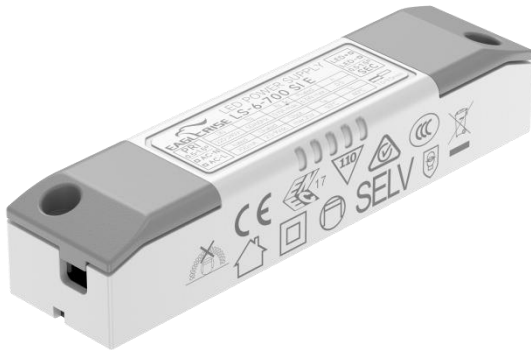


6W Constant Current power supply



■ Approve



Features

- Class II, SELV, Independent
- Input Voltage: 220-240VAC
- Protections: SCP/OLP/OVP
- Power Factor: 0.5C
- Efficiency: $\geq 76\%$
- 5 years warranty
- IP20

Applications

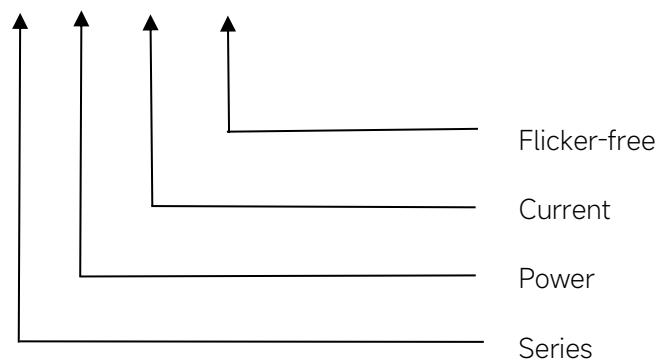
- LED panel, LED down light
LED spot light

◆ Description

LS-6-XXX SI E is a 6W constant current LED driver with 120~700mA output current. With its compact dimensions from 84×20.5×16.5mm 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-6-XXX SI E



◆ Specification

| | | | | | | | |
|-----------------|--|--|-------|-------|-----|------|------|
| Output | Constant Current (mA) | 120 | 150 | 180 | ... | 650 | 700 |
| | Voltage Range(VDC) | 27-40 | 27-40 | 27-40 | ... | 4-9 | 4-9 |
| | Unload voltage Max. | 59 | 59 | 59 | ... | 25 | 25 |
| | Current Accuracy | ±10%@120mA-250mA; ±7%@300mA-400mA; ±6%@450mA; ±5%@500mA-700mA | | | | | |
| | Output HF current ripple(≥1KHz) | ±5% | | | | | |
| | Output LF current ripple(≤120Hz) | ±5% | | | | | |
| | SVM | ≤0.4 | | | | | |
| | P _{st} | ≤1 | | | | | |
| Input | Efficiency(Typ.) | ≥76% | | | | | |
| | Rated input voltage | 220-240VAC | | | | | |
| | Range of input voltage | 198-264VAC | | | | | |
| | Frequency(Hz) | 50/60 Hz | | | | | |
| | Displacement factor | ≥0.7 | | | | | |
| | Power Factor | 0.5C@Full load | | | | | |
| | Input Current max | 0.11A | | | | | |
| | Start-up time | < 0.5S | | | | | |
| Protection | No Load Power | ≤0.5W | | | | | |
| | Over Load Protection | 103-150% | | | | | |
| | | YES/Auto Resume | | | | | |
| | Over Voltage Protection(VDC) | > 59 | > 59 | > 59 | ... | > 25 | > 25 |
| YES/Auto Resume | | | | | | | |
| Environment | Short circuit Protection | YES/Auto Resume | | | | | |
| | Operating Temperature | -20°C~+50°C | | | | | |
| | Humidity | 20%-90%RH | | | | | |
| | T _c | 80°C | | | | | |
| | Storage Temperature | -25°C~+60°C | | | | | |
| Surface | Life time | > 50,000h@T _c =70°C | | | | | |
| | Dimension | 84×20.5×16.5 (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; GB/T 17743,GB 17625.1;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. 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. 3.Data are typical values obtained from test samples | | | | | | |

