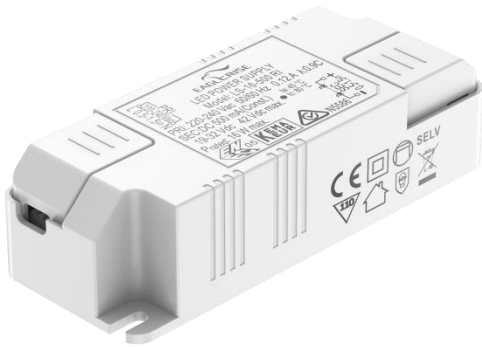


## 16W Constant Current -LS Series



### Features

- Class II, SELV, independent
- Input Voltage 220-240VAC
- Protections: SCP/OLP/OVP
- Power Factor 0.9C
- Efficiency  $\geq 85\%$
- 5 years warranty

### Applications

- LED panel, LED down light  
LED spot light

■ Approve

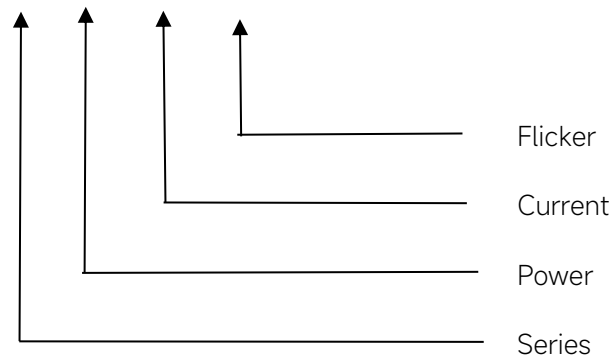


### ◆ Description

LS-16-XXX RI is a 16W constant current LED driver that operates from 176-264Vac input with 300 to 700mA output current. With it's compact dimensions from 92 x 36 x 24.5mm it is easy to integrate in LED Panel, spot and down light products. To ensure trouble-free operation, protection is provided against output short circuit and over Load.

