

## 21W Constant Current power supply



■ Approve



### Features

- For luminaires of protection Class II, SELV, Independent
- Input Voltage: 220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor: 0.55C
- Efficiency:  $\geq 85\%$
- 5 years warranty
- IP20

### Applications

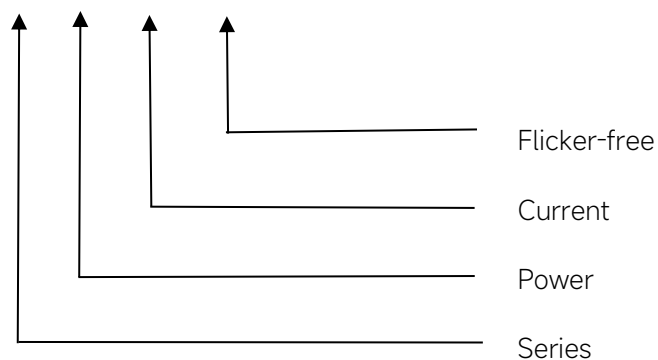
- LED panel、LED down light  
LED spot light

### ◆ Description

LS-21-XXX CCT SI E is a 21W constant current LED driver with 300~700mA output current. With it's compact dimensions from 92 x 36 x 25 mm it is easy to integrate in LED panel、LED down light、LED spot light products. To ensure trouble-free operation, protection is provided against output short circuit and over Load.

### ◆ Model code

LS-21-XXX CCT SI E



## ◆ Specification

|             |                                  |                                                                                       |       |       |      |       |
|-------------|----------------------------------|---------------------------------------------------------------------------------------|-------|-------|------|-------|
| Output      | Constant Current (mA)            | 300                                                                                   | 350   | 400   | .... | 700   |
|             | Voltage Range(VDC)               | 40-70                                                                                 | 42-60 | 30-42 | .... | 18-30 |
|             | Unload voltage Max.              | 90                                                                                    | 80    | 59    | .... | 50    |
|             | Current Accuracy                 | ±5%                                                                                   |       |       |      |       |
|             | Output HF current ripple(≥1KHz)  | ±5%                                                                                   |       |       |      |       |
|             | Output LF current ripple(≤120Hz) | ±5%                                                                                   |       |       |      |       |
|             | SVM                              | ≤0.4                                                                                  |       |       |      |       |
|             | P <sub>st</sub>                  | ≤1                                                                                    |       |       |      |       |
|             | Efficiency(Typ.)                 | ≥85%@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                                                                              |       |       |      |       |
|             | Displacement factor              | ≥0.7                                                                                  |       |       |      |       |
|             | Power Factor                     | 0.55C@Full load,230V                                                                  |       |       |      |       |
|             | Input Current max                | 0.3A                                                                                  |       |       |      |       |
|             | Start-up time                    | < 0.5S                                                                                |       |       |      |       |
|             | No Load Power                    | ≤0.5W                                                                                 |       |       |      |       |
| Protection  | Over Load Protection             | 103-120%                                                                              |       |       |      |       |
|             |                                  | YES/Auto Resume                                                                       |       |       |      |       |
|             | Over Voltage Protection(VDC)     | 90                                                                                    | 80    | 59    | .... | 50    |
|             |                                  | YES/Auto Resume                                                                       |       |       |      |       |
|             | Short circuit Protection         | YES/Auto Resume                                                                       |       |       |      |       |
| capability  | Over Temperature 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                               | 80°C                                                                                  |       |       |      |       |
|             | Storage Temperature              | -25°C~+60°C                                                                           |       |       |      |       |
|             | Life time                        | > 30,000h@tc=75°C; > 60,000h@tc=65°C                                                  |       |       |      |       |
| Surface     | Noise                            | ≤20dB(A)@10cm                                                                         |       |       |      |       |
|             | Dimension                        | 92x36x25 (LxWxH)mm                                                                    |       |       |      |       |
| Standards   | material                         | PP                                                                                    |       |       |      |       |
|             | 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,EN61000-4-5,EN61000-4-2,3,4,5,6,8,11, EN61547 |
|      | Energy Efficiency                                                                                                                                                                                                                                                                                                                                                                                                              | 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.<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.<br>3. Data are typical values obtained from test samples<br>4. Switch and dimmer are not recommended to connect between this product output and luminaries. |                                                                                                                |

