

## 25W Constant Current – IP65



■ Approve



### Features

- Class II, SELV, Built-in
- Input Voltage 100-240VAC
- Protections: SCP/OLP/OVP
- Power Factor 0.95C
- Efficiency  $\geq 86\%$
- IP65 Ingress protection
- 5 years warranty

### Applications

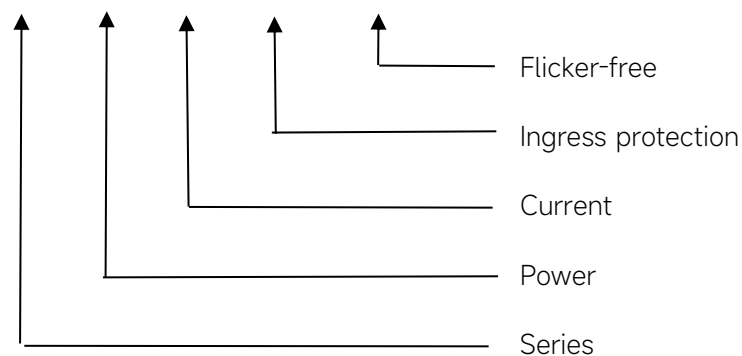
- Outdoor-Wall light
- Lawn light

### ◆ Description

CH-25-XXX IP65 LB1 is a 25W constant current LED driver that operates from 90-264Vac input with 300 to 800mA output current. With it's compact dimensions from  $\Phi 65 \times 28\text{mm}$  it is easy to integrate in Outdoor-Wall light and Lawn light products. To ensure trouble-free operation, protection is provided against output short circuit and over Load

### ◆ Model code

#### CH-25-XXX IP65 LB1



## ◆ Specification

|             |                                                                                                                                                                                                                                                                  |                                |          |          |     |            |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|----------|----------|-----|------------|
| Output      | Constant Current                                                                                                                                                                                                                                                 | 300mA                          | 350mA    | 500mA    | ... | 800mA      |
|             | Voltage Range                                                                                                                                                                                                                                                    | 50-84VDC                       | 43-72VDC | 30-50VDC | ... | 19-31.5VDC |
|             | Unload voltage Max.                                                                                                                                                                                                                                              | 98VDC                          | 85VDC    | 63VDC    | ... | 42VDC      |
|             | Current Accuracy                                                                                                                                                                                                                                                 | ±5%                            |          |          |     |            |
|             | Output HF current ripple(≥1KHz)                                                                                                                                                                                                                                  | ±5%                            |          |          |     |            |
|             | Output LF current ripple(≤120Hz)                                                                                                                                                                                                                                 | ±5%                            |          |          |     |            |
|             | SVM                                                                                                                                                                                                                                                              | ≤0.4                           |          |          |     |            |
|             | Pst                                                                                                                                                                                                                                                              | ≤1                             |          |          |     |            |
|             | Efficiency(Typ.)                                                                                                                                                                                                                                                 | ≥86%                           |          |          |     |            |
| Input       | Rated input voltage                                                                                                                                                                                                                                              | 100-240VAC                     |          |          |     |            |
|             | Range of input voltage                                                                                                                                                                                                                                           | 90-264VAC                      |          |          |     |            |
|             | Frequency(Hz)                                                                                                                                                                                                                                                    | 50/60 Hz                       |          |          |     |            |
|             | Displacement factor                                                                                                                                                                                                                                              | ≥0.9                           |          |          |     |            |
|             | Power Factor                                                                                                                                                                                                                                                     | 0.95C                          |          |          |     |            |
|             | Input Current max                                                                                                                                                                                                                                                | 0.38A                          |          |          |     |            |
|             | Start-up time                                                                                                                                                                                                                                                    | < 0.5S                         |          |          |     |            |
|             | No Load Power                                                                                                                                                                                                                                                    | ≤0.5W                          |          |          |     |            |
|             | THD (Typ.)                                                                                                                                                                                                                                                       | < 12%                          |          |          |     |            |
| Protection  | Over Load Protection                                                                                                                                                                                                                                             | 103-120%                       |          |          |     |            |
|             |                                                                                                                                                                                                                                                                  | YES/Auto Resume                |          |          |     |            |
|             | Over Voltage Protection                                                                                                                                                                                                                                          | > 98VDC                        | > 85VDC  | > 63VDC  | ... | > 42VDC    |
|             |                                                                                                                                                                                                                                                                  | YES/Auto Resume                |          |          |     |            |
|             | Short circuit Protection                                                                                                                                                                                                                                         | YES/Auto Resume                |          |          |     |            |
| Environment | Operating Temperature                                                                                                                                                                                                                                            | -20°C~+50°C                    |          |          |     |            |
|             | Humidity                                                                                                                                                                                                                                                         | 20%-90%RH                      |          |          |     |            |
|             | Tc                                                                                                                                                                                                                                                               | 85°C                           |          |          |     |            |
|             | Storage Temperature                                                                                                                                                                                                                                              | -25°C~+60°C                    |          |          |     |            |
|             | Life time                                                                                                                                                                                                                                                        | > 50000h@Tc=80°C,230VAC        |          |          |     |            |
| Surface     | Dimension                                                                                                                                                                                                                                                        | Φ65X28(DXH)mm                  |          |          |     |            |
| standards   | EN 61347-1; EN61347-2-13; EN62384; EN55015; EN61000-3-2 ; EN61000-3-3; EN 61547;                                                                                                                                                                                 |                                |          |          |     |            |
| Others      | ErP                                                                                                                                                                                                                                                              | EU 2019/2020                   |          |          |     |            |
|             | 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. |                                |          |          |     |            |

