage         | 12V                        |            |     |     |     |     |     |     |
|                             | Auxiliary Output Current         | 50 mA                      |            |     |     |     |     |     |     |
|                             | SVM                              | ≤0.4                       |            |     |     |     |     |     |     |
|                             | P <sub>st</sub>                  | ≤1                         |            |     |     |     |     |     |     |
|                             | Efficiency(Typ.)                 | ≥80%@Full load             |            |     |     |     |     |     |     |
|                             | Input                            | Rated input voltage(VAC)   | 220-240VAC |     |     |     |     |     |     |
| Range of input voltage(VAC) |                                  | 198-264VAC                 |            |     |     |     |     |     |     |
| Range of input voltage(VDC) |                                  | 198-264VDC                 |            |     |     |     |     |     |     |
| Frequency(Hz)               |                                  | 0/50/60 Hz                 |            |     |     |     |     |     |     |
| Displacement factor         |                                  | ≥0.9@Full load             |            |     |     |     |     |     |     |
| Power Factor                |                                  | 0.4C-0.95                  |            |     |     |     |     |     |     |
| Input Current max           |                                  | 0.1 A Max                  |            |     |     |     |     |     |     |
| Start-up time               |                                  | < 0.5S                     |            |     |     |     |     |     |     |
| No Load Power               |                                  | ≤0.5W                      |            |     |     |     |     |     |     |
| THD (Typ.)                  |                                  | ≤15%@Full load             |            |     |     |     |     |     |     |
| Dimming                     | Dimming                          | YES                        |            |     |     |     |     |     |     |
|                             | Dimming mode                     | 0-10V,RX,PWM               |            |     |     |     |     |     |     |
|                             | Dimming depth                    | 1%                         |            |     |     |     |     |     |     |
|                             | Dimming current range            | 0~100%                     |            |     |     |     |     |     |     |
| Protection                  | Over Load Protection             | 103-130%                   |            |     |     |     |     |     |     |
|                             | Over Voltage Protection          | YES/Auto Resume<br>> 59VDC |            |     |     |     |     |     |     |
|                             | Short circuit Protection         | YES/Auto Resume            |            |     |     |     |     |     |     |
|                             | Over Temperature Protection      | YES/Auto Resume            |            |     |     |     |     |     |     |
| Environment                 | Operating Temperature            | -20°C...+45°C              |            |     |     |     |     |     |     |
|                             | Humidity                         | 20%-90%RH                  |            |     |     |     |     |     |     |
|                             | Tc                               | 85°C                       |            |     |     |     |     |     |     |
|                             | Storage Temperature              | -25°C...+80°C              |            |     |     |     |     |     |     |
|                             | Life time                        | > 50000h@tc=85°C           |            |     |     |     |     |     |     |
| Surface                     | Dimension                        | 125X45X26(LXWXH)mm         |            |     |     |     |     |     |     |

|           |  |                                |
|-----------|--|--------------------------------|
| standards | EN 61547; EN 61347-1,EN 61347-2-13; IEC 61347-1,IEC 61347-2-13; GB 19510.1,GB 19510.14; AS 61347.1,AS 61347.2.13; EN 62384; EN IEC 55015,EN IEC 61000-3-2,EN 61000-3-3   |                                |
| 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

