

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:
0.6C@300-400mA, 600-700mA
0.55C@450-550mA

- Efficiency: $\geq 85\%$
- 5 years warranty
- IP20

Applications

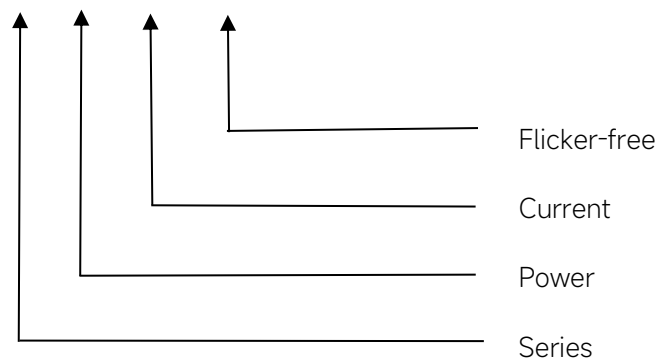
- LED panel, LED down light

◆ Description

LS-21-XXX CCT SI E is a 21W constant current LED driver with 300~700mA output current. With its 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 _{st} | ≤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 | 0.6C@300-400mA,600-700mA;0.55C@450-550mA, 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 | | | | |
| | Over Temperature 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 | 80°C | | | | |
| | Storage Temperature | -25°C~+60°C | | | | |
| | Life time | > 30,000h@tc=75°C; > 60,000h@tc=65°C | | | | |
| | Noise | ≤20dB(A)@10cm | | | | |
| Surface | Dimension | 92x36x25 (LxWxH)mm | | | | |
| | material | PP | | | | |
| 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,EN61000-4-5,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 | <p>1. All parameters NOT specially mentioned are measured at 230VAC input , full load and 25°C of ambient temperature.</p> <p>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.</p> <p>3. Data are typical values obtained from test samples</p> <p>4. Switch and dimmer are not recommended to connect between this product output and luminaries.</p> | |

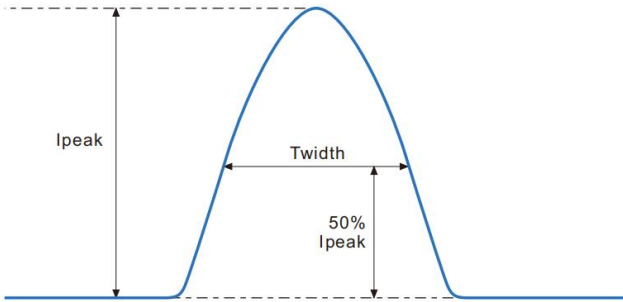
◆ Model list

| 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 | 50 | 21 |
| 8 | LS-21-650 CCT SI E | 650 | 20-32 | | 20.8 |
| 9 | LS-21-700 CCT SI E | 700 | 18-30 | | 21 |

*Regular stock

◆ Inrush Current

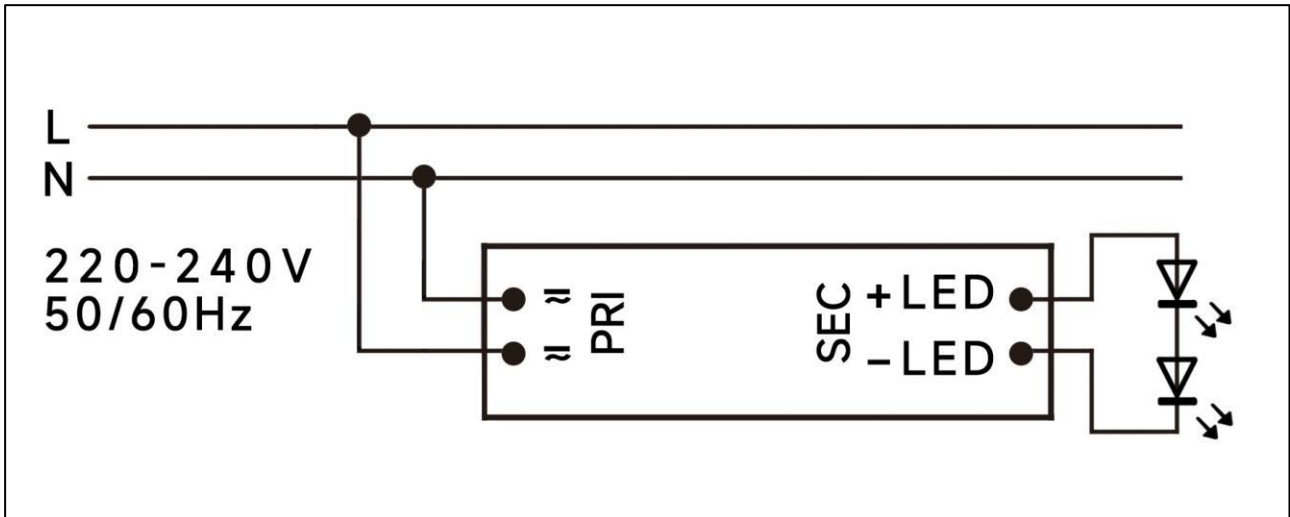
| I_{peak} | Twidth | B10 | B16 | B20 | C10 | C16 | C20 |
|------------|-------------------------------|-------|-------|-------|-------|-------|-------|
| 13.4A | 101.6μs | 26pcs | 42pcs | 53pcs | 26pcs | 42pcs | 53pcs |