### ◆ Model code

#### LS-16-XXX RI



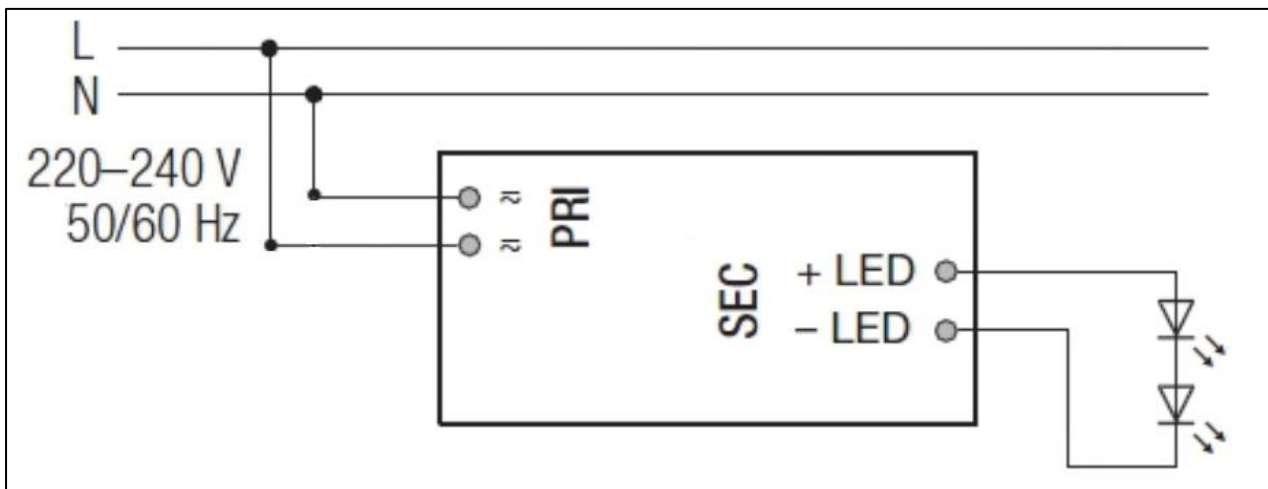
## ◆ Specification

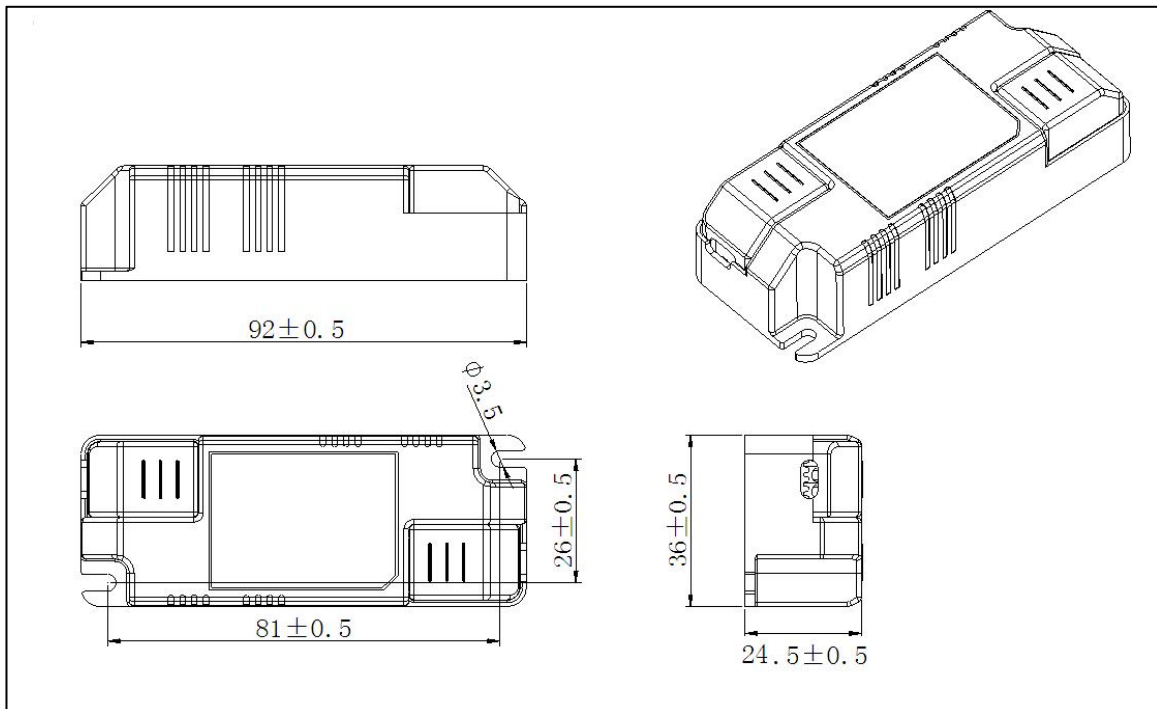
|             |  |                                |                       |                       |     |                       |
|-------------|--|--------------------------------|-----------------------|-----------------------|-----|-----------------------|
| Output      | Constant Current   | 300mA                          | 350mA                 | 500mA                 | ... | 700mA                 |
|             | Voltage Range  | 27-54VDC                       | 23-46VDC              | 19-32VDC              | ... | 14-23VDC              |
|             | Unload voltage Max.  | 63VDC                          | 56VDC                 | 42VDC                 | ... | 33VDC                 |
|             | Current Accuracy   | ±5%                            |                       |                       |     |                       |
|             | Ripple & Noise *Note.2   | ≤180mA <sub>p-p</sub>          | ≤210mA <sub>p-p</sub> | ≤300mA <sub>p-p</sub> | ... | ≤420mA <sub>p-p</sub> |
|             | Efficiency(Typ.)   | 85%                            |                       |                       |     |                       |
| Input       | Rated input voltage  | 220-240VAC                     |                       |                       |     |                       |
|             | Range of input voltage   | 176-264VAC                     |                       |                       |     |                       |
|             | Frequency(Hz)  | 50/60 Hz                       |                       |                       |     |                       |
|             | Power Factor   | 0.9C                           |                       |                       |     |                       |
|             | Input Current max  | 0.12A                          |                       |                       |     |                       |
|             | Start-up time  | < 0.5S                         |                       |                       |     |                       |
|             | No Load Power  | ≤0.5W                          |                       |                       |     |                       |
|             | THD (Typ.)   | < 15%                          |                       |                       |     |                       |
| Protection  | Over Load Protection   | 103-120%<br>YES/Auto Resume    |                       |                       |     |                       |
|             | Over Voltage Protection  | > 63VDC                        | > 56VDC               | > 42VDC               | ... | > 33VDC               |
|             |  | YES/Auto Resume                |                       |                       |     |                       |
|             | Short circuit Protection   | YES/Auto Resume                |                       |                       |     |                       |
| Environment | Operating Temperature  | -20°C~+45°C                    |                       |                       |     |                       |
|             | Humidity   | 20%-90%RH                      |                       |                       |     |                       |
|             | Tc   | 80°C                           |                       |                       |     |                       |
|             | Storage Temperature  | -25°C~+60°C                    |                       |                       |     |                       |
|             | Life time  | > 50000h@Tc=75°C,230VAC        |                       |                       |     |                       |
| Surface     | Dimension  | 92X36X24.5(LXWXH)mm            |                       |                       |     |                       |
| Standards   | EN 61347-1; EN61347-2-13; EN62384; EN55015; EN61000-3-2 ; EN61000-3-3; EN 61547;   |                                |                       |                       |     |                       |
| Others      | RoHS   | RoHS (2011/65/EU) (EU)2015/863 |                       |                       |     |                       |
| Note        | 1.All parameters NOT specially mentioned are measured at 240VAC 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. |                                |                       |                       |     |                       |