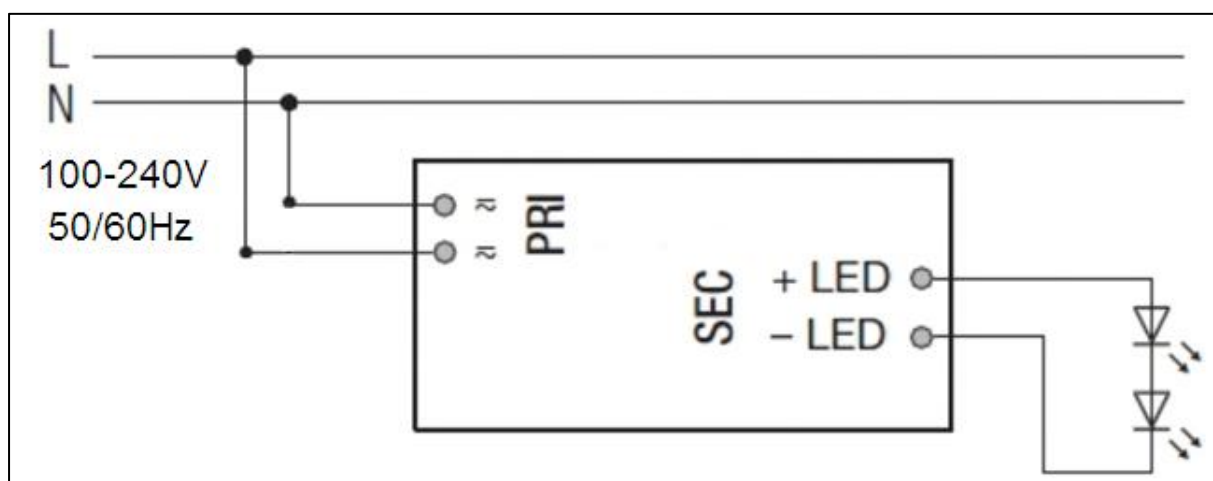
## ◆ Circuit Breaker

| I <sub>peak</sub> | T <sub>width</sub> | B10   | B16   | B20   | C10   | C16   | C20   |
|-------------------|--------------------|-------|-------|-------|-------|-------|-------|
| 13.4A             | <b>116μs</b>       | 21pcs | 33pcs | 42pcs | 21pcs | 33pcs | 42pcs |