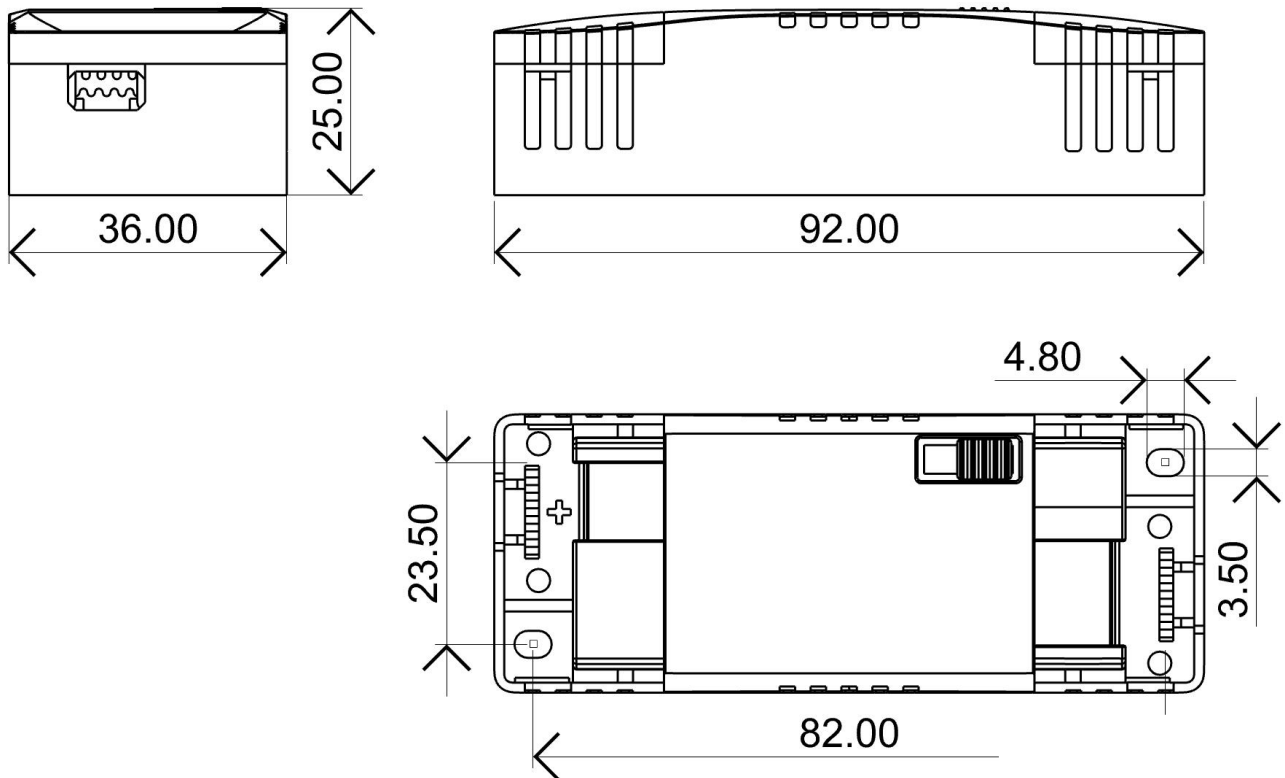
Remarks:

- 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



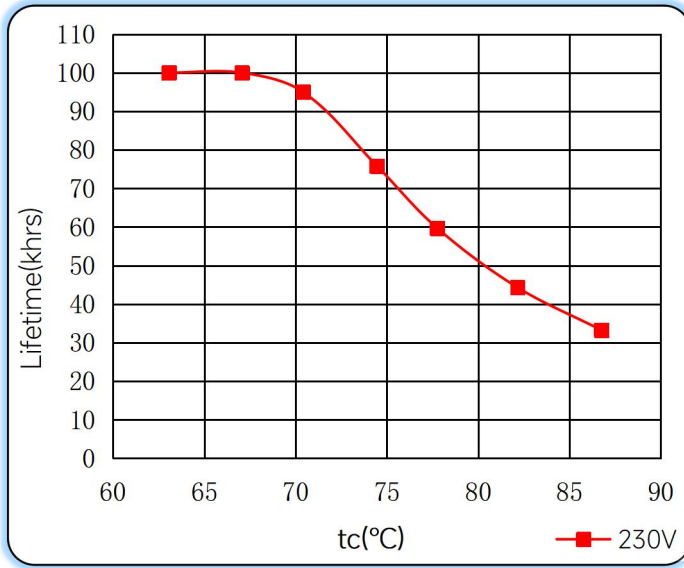
◆ Wiring & Connections

| Specification item | | Value (Unit) |
|--------------------|---------------------------|---------------------------|
| Input | Input wire cross-section | 0.5...1.5 mm ² |
| | Input wire gauge. | 16...20 AWG |
| | Input wire strip length | 7...9mm |
| Output | Output wire cross-section | 0.5...1.5 mm ² |
| | Output wire gauge. | 16...20 AWG |
| | Output wire strip length | 7...9mm |

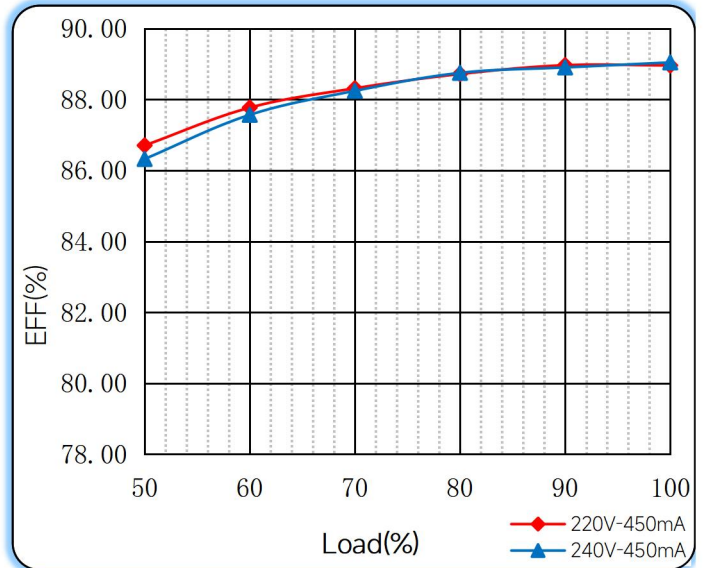
Note: Solid wire is risky to use on an angled terminal. Stranded wire is recommended for this kind of use.