### ◆ Model list

| Model number | Input         |             |                | Output                |                              |                               | Max. Prated(W) |
|--------------|---------------|-------------|----------------|-----------------------|------------------------------|-------------------------------|----------------|
|              | Voltage (VAC) | Current (A) | Frequency (Hz) | Constant current (mA) | Normal working voltage (VDC) | No load working voltage (VDC) |                |
| LS-16-300 RI | 220-240       | 0.12        | 50/60          | 300                   | 27-54                        | 63                            | 16.2           |
| LS-16-350 RI |               |             |                | 350                   | 23-46                        | 56                            | 16.1           |
| LS-16-400 RI |               |             |                | 400                   | 24-40                        | 50                            | 16             |
| LS-16-450 RI |               |             |                | 450                   | 21.5-36                      | 46                            | 16.2           |
| LS-16-500 RI |               |             |                | 500                   | 19-32                        | 42                            | 16             |
| LS-16-550 RI |               |             |                | 550                   | 18-29.5                      | 40                            | 16.2           |
| LS-16-600 RI |               |             |                | 600                   | 16-27                        | 37                            | 16.2           |
| LS-16-650 RI |               |             |                | 650                   | 15-25                        | 35                            | 16.3           |
| LS-16-700 RI |               |             |                | 700                   | 14-23                        | 33                            | 16.1           |

