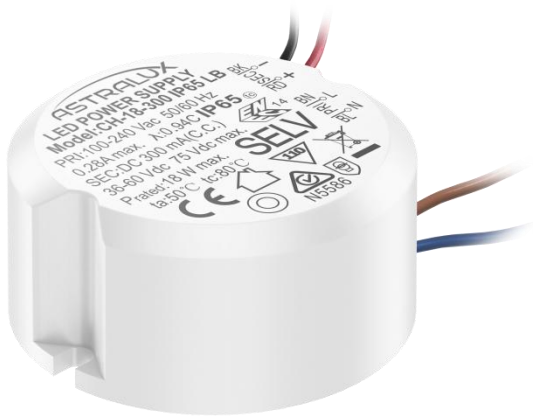


## 18W Constant Current – IP65



■ Approve



### Features

- Class II, SELV, Built-in
- Input Voltage 100-240VAC
- Protections: SCP/OLP/OVP
- Power Factor 0.94C
- Efficiency  $\geq 86\%$
- IP65 Ingress protection
- 5 years warranty

### Applications

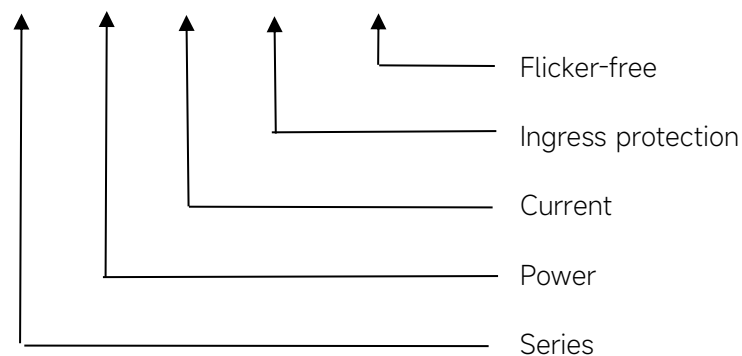
- Outdoor-Wall light
- Lawn light

### ◆ Description

CH-18-XXX IP65 LB is an 18W constant current LED driver that operates from 90-264Vac input with 300 to 700mA output current. With it's compact dimensions from  $\Phi 55 \times 26\text{mm}$  it is easy to integrate in Outdoor-Wall light lights and Lawn lights. To ensure trouble-free operation, protection is provided against output short circuit and over Load