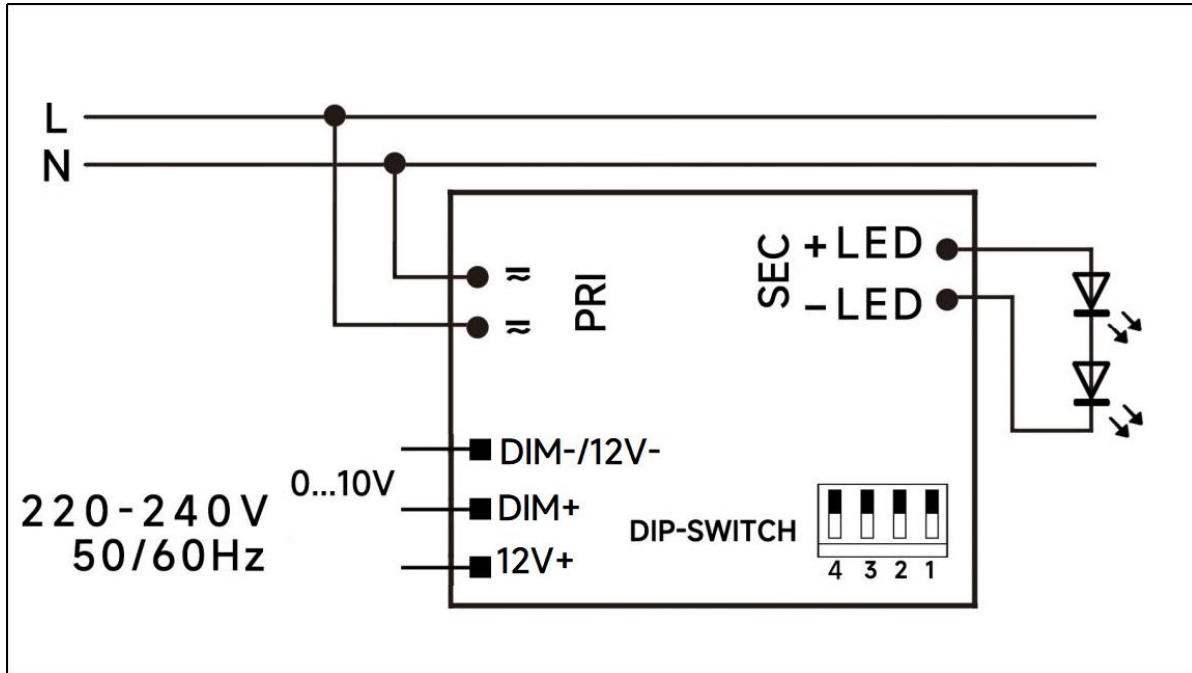
| Number | Output       |               |                       |           | Switch position |    |    |    |
|--------|--------------|---------------|-----------------------|-----------|-----------------|----|----|----|
|        | Current (mA) | Voltage (VDC) | Voltage No load (VDC) | Power (W) | 1               | 2  | 3  | 4  |
| 1      | 120mA        | 9-42VDC       | 59VDC                 | 5         | ON              | -- | -- | -- |
| 2      | 150mA        | 9-42VDC       |                       | 6.3       | --              | ON | -- | -- |
| 3      | 180mA        | 9-42VDC       |                       | 7.56      | --              | -- | ON | -- |
| 4      | 200mA        | 9-42VDC       |                       | 8.4       | --              | -- | -- | ON |
| 5      | 220mA        | 9-42VDC       |                       | 9.24      | ON              | -- | -- | ON |
| 6      | 250mA        | 9-42VDC       |                       | 10.5      | --              | ON | -- | ON |
| 7      | 300mA        | 9-42VDC       |                       | 12.6      | ON              | -- | ON | ON |
| *8     | 350mA        | 9-42VDC       |                       | 14.7      | ON              | ON | ON | ON |