### ◆ Wiring diagram

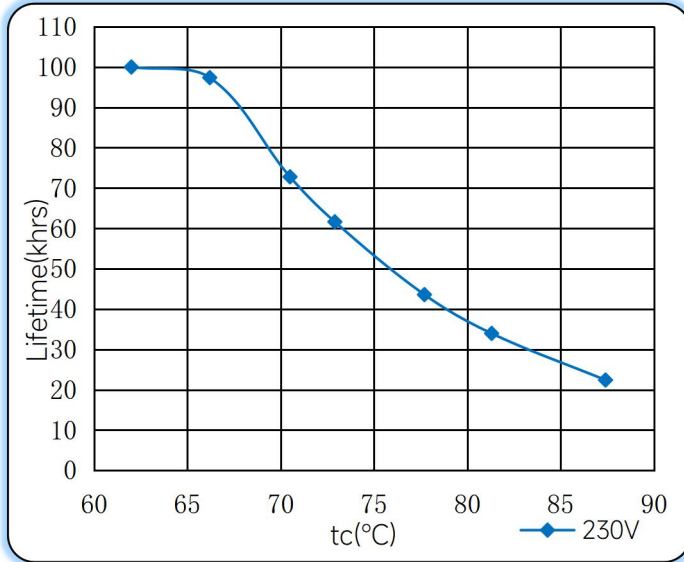


**◆ 2D diagram**

**◆ Wiring & Connections**

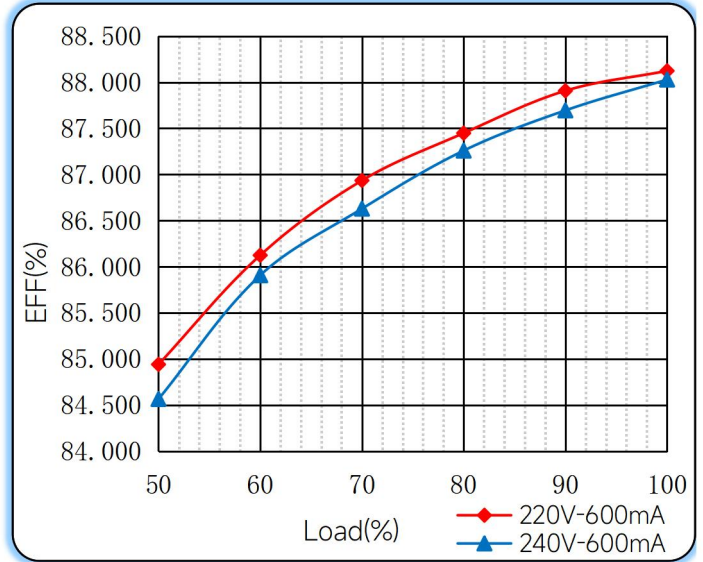
| Specification item |                           | Value (Unit )             |
|--------------------|---------------------------|---------------------------|
| Input              | Input wire cross-section  | 0.5...1.5 mm <sup>2</sup> |
|                    | Input wire gauge.         | 16...20 AWG               |
|                    | 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                   |