### ◆ Model code

CH-18-XXX IP65 LB



## ◆ Specification

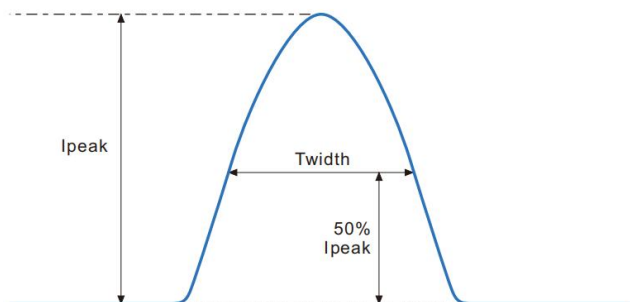
|             |                                                                                                                                                                                                                                                                  |                                |          |            |     |            |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|----------|------------|-----|------------|
| Output      | Constant Current                                                                                                                                                                                                                                                 | 300mA                          | 350mA    | 500mA      | ... | 700mA      |
|             | Voltage Range                                                                                                                                                                                                                                                    | 36-60VDC                       | 31-52VDC | 21.5-36VDC | ... | 15.5-26VDC |
|             | Unload voltage Max.                                                                                                                                                                                                                                              | 75VDC                          | 63VDC    | 46VDC      | ... | 35VDC      |
|             | Current Accuracy                                                                                                                                                                                                                                                 | ±5%                            |          |            |     |            |
|             | Output HF current ripple(≥1KHz)                                                                                                                                                                                                                                  | ±5%                            |          |            |     |            |
|             | Output LF current ripple(≤120Hz)                                                                                                                                                                                                                                 | ±5%                            |          |            |     |            |
|             | SVM                                                                                                                                                                                                                                                              | ≤0.4                           |          |            |     |            |
|             | Pst                                                                                                                                                                                                                                                              | ≤1                             |          |            |     |            |
|             | Efficiency(Typ.)                                                                                                                                                                                                                                                 | ≥86%;≥85%@600mA                |          |            |     |            |
| Input       | Rated input voltage                                                                                                                                                                                                                                              | 100-240VAC                     |          |            |     |            |
|             | Range of input voltage                                                                                                                                                                                                                                           | 90-264VAC                      |          |            |     |            |
|             | Frequency(Hz)                                                                                                                                                                                                                                                    | 50/60 Hz                       |          |            |     |            |
|             | Displacement factor                                                                                                                                                                                                                                              | ≥0.9                           |          |            |     |            |
|             | Power Factor                                                                                                                                                                                                                                                     | 0.94C                          |          |            |     |            |
|             | Input Current max                                                                                                                                                                                                                                                | 0.28A                          |          |            |     |            |
|             | Start-up time                                                                                                                                                                                                                                                    | < 0.5S                         |          |            |     |            |
|             | No Load Power                                                                                                                                                                                                                                                    | ≤0.5W                          |          |            |     |            |
|             | THD (Typ.)                                                                                                                                                                                                                                                       | < 10%                          |          |            |     |            |
| Protection  | Over Load Protection                                                                                                                                                                                                                                             | 103-120%                       |          |            |     |            |
|             |                                                                                                                                                                                                                                                                  | YES/Auto Resume                |          |            |     |            |
|             | Over Voltage Protection                                                                                                                                                                                                                                          | > 75VDC                        | > 63VDC  | > 46VDC    | ... | > 35VDC    |
|             |                                                                                                                                                                                                                                                                  | YES/Auto Resume                |          |            |     |            |
|             | Short circuit Protection                                                                                                                                                                                                                                         | YES/Auto Resume                |          |            |     |            |
| capability  | Surge capability (L-N)                                                                                                                                                                                                                                           | 1KV                            |          |            |     |            |
|             | Surge capability (L/N-Ground)                                                                                                                                                                                                                                    | NA                             |          |            |     |            |
| Environment | Operating Temperature                                                                                                                                                                                                                                            | -20°C~~+50°C                   |          |            |     |            |
|             | Humidity                                                                                                                                                                                                                                                         | 20%-90%RH                      |          |            |     |            |
|             | Tc                                                                                                                                                                                                                                                               | 80°C                           |          |            |     |            |
|             | Storage Temperature                                                                                                                                                                                                                                              | -25°C~~+60°C                   |          |            |     |            |
|             | Life time                                                                                                                                                                                                                                                        | > 50000h@Tc=75°C,230VAC        |          |            |     |            |
|             | Noise                                                                                                                                                                                                                                                            | ≤20dB(A)@10cm                  |          |            |     |            |
| Surface     | Dimension                                                                                                                                                                                                                                                        | Φ55X26(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. |                                |          |            |     |            |

## ◆ Model list

| NO. | Model number      | Output                |                              |                               | Max. Prated (W) |
|-----|-------------------|-----------------------|------------------------------|-------------------------------|-----------------|
|     |                   | Constant current (mA) | Normal working voltage (VDC) | No load working voltage (VDC) |                 |
| 1   | CH-18-300 IP65 LB | 300                   | 36-60                        | 75                            | 18              |
| 2   | CH-18-350 IP65 LB | 350                   | 31-52                        | 63                            | 18.2            |
| 3   | CH-18-400 IP65 LB | 400                   | 27-45                        | 55                            | 18              |
| 4   | CH-18-450 IP65 LB | 450                   | 24-40                        | 50                            | 18              |
| 5   | CH-18-500 IP65 LB | 500                   | 21.5-36                      | 46                            | 18              |
| 6   | CH-18-550 IP65 LB | 550                   | 19.5-33                      | 43                            | 18.2            |
| 7   | CH-18-600 IP65 LB | 600                   | 18-30                        | 40                            | 18              |
| 8   | CH-18-650 IP65 LB | 650                   | 16.5-28                      | 38                            | 18.2            |
| 9   | CH-18-700 IP65 LB | 700                   | 15.5-26                      | 35                            | 18.2            |