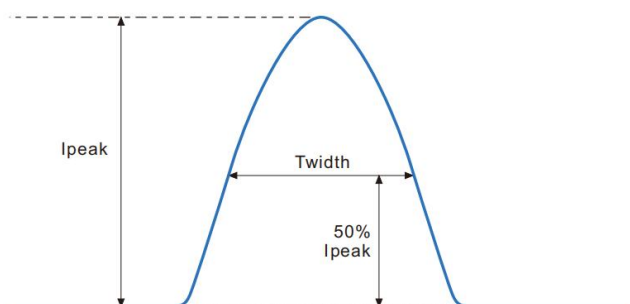
## ◆ Model list

| Number | Model number        | Output       |               |                       |           |
|--------|---------------------|--------------|---------------|-----------------------|-----------|
|        |                     | Current (mA) | Voltage (VDC) | Voltage No load (VDC) | Power (W) |
| 1      | LS-21-300 CCT SI E  | 300          | 40-70         | 90                    | 21        |
| 2      | LS-21-350 CCT SI E  | 350          | 42-60         | 80                    | 21        |
| 3      | *LS-21-400 CCT SI E | 400          | 30-42         | 59                    | 16.8      |
| 4      | *LS-21-450 CCT SI E | 450          | 30-42         |                       | 18.9      |
| 5      | *LS-21-500 CCT SI E | 500          | 30-42         |                       | 21        |
| 6      | LS-21-550 CCT SI E  | 550          | 30-40         |                       | 22        |
| 7      | *LS-21-600 CCT SI E | 600          | 27-35         |                       | 21        |
| 8      | *LS-21-650 CCT SI E | 650          | 20-32         | 50                    | 20.8      |
| 9      | *LS-21-700 CCT SI E | 700          | 18-30         | 50                    | 21        |

\*Regular stock

## ◆ Inrush Current

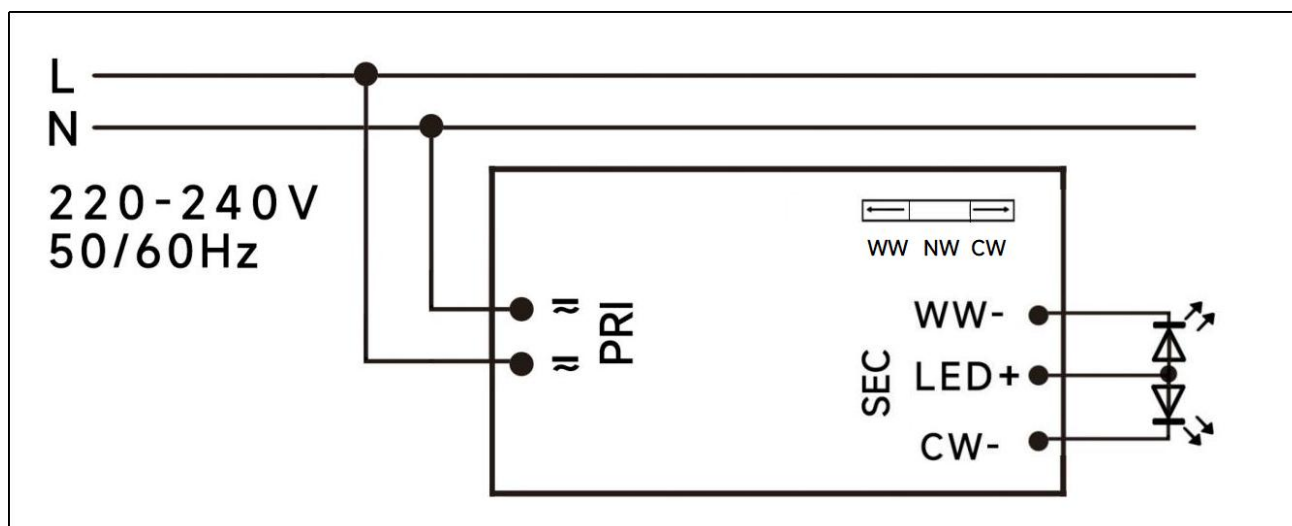
| $I_{peak}$ | Twidth     | B10   | B16   | B20   | C10   | C16   | C20   |
|------------|------------|-------|-------|-------|-------|-------|-------|
| 17.1A      | 88 $\mu$ s | 26pcs | 42pcs | 53pcs | 26pcs | 42pcs | 53pcs |