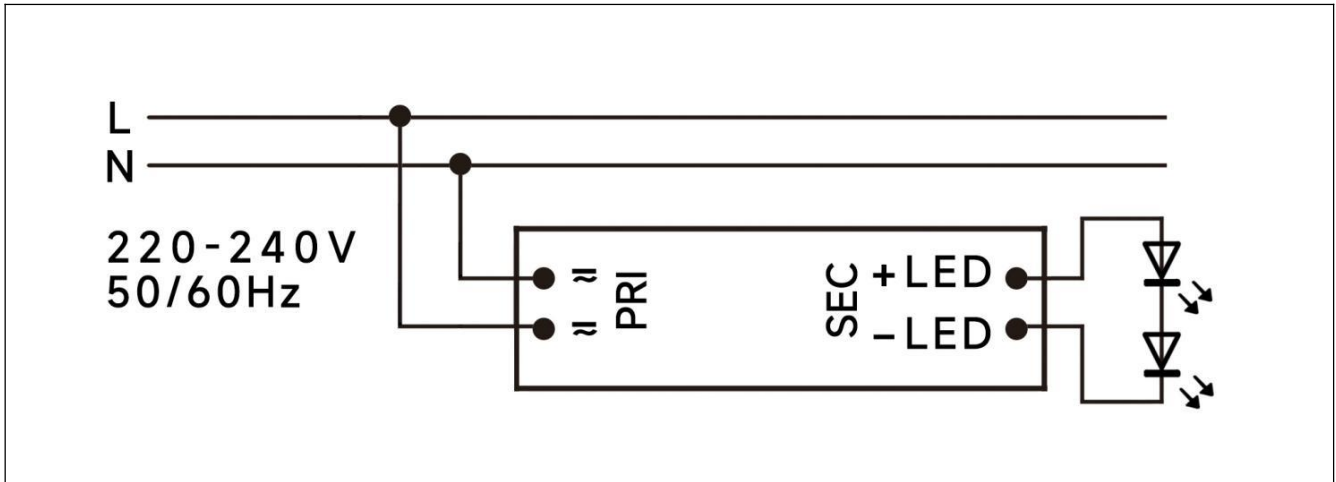
◆ Model list

| Number | Model number | Output | | | |
|--------|----------------|--------------|---------------|-----------------------|-----------|
| | | Current (mA) | Voltage (VDC) | Voltage No load (VDC) | Power (W) |
| 1 | *LS-6-120 SI E | 120 | 27-40 | 59 | 4.8 |
| 2 | *LS-6-150 SI E | 150 | 27-40 | 59 | 6 |
| 3 | *LS-6-180 SI E | 180 | 27-40 | 59 | 7.2 |
| 4 | *LS-6-200 SI E | 200 | 27-40 | 59 | 8 |
| 5 | *LS-6-220 SI E | 220 | 27-40 | 59 | 8.8 |
| 6 | LS-6-250 SI E | 250 | 10-24 | 45 | 6 |
| 7 | *LS-6-300 SI E | 300 | 8-20 | 40 | 6 |
| 8 | *LS-6-350 SI E | 350 | 8-18 | 40 | 6.3 |
| 9 | LS-6-400 SI E | 400 | 5-15 | 30 | 6 |
| 10 | LS-6-450 SI E | 450 | 5-13.5 | 30 | 6.05 |
| 11 | *LS-6-500 SI E | 500 | 5-12 | 30 | 6 |
| 12 | *LS-6-550 SI E | 550 | 5-11 | 30 | 6.05 |
| 13 | LS-6-600 SI E | 600 | 4-9 | 25 | 5.4 |
| 14 | LS-6-650 SI E | 650 | 4-9 | 25 | 5.85 |
| 15 | *LS-6-700 SI E | 700 | 4-9 | 25 | 6.3 |