\* Factory default

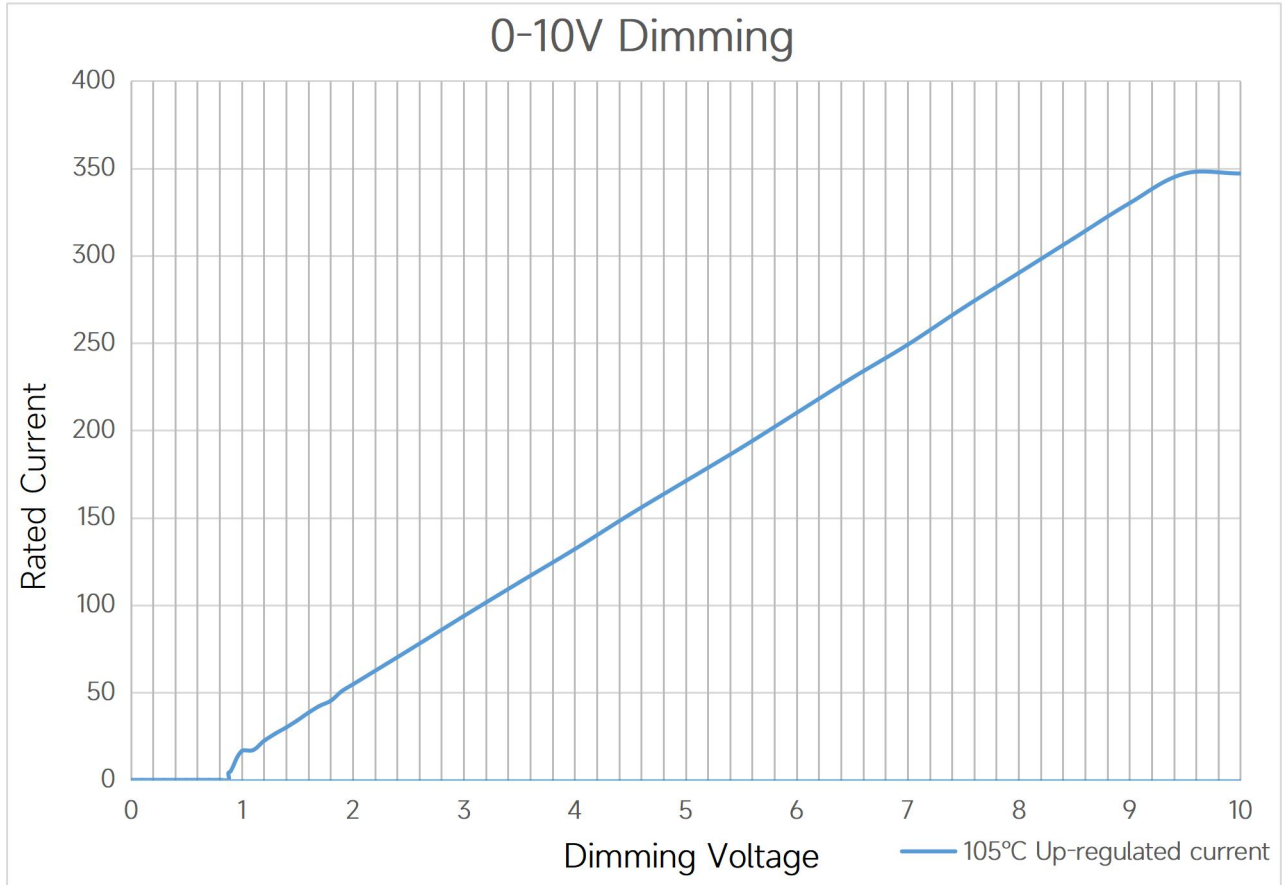
## ◆ Circuit Breaker

| I <sub>peak</sub> | T <sub>width</sub> | B10   | B16    | B20    | C10   | C16    | C20    |
|-------------------|--------------------|-------|--------|--------|-------|--------|--------|
| 3.1A              | <b>44μs</b>        | 80pcs | 128pcs | 160pcs | 80pcs | 128pcs | 160pcs |