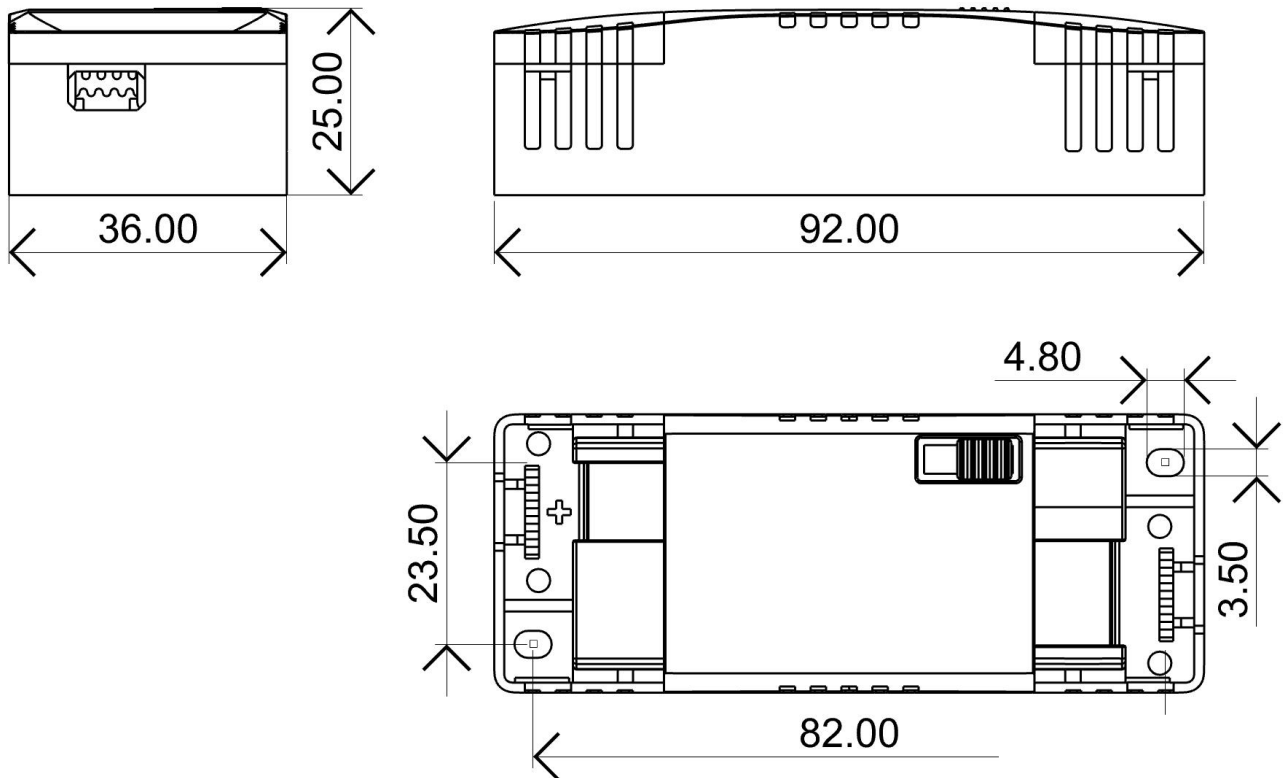
### Remarks:

- 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                   |

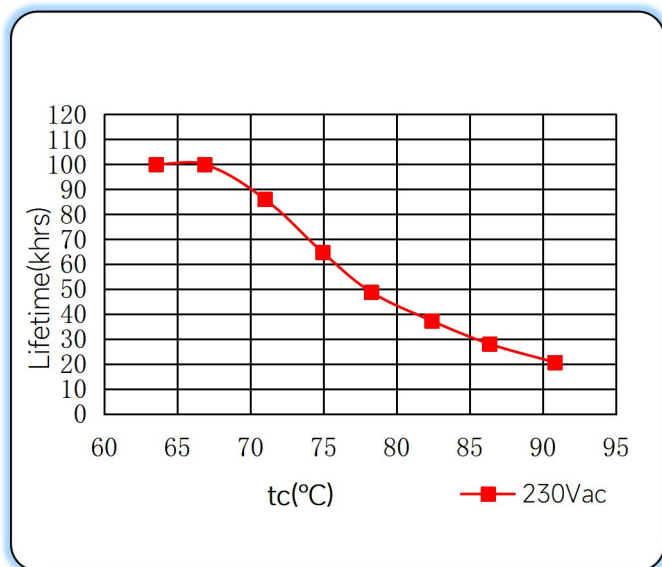
Note: Solid wire is risky to use on an angled terminal. Stranded wire is recommended for this kind of use.

## ◆ Packaging

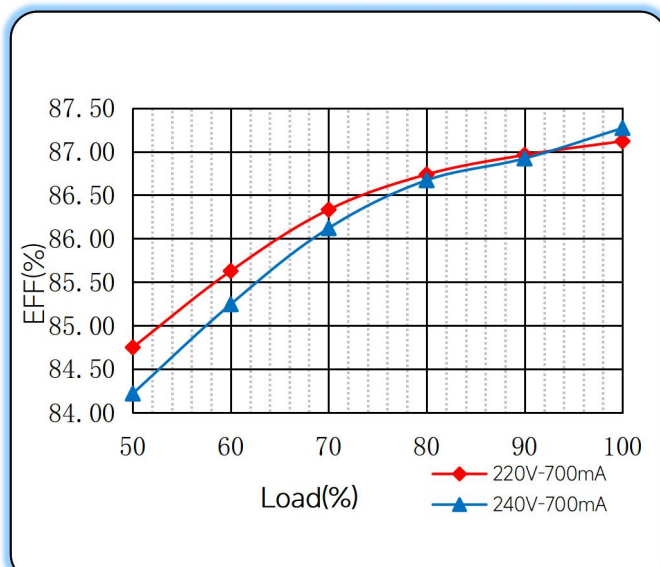
| Model                 | Product Dimensions(mm) | weight/piece | Outer carton dimension(mm)                | Quantity/carton | Net weight/carton(Kg) | Gross weight/carton(Kg) |
|-----------------------|------------------------|--------------|-------------------------------------------|-----------------|-----------------------|-------------------------|
| LS-21-XXX<br>CCT SI E | 92x36x25               | 0.0456       | Inside:295X255X200<br>Outside:310X265*210 | 132             | 6.0192                | 6.5592                  |