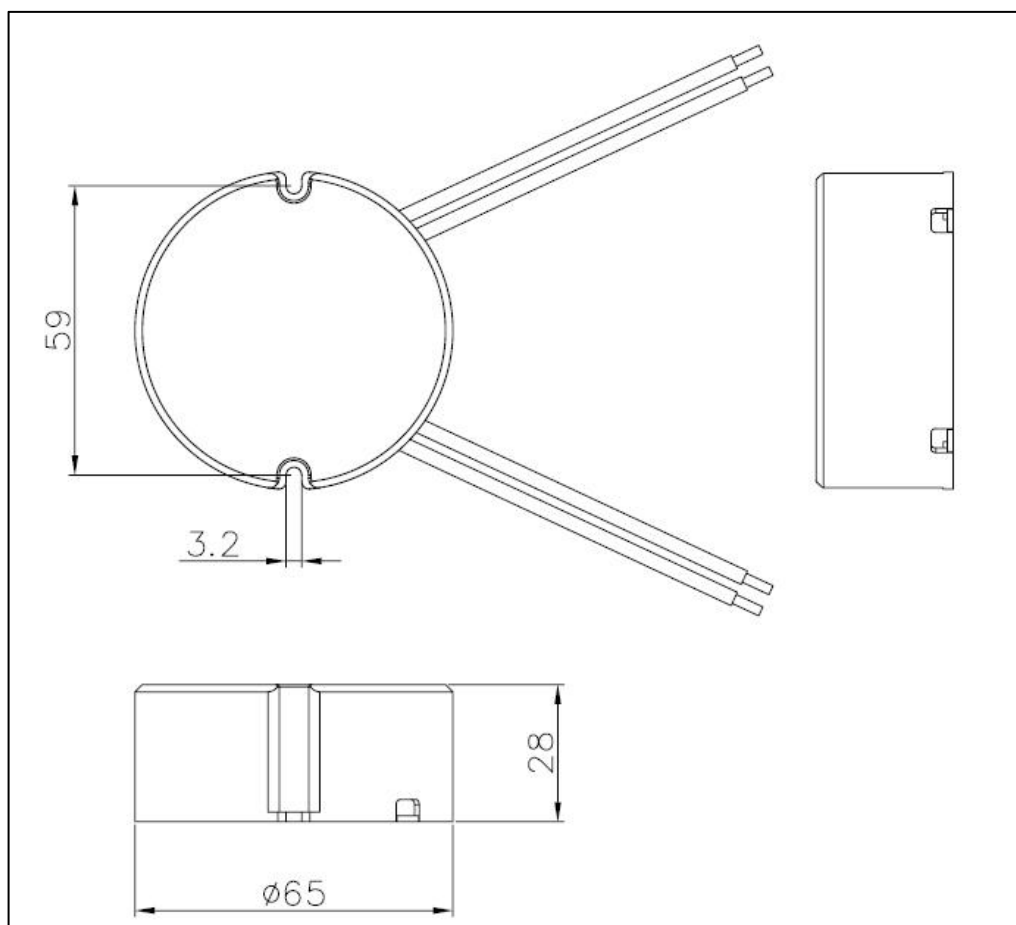
## ◆ Model list

| NO. | Model number       | Output                |                              |                               | Max.Prated(W) |
|-----|--------------------|-----------------------|------------------------------|-------------------------------|---------------|
|     |                    | Constant current (mA) | Normal working voltage (VDC) | No load working voltage (VDC) |               |
| 1   | CH-25-300 IP65 LB1 | 300                   | 50-84                        | 98                            | 25.2          |
| 2   | CH-25-350 IP65 LB1 | 350                   | 43-72                        | 85                            | 25.2          |
| 3   | CH-25-400 IP65 LB1 | 400                   | 37.5-63                      | 75                            | 25.2          |
| 4   | CH-25-450 IP65 LB1 | 450                   | 33.5-56                      | 68                            | 25.2          |
| 5   | CH-25-500 IP65 LB1 | 500                   | 30-50                        | 63                            | 25            |
| 6   | CH-25-550 IP65 LB1 | 550                   | 27-45.5                      | 55                            | 25            |
| 7   | CH-25-600 IP65 LB1 | 600                   | 25-42                        | 50                            | 25.2          |
| 8   | CH-25-650 IP65 LB1 | 650                   | 23-38.5                      | 50                            | 25            |
| 9   | CH-25-700 IP65 LB1 | 700                   | 21.5-36                      | 46                            | 25.2          |
| 10  | CH-25-750 IP65 LB1 | 750                   | 20-33.5                      | 44                            | 25.1          |
| 11  | CH-25-800 IP65 LB1 | 800                   | 19-31.5                      | 42                            | 25.2          |