◆ Curve for LS-16-600 RI, I<sub>o</sub>=600mA

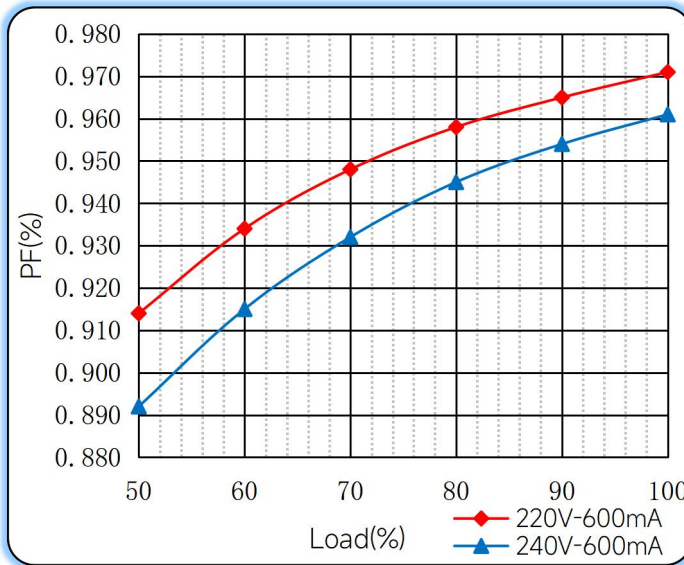
Lifetime vs. Temperature Curve



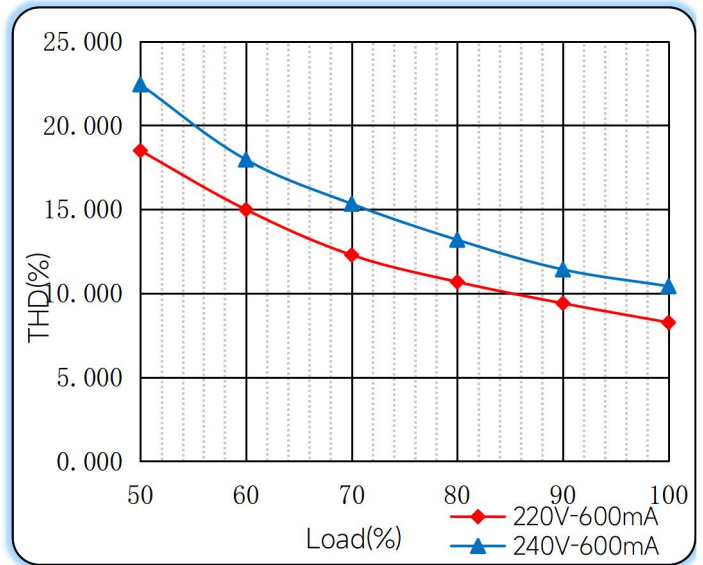
Efficiency vs. Load



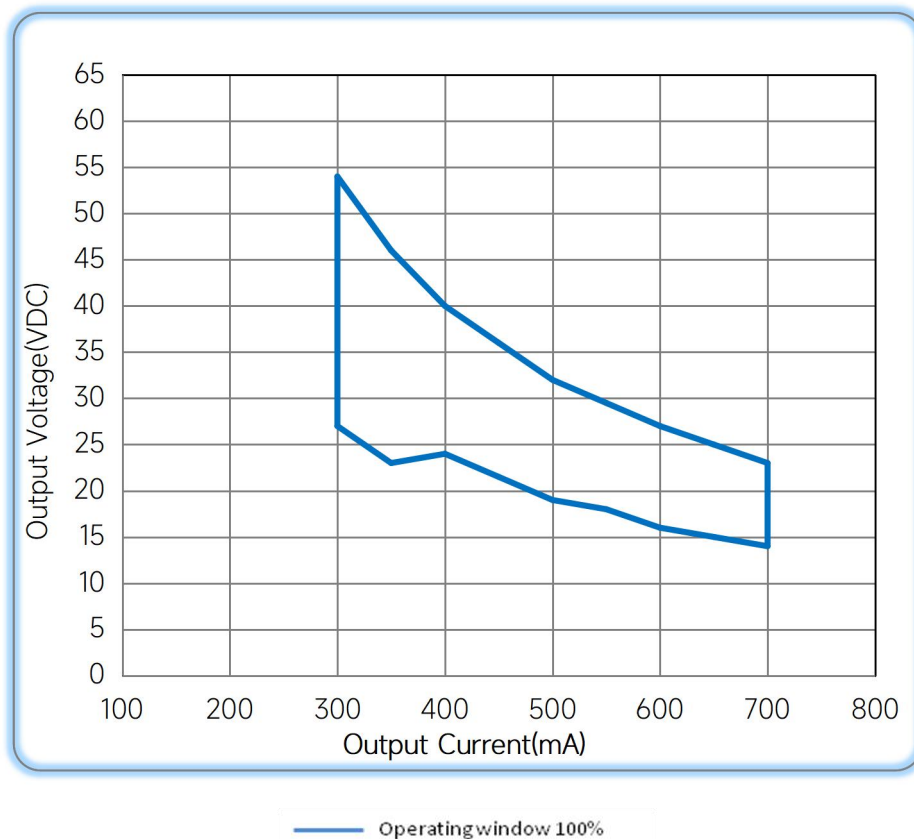
Power Factor Characteristics



THD vs. Load



### ◆ Operating window



### ◆ Revision Updates

| ITEM    | BEFORE | AFTER | VERSION | DATE       |
|---------|--------|-------|---------|------------|
| Initial |        |       | A       | 2022/05/15 |
|         |        |       |         |            |

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Manual