## ◆ Inrush Current

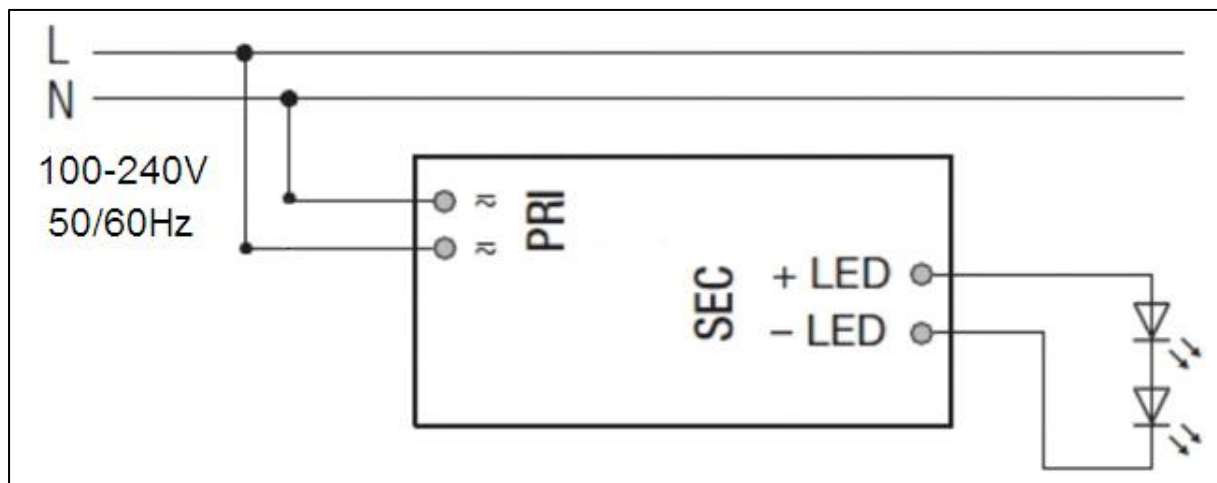
| I <sub>peak</sub> | T <sub>width</sub> | B10   | B16   | B20   | C10   | C16   | C20   |
|-------------------|--------------------|-------|-------|-------|-------|-------|-------|
| 12.8A             | 104μs              | 28pcs | 45pcs | 57pcs | 28pcs | 45pcs | 57pcs |



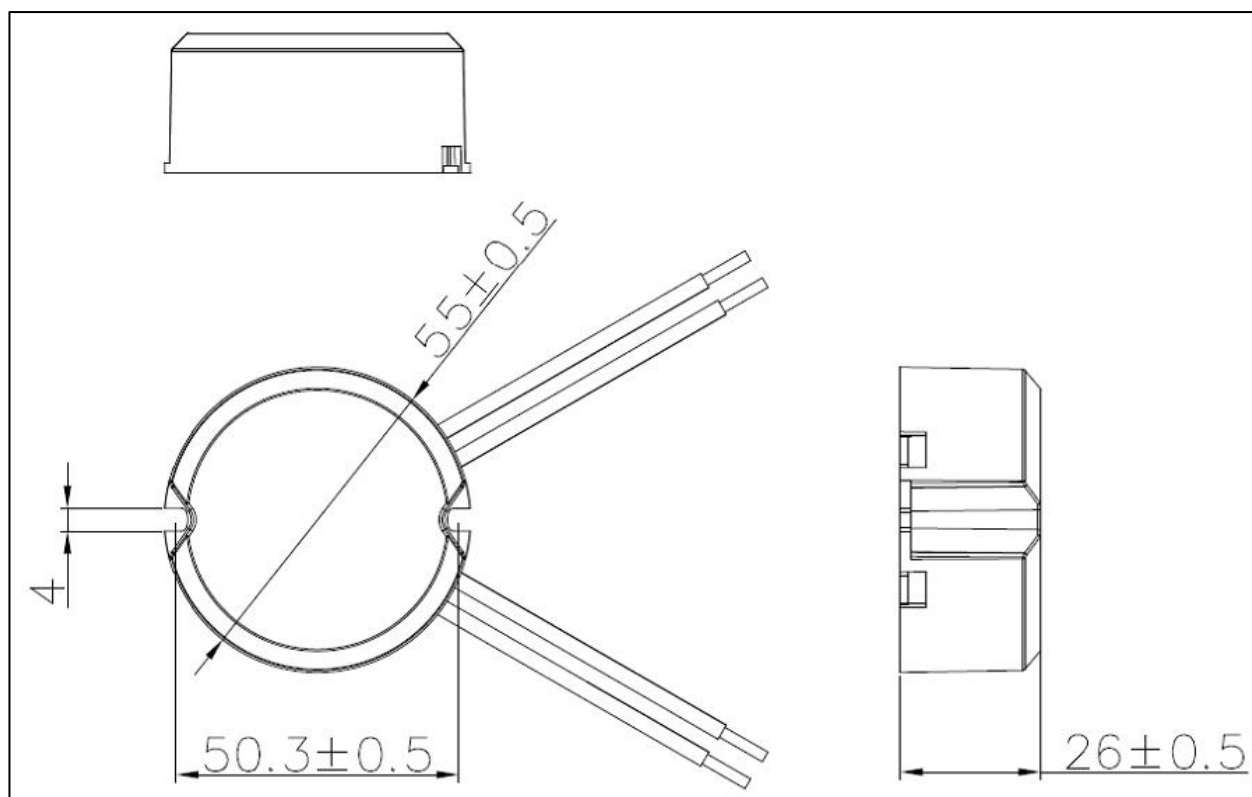
### Remarks:

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

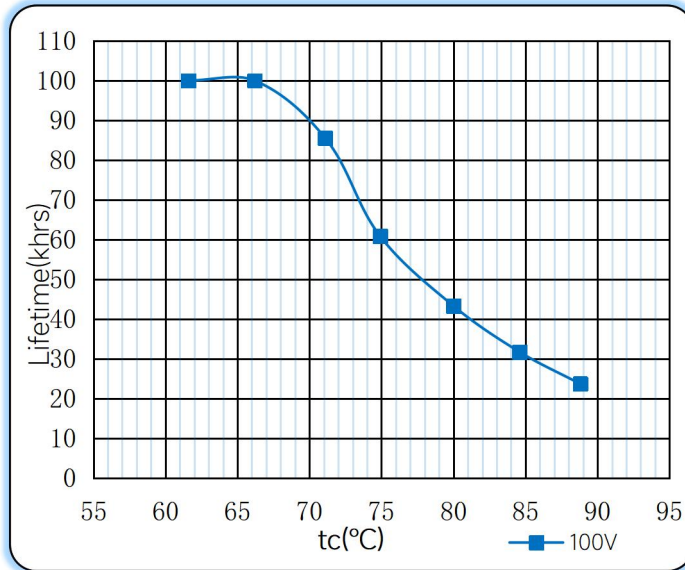


## ◆ 2D diagram

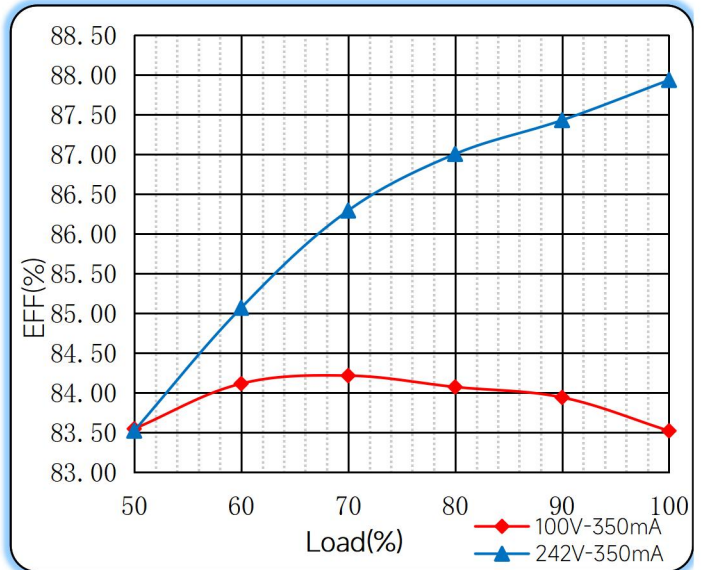


# ◆ Curve for CH-18-350 IP65 LB, Io=350mA

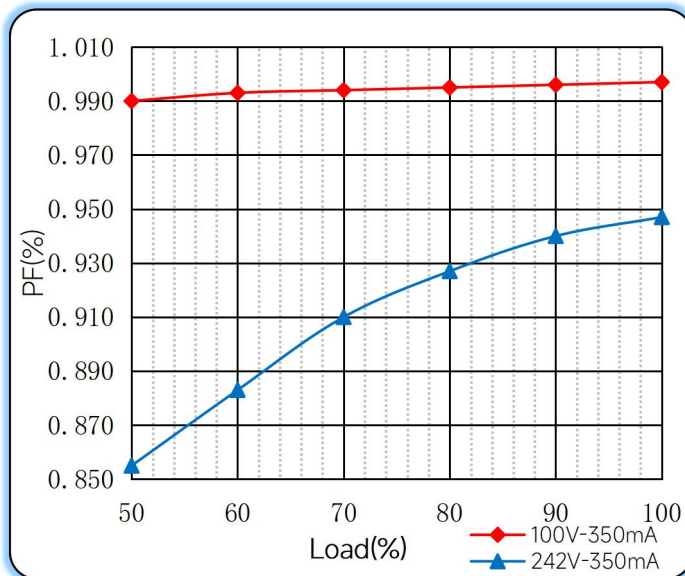
Lifetime vs. Temperature Curve



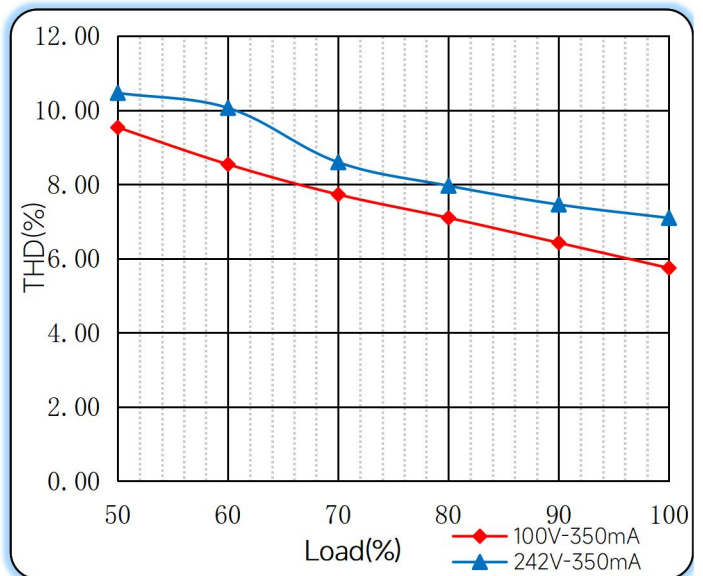
Efficiency vs. Load



