

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



# Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China







### **LED Driver**

# Indoor 35 W Non-Dimmable SI-EPD006570WW



## SELV Constant Current LED Driver Easy Current Selection – No Dimming

#### **Features & Benefits**

Output Currents:
 800 / 925 / 1050 mA (fixed, selectable)

Output Voltage Range:
 17 ~ 34 V (SELV equivalent)

Output Power Range: 14 ~ 36 W

Input Voltage: 220 ~ 240 Vac 50/60 Hz

Protections: Overload, No Load, Short Circuit, Over Temperature,

Over Voltage,

•  $t_a$  Range:  $-20 \sim +55$  °C

• Expected Lifetime: 50,000 hours at  $t_c = 70$  °C

• Long lasting & high reliability

• Extra small compact housing

Suitable for Class I and II luminaires

#### **Applications**

- Downlights, Spotlights and other Indoor Lighting Applications
- Office Industry Shop













#### **Table of Contents**

| 1. | Characteristics                | <br>3  |
|----|--------------------------------|--------|
| 2. | Typical Characteristics Graphs | <br>5  |
| 3. | Protection                     | <br>7  |
| 4. | Outline Drawing & Dimension    | <br>8  |
| 5. | Label Structure                | <br>9  |
| 6. | Packing Structure              | <br>10 |
| 7  | Precautions in Handling & Use  | <br>10 |



#### 1. Characteristics

|                           |        |      | Specification   |                    |          | Note   |
|---------------------------|--------|------|-----------------|--------------------|----------|--|
| Article                   | Symbol | Min. | Тур. Мах.       |                    | Unit     |  |
| INPUT SPECIFICATIONS      |        |      |                 |                    |          |  |
| Nominal Voltage           | Vin    |      | 220 ~ 240       |                    | Vac      |  |
| Nominal Frequency         | fin    |      | 50 / 60         |                    | Hz       |  |
| AC Voltage Range          |        | 198  |                 | 264                | Vac      |  |
| DC Voltage Range          |        |      | n/a             |                    | V        |  |
| Maximum Voltage           |        |      |                 | 275                | Vac      | 2 hours max.   |
| Nominal Current           | lin    |      | 200             |                    | mA       | At 230 V, 36 W load (see section 2e)                         |
| Total Harmonic Distortion | THD    |      |                 | 20                 | %        | At full load, 230 V, 50 Hz (see graph)                       |
| Power Factor              | PF     | 0.95 |                 |                    | _        | At full load, 230 V, 50 Hz (see graph)                       |
| Efficiency                | η      | 87   |                 |                    | %        | At full load, 230 V, 50 Hz (see graph)                       |
| Power Losses              |        |      |                 | 5.5                | W        | At 230 V, 1050 mA (see section 2e)                           |
| No-load Power             |        |      | n/a             |                    | W        | Load switching on output side is safe but not permitted      |
| Stand-by Power            |        |      | n/a             |                    | W        | Unit is not dimmable/controllable                            |
| Protection Class          |        |      | II              |                    | -        | Suitable for class I and II luminaires                       |
| In-rush Current           |        |      |                 | 16                 | $A_{pk}$ | t <sub>width</sub> = 100 μs typ. (at 50% lpk)                |
| Units per Circuit Breaker |        |      |                 | B16: 25<br>B10: 15 | -        | Imax = 16 A, t <sub>width</sub> = 100 μs                     |
| OUTPUT SPECIFICATIONS     |        |      |                 |                    |          |  |
| Nominal Voltage           | Vo     |      | 17 ~ 34         |                    | Vdc      | With load  |
| Max. Voltage              |        |      |                 | 50                 | Vdc      | Open circuit, No-load protection                             |
| Nominal Current           | lo     |      | 800/925/1050    |                    | mA       | ±5 %   |
| Current Ripple            |        |      | ±30             |                    | %        | Ripple / average @ 100 Hz                                    |
| Nominal Power             | Ро     |      | 14 ~ 36         | 36                 | W        | See section 2e   |
| Galvanic Isolation        |        |      | SELV-equivalent |                    |          | Output to mains –<br>Touch current < 0.7 mA                  |
| Touch Current             |        |      |                 | 0.7                | mA       | According to EN 60598-1 annex G<br>and EN 61347-2-13 annex A |