## ◆ Wiring diagram

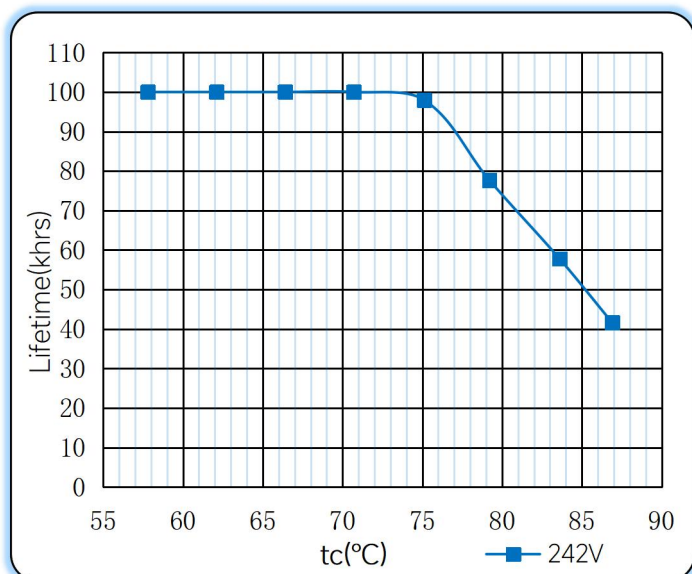


◆ **2D diagram**

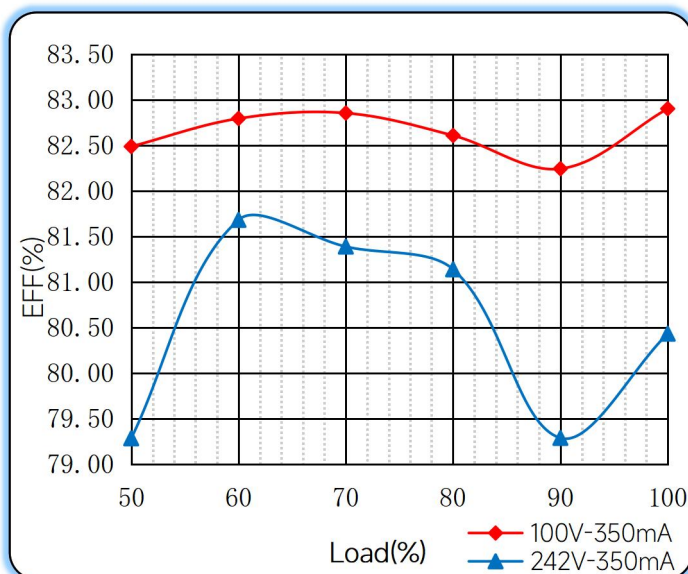


## ◆ Curve for CH-25-350 IP65 LB1, $I_o=350\text{mA}$

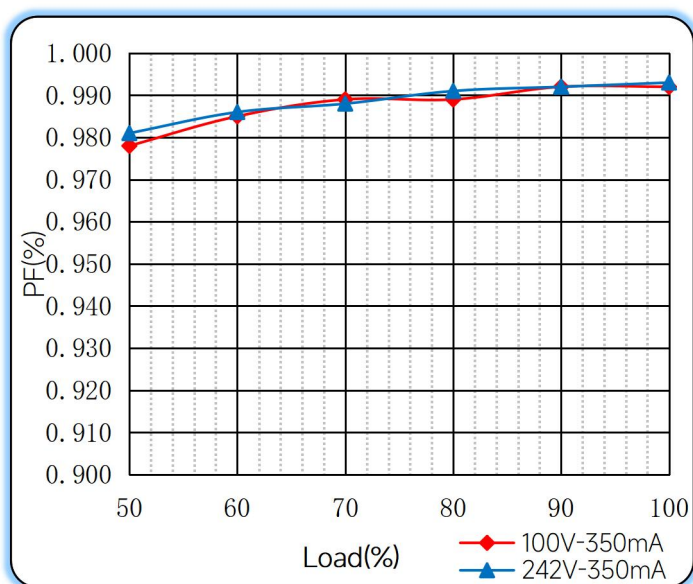
Lifetime vs. Temperature Curve



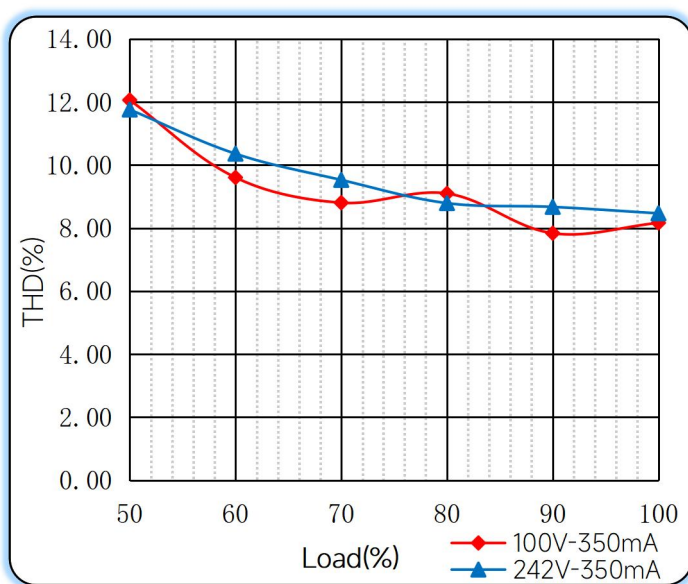
Efficiency vs. Load



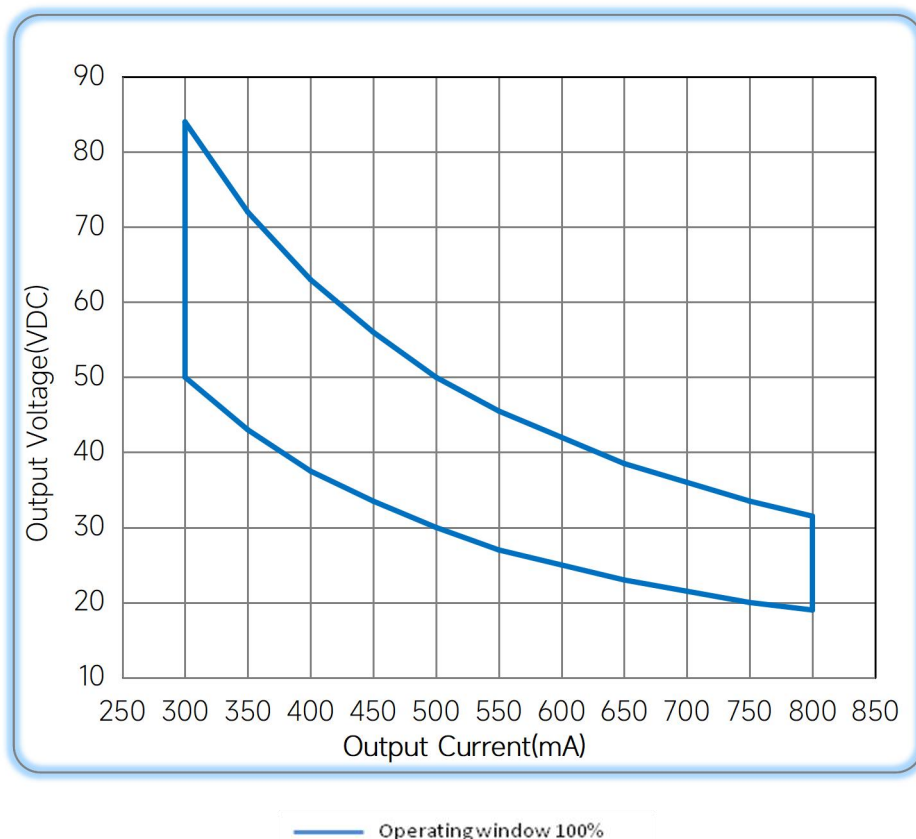
Power Factor Characteristics



THD vs. Load



## ◆ Operating window



## ◆ Revision Updates

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

Tel: +86-0757-86256822, +86-0757-86256831

E-mail: sales@eaglerise.com

Website : <https://lighting.eaglerise.com>



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Manual