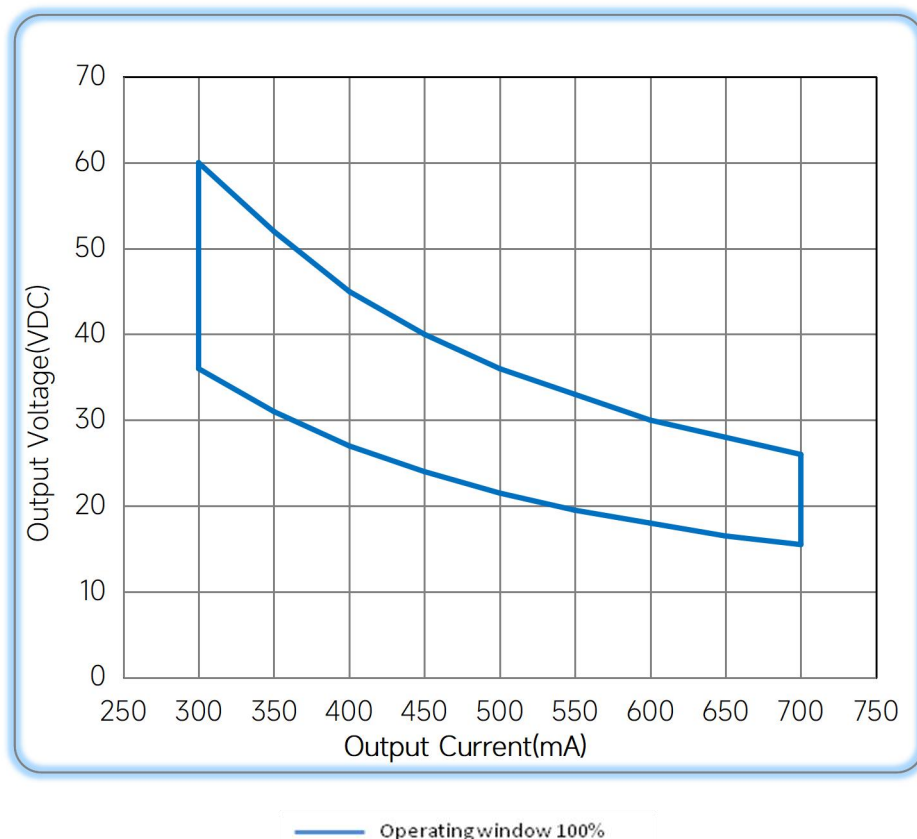
Power Factor Characteristics



THD vs. Load



## ◆ Operating window



## ◆ Revision Updates

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

Remark: The final interpretation of the contents of the specification belongs to Astralux.

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