| Article                             | Symbol                                  |       | Specification |                 |      | Unit |   |  |
|-------------------------------------|---|-------|---------------|-----------------|------|------|---|--|
| Article                             |   |       | Min.          | Тур.            | Max. | Unit | Note  |  |
| DIMMING SPECIFICATION               | DIMMING SPECIFICATIONS                  |       |               |                 |      |      |   |  |
| Dimming Control                     |   |       |               | n/a             |      |      | Unit is not dimmable  |  |
| ENVIRONMENTAL SPECIF                | FICATIONS                               |       |               |                 |      |      |   |  |
| Ambient Temperature                 |   | ta    | -20           |                 | 55   | °C   |   |  |
| Case Temperature                    |   | tc    |               |                 | 80   | °C   | Measured at t <sub>c</sub> point as indicated on the product label              |  |
| Case Temperature in fault condition |   |       |               |                 | 110  | °C   | ·   |  |
| Storage Temperature                 |   | ts    | -25           |                 | 75   | °C   | Cool down before operating  |  |
| Relative Humidity                   |   |       | 5             |                 | 85   | %    | Not condensing  |  |
| Surge Transient<br>Protection       | L/N                                     |       |               |                 | ±1   | kV   | According to EN 61547-5.7   |  |
| IP Rating                           |   |       |               | IP20            |      | _    | Suitable for indoor environment   |  |
| Mains Switching cycles              |   |       | 100,000       |                 |      | _    |   |  |
|                                     |   |       | 35,000        |                 |      | h    | t <sub>c</sub> = 80 °C, 10 % failure rate (14 h on / 10 h standby per day)      |  |
| Expected Lifetime                   | *************************************** |       | 50,000        |                 |      | h    | $t_c = 70^{\circ}\text{C}$ , 10 % failure rate (14 h on / 10 h standby per day) |  |
| Dimensions                          |   | LxWxH |               | 103 x 67 x 29.5 |      | mm   |   |  |
| Net Weight                          |   |       |               | 165             |      | g    |   |  |

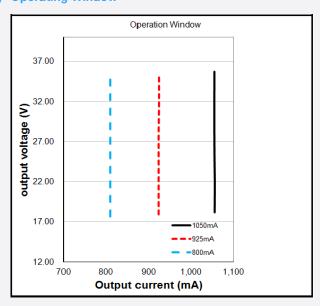
#### Note:

Standards: EN 61347-1, EN 61347-2-13, EN 55015, EN 61547, EN 61000-3-2, EN 62384

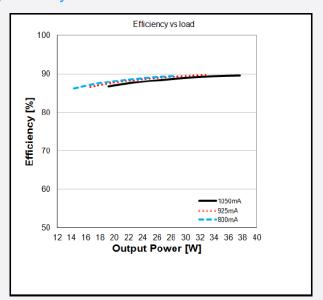


#### 2. Typical Characteristics Graphs

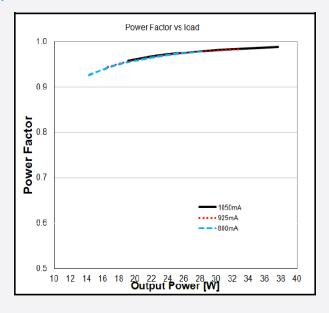
#### a) Operating Window



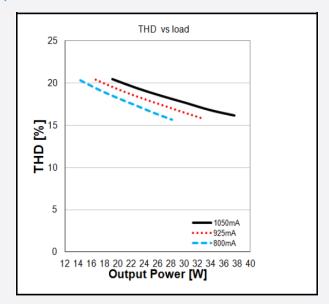
#### b) Efficiency vs. Load



#### c) Power Factor vs. Load



#### d) Total Harmonic Distortion vs. Load





#### e) Typical Output / Input

| Output / Input Pating        | Unit  | Outpu | Output Current Setting (mA) |      |  |  |  |
|------------------------------|-------|-------|-----------------------------|------|--|--|--|
| Output / Input Rating        | Offit | 800   | 925                         | 1050 |  |  |  |
| Output Voltage, Min.         | V     | 17    | 17                          | 17   |  |  |  |
| Output Voltage, Max.         | V     | 34    | 34                          | 34   |  |  |  |
| Output Power, Min.           | W     | 14    | 16                          | 18   |  |  |  |
| Output Power, Max.           | W     | 27    | 31                          | 36   |  |  |  |
| Power Loss Max. (@ 230 V)    | W     | 4     | 4.7                         | 5.5  |  |  |  |
| Line Input Power (@ 230 V)   | W     | 31    | 35.7                        | 41.5 |  |  |  |
| Line Input Current (@ 230 V) | mA    | 150   | 180                         | 200  |  |  |  |



#### 3. Protection

#### • Input over voltage protection

Mains up to 275 Vac for two hours maximum.

#### • Output short circuit protection

Automatic and reversible.

#### • Output overload protection

Automatic and reversible.

#### • Output over voltage protection

Output voltage is limited to below 50 V.

#### No load operation

Available.