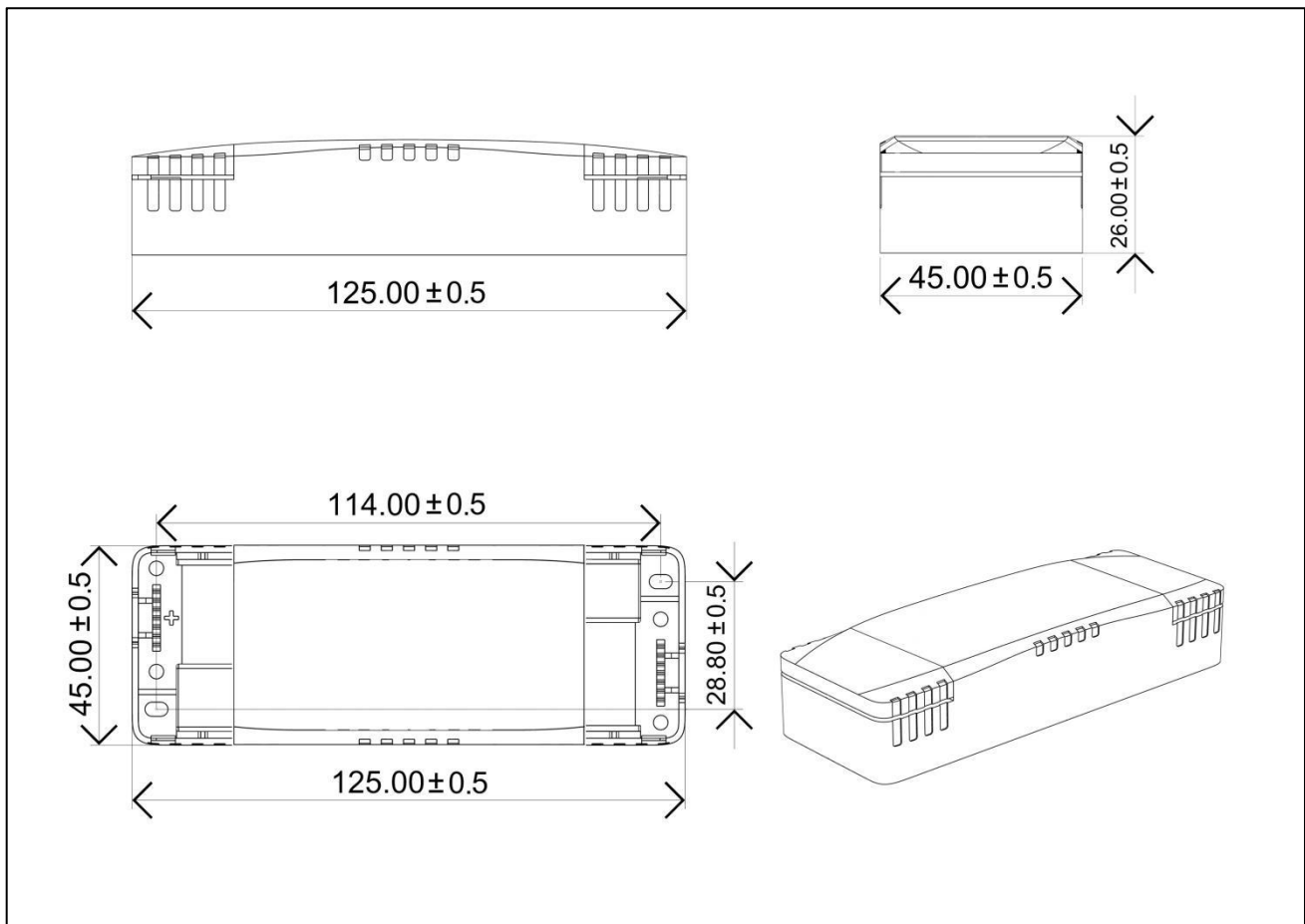
◆ **Wiring diagram**



◆ **The dimming curve**



◆ **2D diagram**

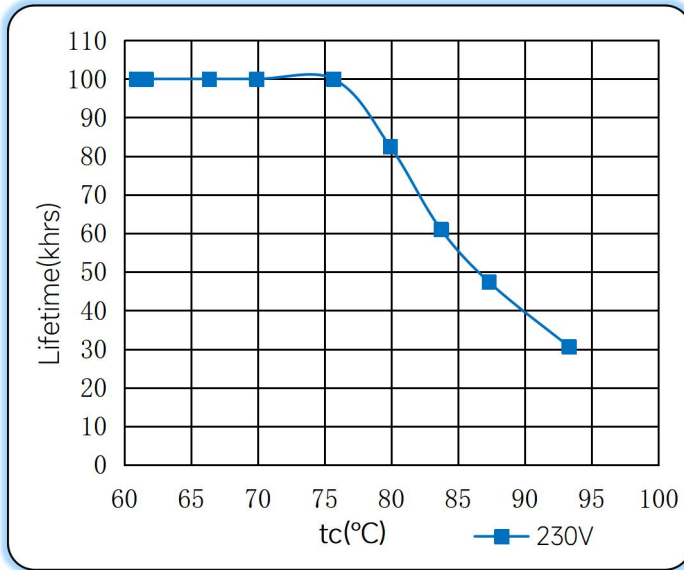


◆ **Wiring & Connections**

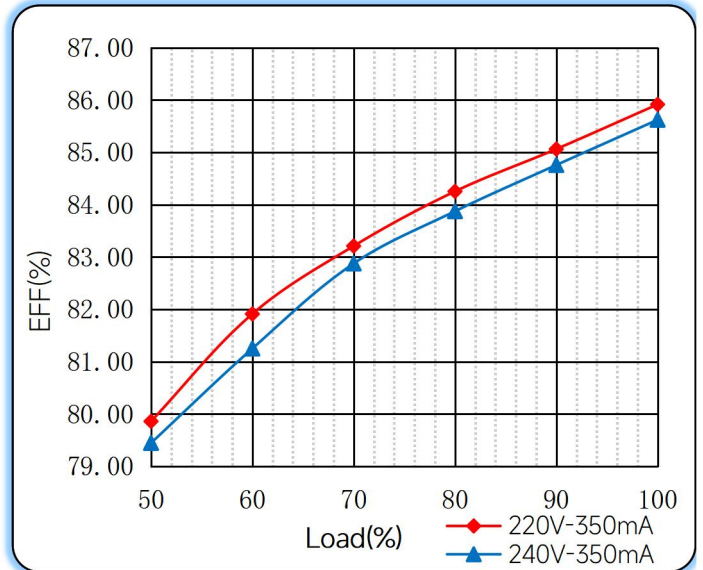
| Specification item |                           | Value (Unit )             |
|--------------------|---------------------------|---------------------------|
| Input              | Input wire cross-section  | 0.5...1.5 mm <sup>2</sup> |
|                    | Input wire gauge.         | 16...20 AWG               |
|                    | 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 FLS-15-350 0-10 LA, I<sub>o</sub>=350mA**