# ◆ Curve for LS-21-XXX CCT SI E, Io=700mA

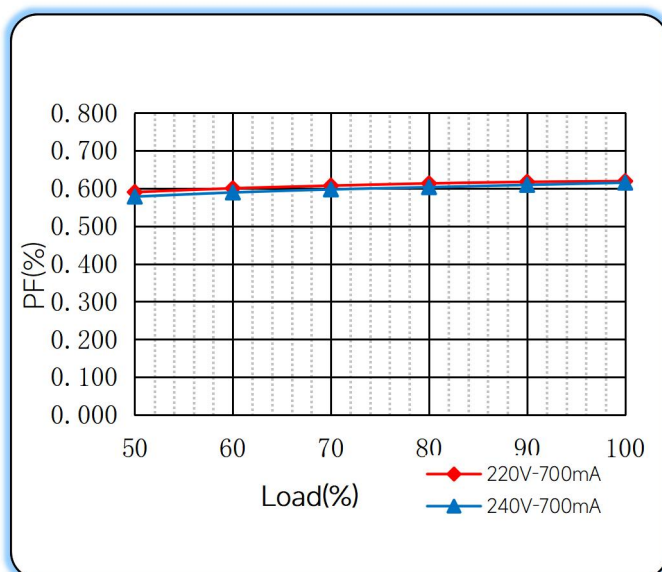
Lifetime vs. Temperature Curve



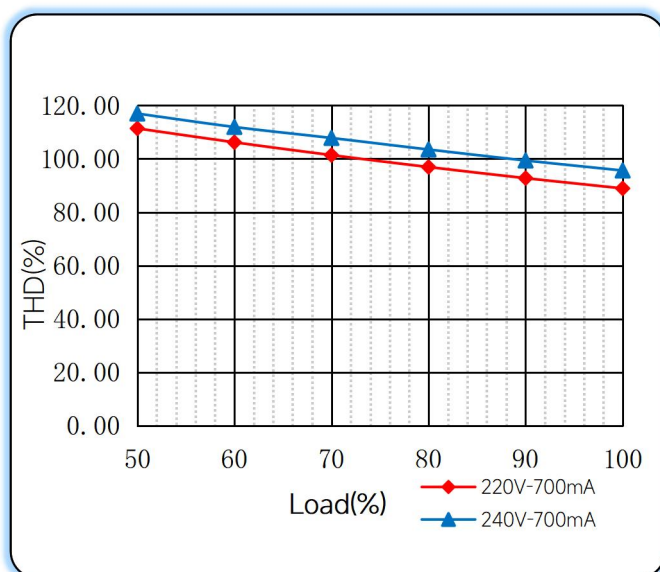
Efficiency vs. Load



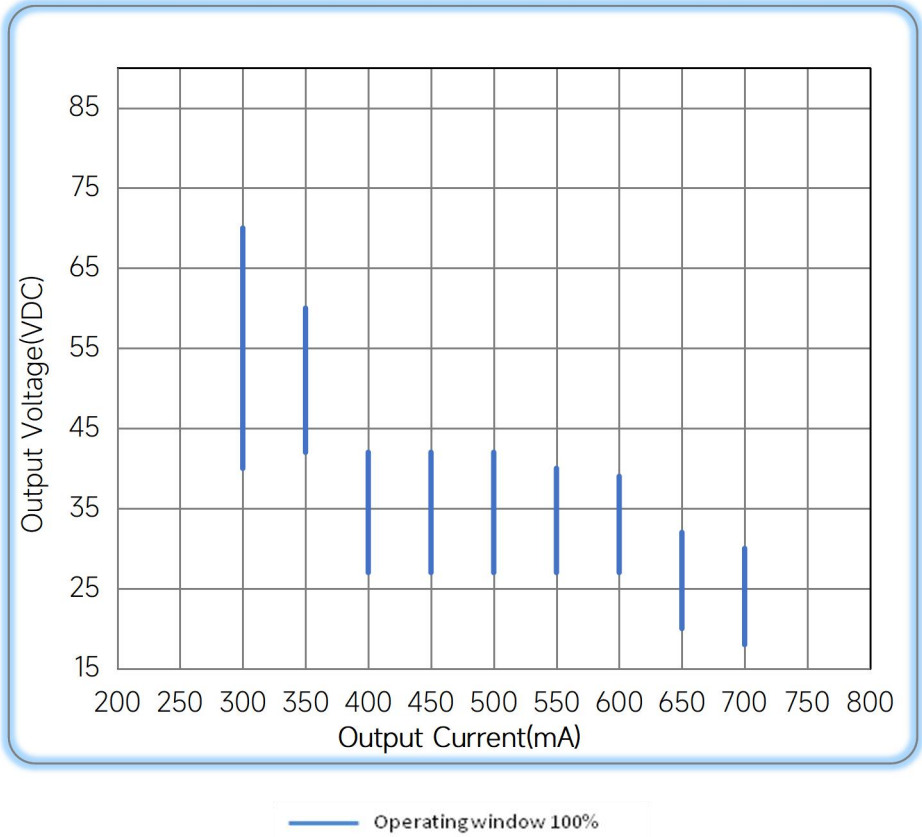
Power Factor Characteristics



THD vs. Load



◆ Operating window



◆ Revision Updates

| ITEM         | BEFORE | AFTER | VERSION | DATE       |
|--------------|--------|-------|---------|------------|
| Initial      |        |       | A       | 2024/09/10 |
| Power Factor | 0.6C   | 0.55C | B       | 2025/11/25 |
|              |        |       |         |            |

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

Tel: +86-0757-86256822, +86-0757-86256831  
E-mail: sales@eaglerise.com  
Website : <https://lighting.eaglerise.com>



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Manual