#### • Over temperature protection

Automatic and reversible.

#### • Load hot plug protection

Hot plug-in or secondary switching of LEDs is not permitted and may cause a very high current to the LEDs.

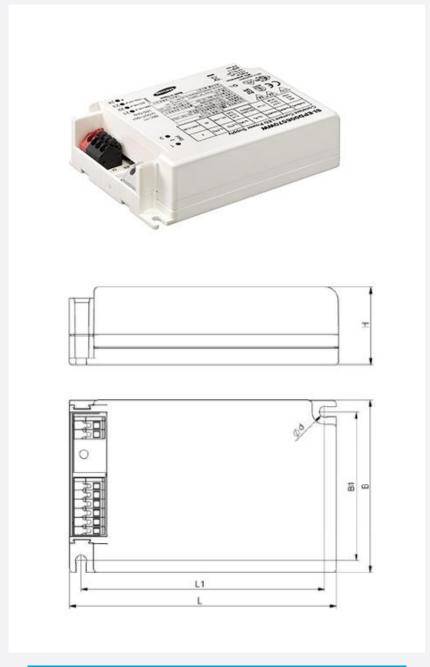
#### • Output under voltage protection

n/a



#### 4. Outline Drawing & Dimension

#### a) Dimension

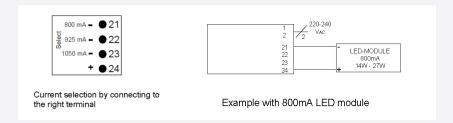


| L   | L1 | В  | B1 | Н    | Unit |
|-----|----|----|----|------|------|
| 103 | 94 | 67 | 58 | 29.5 | mm   |

Housing material: plastic, white



#### b) Wiring Diagram

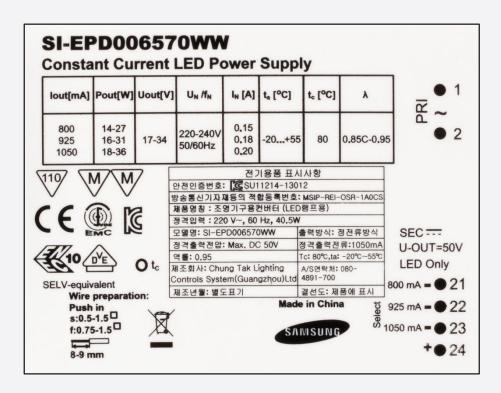


Connectors type (input and output): Push-in terminals

Wire cross-section: solid: 0.5 - 1.5 mm<sup>2</sup> flexible: 0.75 - 1.5 mm<sup>2</sup>

Wire peeling length: 8 - 9 mm
Load wire length: Max. 2 m

#### 5. Label Structure





#### 6. Packing Structure

| Packing material | Max. quantity (pcs) |  |
|------------------|---------------------|--|
| Outer Box        | 20                  |  |

#### 7. Precautions in Handling & Use

- 1) To prevent the LED Driver from any defect, please handle and store it with care
  - Do not drop or give shock
  - Do not store in very humid location or at extreme temperature
  - Do not open or disassemble the product
- 2) Static electricity or surge voltage may damage the components inside LED Driver, as such please observe proper antielectrostatic working process
  - People handing the Driver should be well grounded (e.g. using ESD wrist band) and wear anti-static working clothes and gloves
  - All related devices and instruments in the production line should be well grounded (e.g. working table, measuring equipment, assembly jigs)
- 3) Observe the correct polarity of output terminal
- 4) Avoid input voltage exceeds the maximum rating, which will cause damage to the circuit and result in malfunction



# Legal and additional information.

#### About Samsung Electronics Co., Ltd.

Samsung Electronics Co., Ltd. is a global leader in technology, opening new possibilities for people everywhere. Through relentless innovation and discovery, we are transforming the worlds of TVs, smartphones, tablets, PCs, cameras, home appliances, printers, LTE systems, medical devices, semiconductors and LED solutions. We employ 286,000 people across 80 countries with annual sales of US\$216.7 billion. To discover more, please visit www.samsungled.com.

Copyright © 2014 Samsung Electronics Co., Ltd. All rights reserved.

Samsung is a registered trademark of Samsung Electronics Co., Ltd.

Specifications and designs are subject to change without notice. Non-metric weights and measurements are approximate. All data were deemed correct at time of creation. Samsung is not liable for errors or omissions. All brand, product, service names and logos are trademarks and/or registered trademarks of their respective owners and are hereby recognized and acknowledged.

Samsung Electronics Co., Ltd. 95, Samsung 2-ro Giheung-gu Yongin-si, Gyeonggi-do, 446-711 KOREA

www.samsungled.com