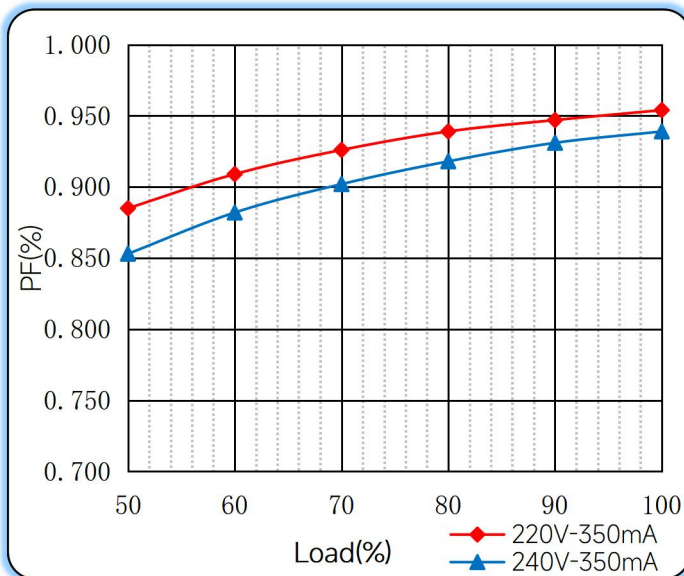
Lifetime vs. Temperature Curve



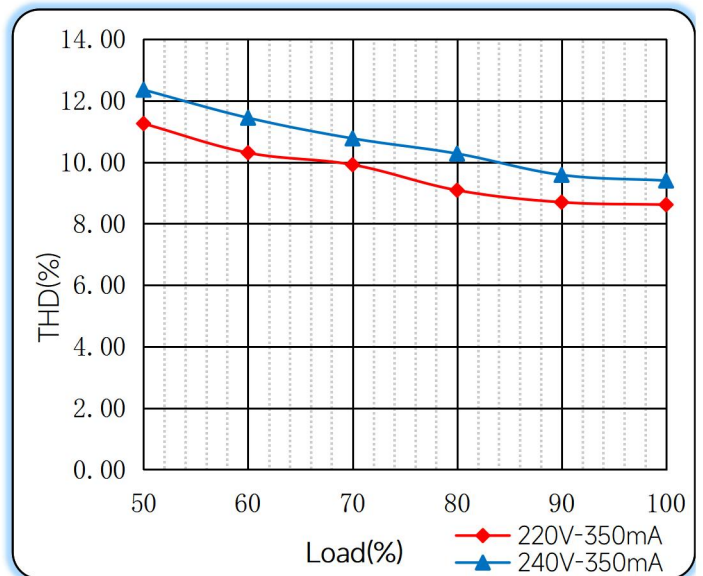
Efficiency vs. Load



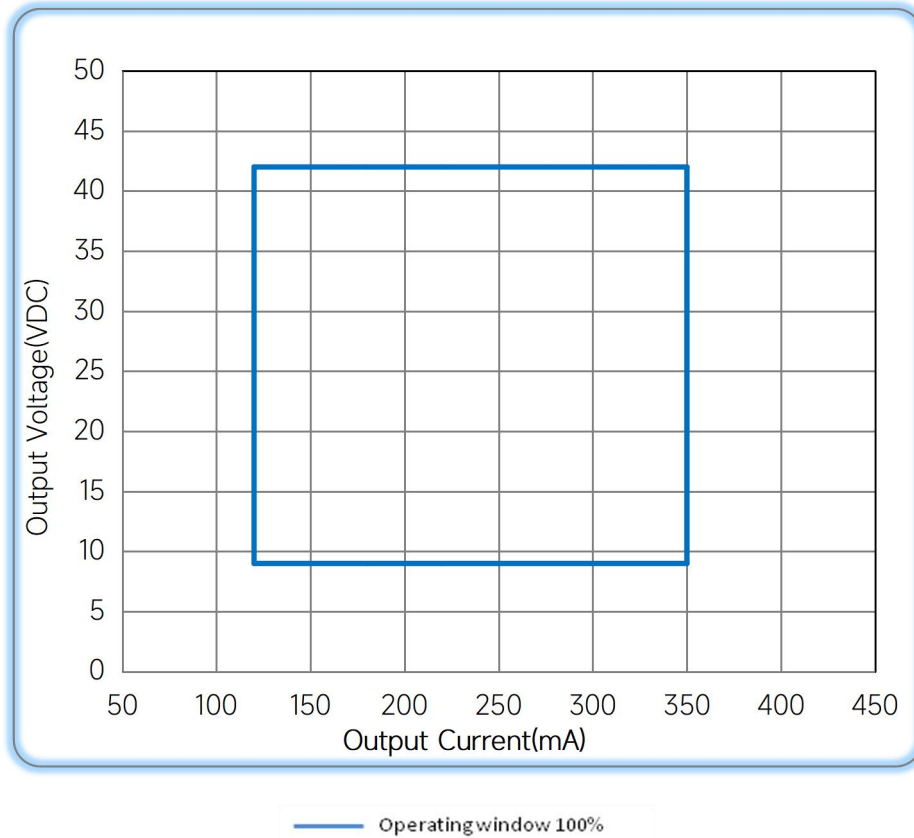
Power Factor Characteristics



THD vs. Load



### ◆ Operating window



### ◆ Revision Updates

| ITEM    | BEFORE | AFTER | VERSION | DATE       |
|---------|--------|-------|---------|------------|
| Initial |        |       | A       | 2023/01/04 |
|         |        |       |         |            |

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Manual