◆ Curve for LS-21-XXX CCT SI E, Io=450mA

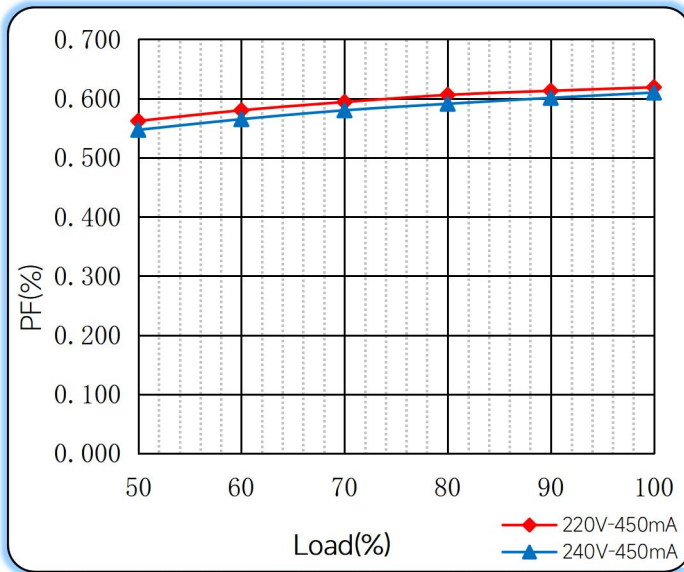
Lifetime vs. Temperature Curve



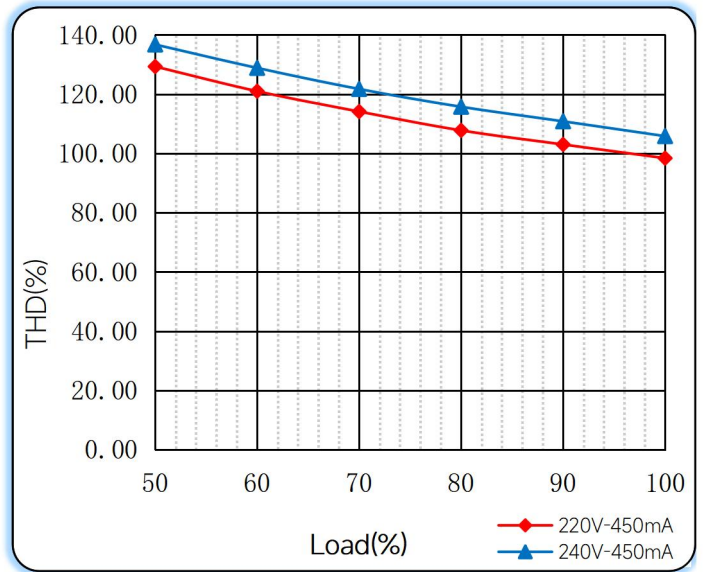
Efficiency vs. Load



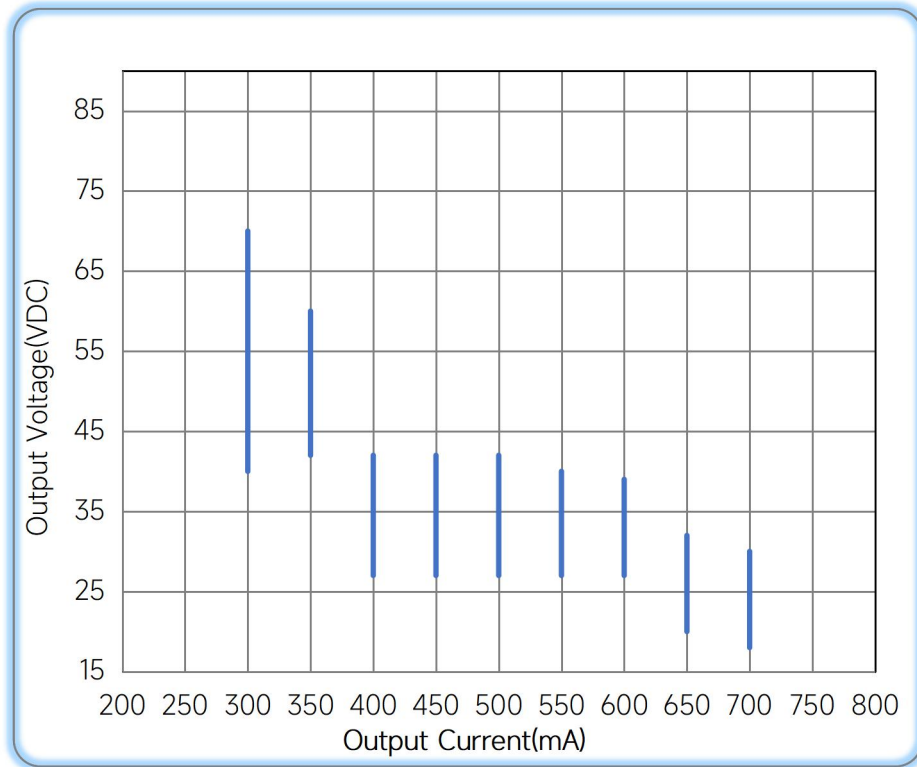
Power Factor Characteristics



THD vs. Load



◆ **Operating window**



— Operating window 100%

◆ **Revision Updates**

| ITEM | BEFORE | AFTER | VERSION | DATE |
|---------|--------|-------|---------|------------|
| Initial | | | A | 2024/09/10 |
| | | | | |
| | | | | |
| | | | | |

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

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