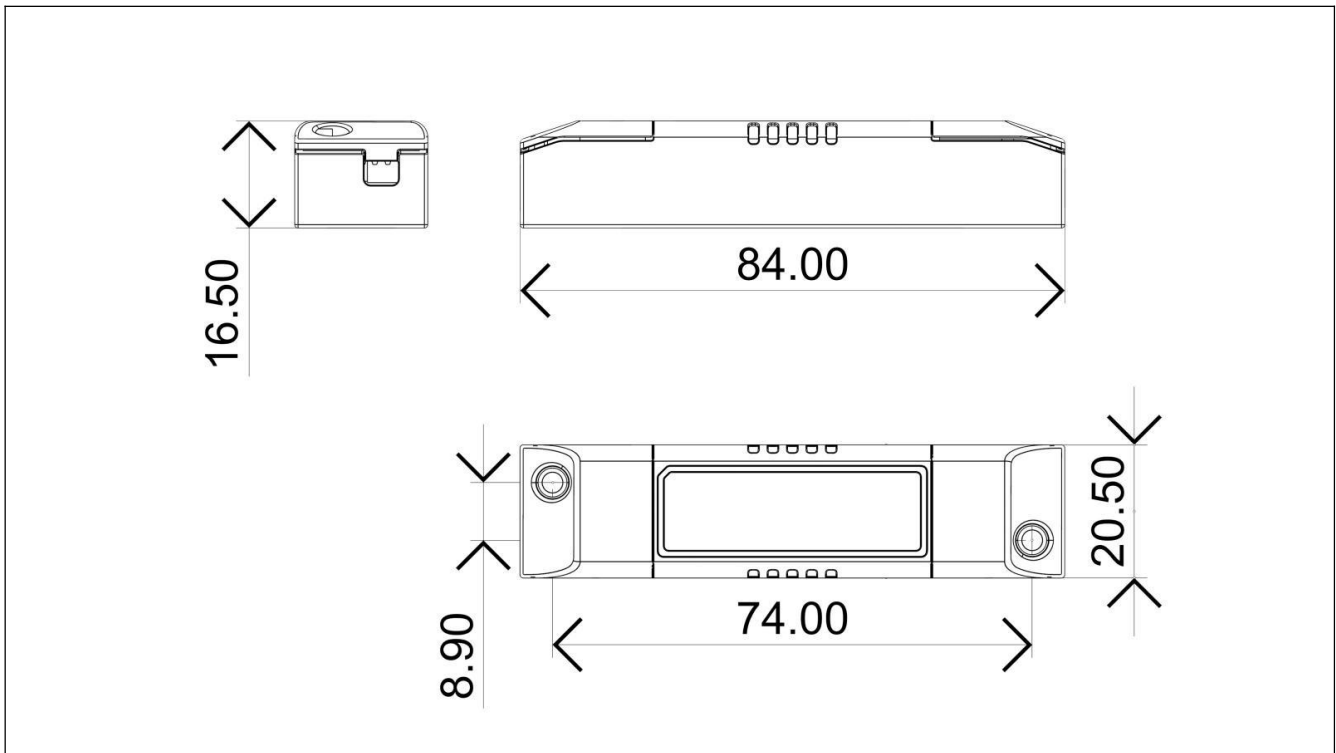
◆ Circuit Breaker

| I _{peak} | T _{width} | B10 | B16 | B20 | C10 | C16 | C20 |
|-------------------|--------------------|-------|--------|--------|-------|--------|--------|
| 4.2A | 94μs | 72pcs | 116pcs | 145pcs | 72pcs | 116pcs | 145pcs |

◆ Wiring diagram



◆ 2D diagram

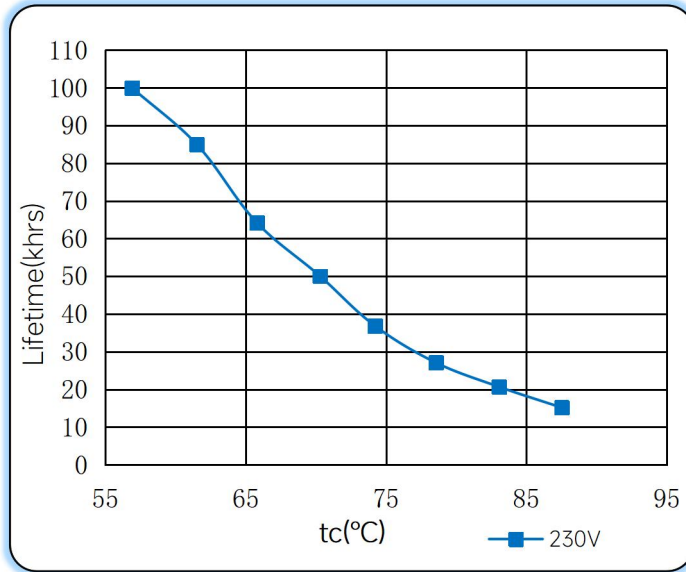


◆ Wiring & Connections

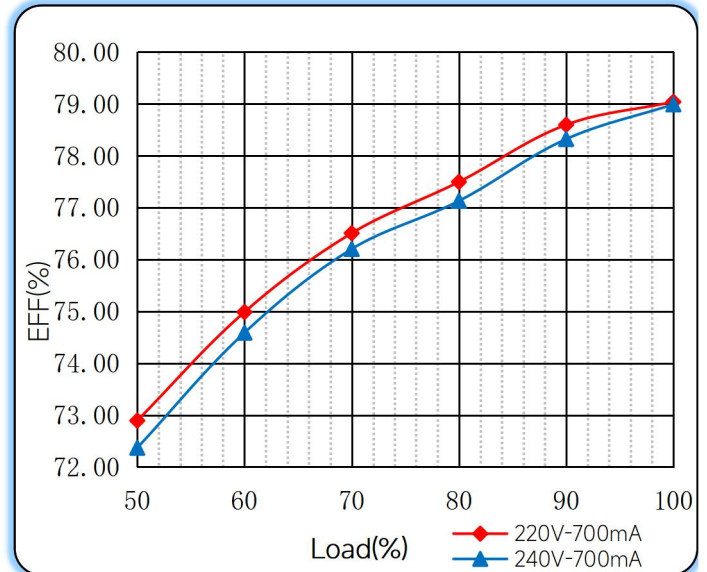
| Specification item | | Value (Unit) |
|--------------------|---------------------------|---------------------------|
| Input | Input wire cross-section | 0.5...1.5 mm ² |
| | Input wire gauge. | 16...20 AWG |
| | Input wire strip length | 7...9mm |
| Output | Output wire cross-section | 0.5...1.5 mm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

◆ Curve for LS-6-XXX SI E, I_o=700mA

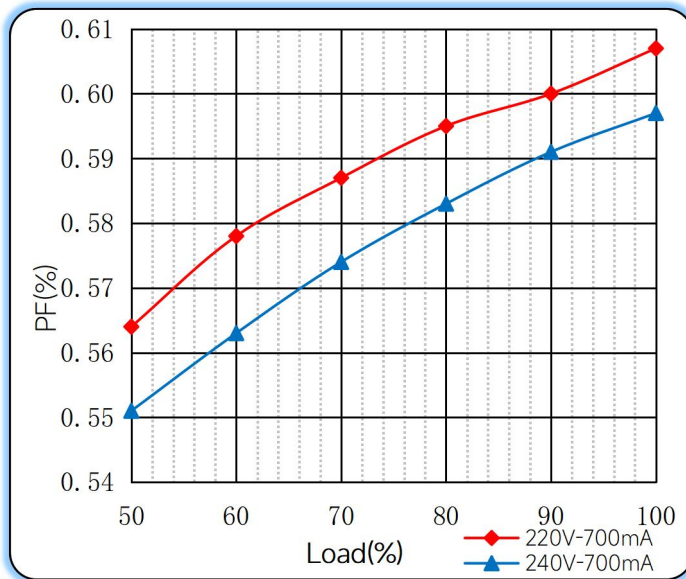
Lifetime vs. Temperature Curve



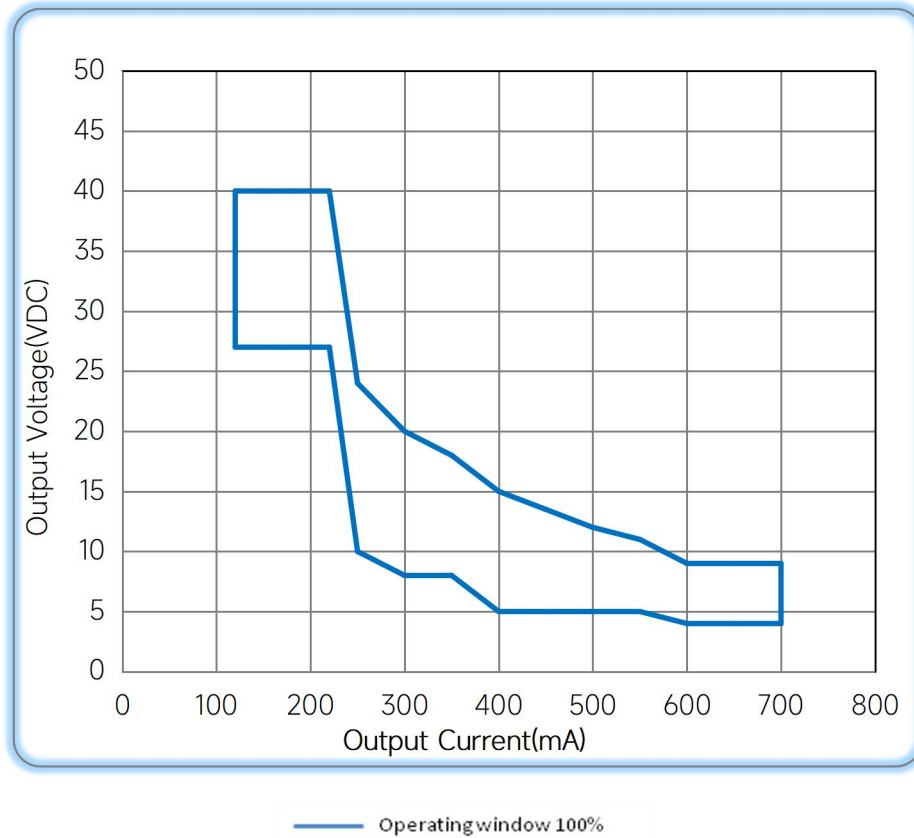
Efficiency vs. Load



Power Factor Characteristics



◆ **Operating window**



◆ **Revision Updates**

| ITEM | BEFORE | AFTER | VERSION | DATE |
|------------------|--------|--|---------|------------|
| Initial | | | A | 2022/08/09 |
| Current Accuracy | ±5% | ±10%@120mA-250mA; ±7%@300mA-400mA; ±6%@450mA | B | 2022/11/14 |
| Model list | | Added | C | 2022/11/18 |
| Model list | | update | D | 2022/11/29 |

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