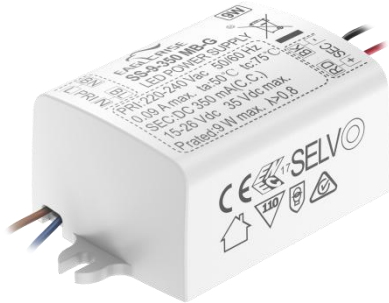


## 9W LED Driver Constant Current



■ Approve



### Features

- Class II&I, SELV, built-in
- Input Voltage 220-240VAC
- Protections: SCP/OLP/OVP
- Power Factor 0.8
- Efficiency  $\geq 78\%$
- 5 years warranty

### Applications

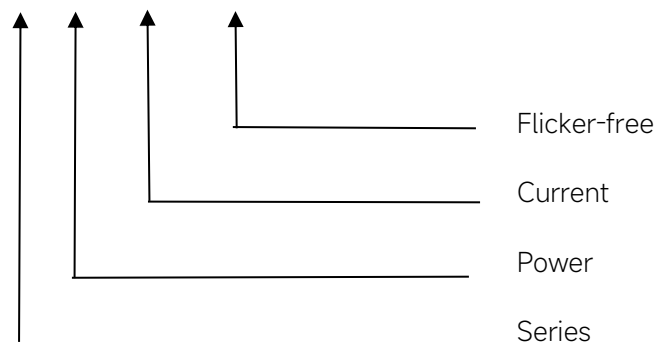
- LED spot light, LED down light,
- Wall light

### ◆ Description

SS-9-XXX MB-G is a 9W constant current LED driver that operates from 176-264Vac input with 200 to 700mA output voltage. With it's compact dimensions from 60 x 34 x 23.5mm it is easy to integrate in LED spot, down light and Wall light products. To ensure trouble-free operation, protection is provided against output short circuit and over Load.

### ◆ Model code

SS-9-XXX MB-G



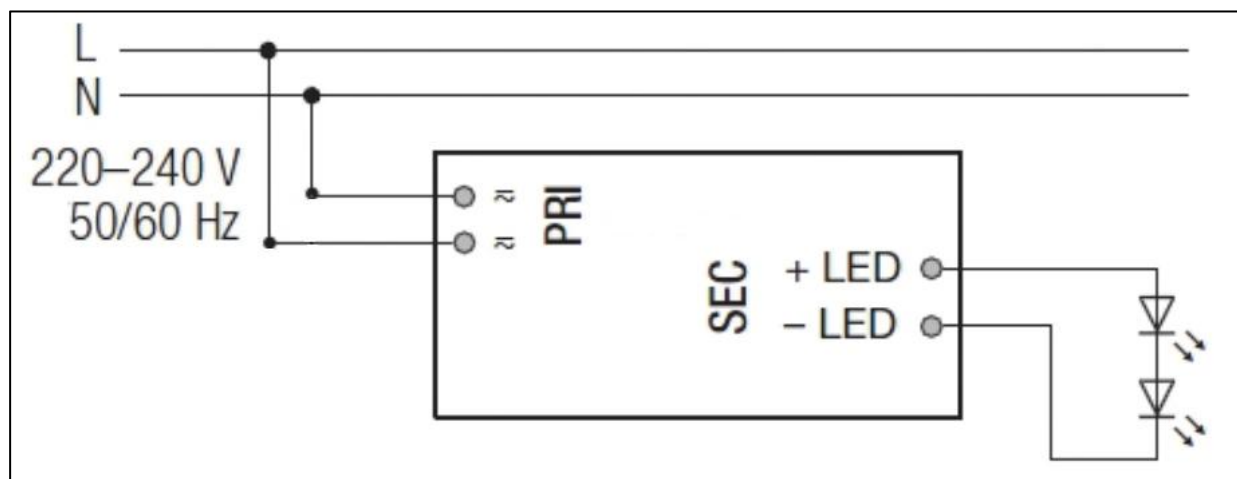
## ◆ Specification

|             |                                                                                                                                                                                                                                                                  |                                |          |          |     |         |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|----------|----------|-----|---------|
| Output      | Constant Current                                                                                                                                                                                                                                                 | 200mA                          | 300mA    | 350mA    | ... | 700mA   |
|             | Voltage Range                                                                                                                                                                                                                                                    | 27-45VDC                       | 18-30VDC | 15-26VDC | ... | 7-13VDC |
|             | Unload voltage Max.                                                                                                                                                                                                                                              | 55VDC                          | 40VDC    | 35VDC    | ... | 23VDC   |
|             | Current Accuracy                                                                                                                                                                                                                                                 | ±5%                            |          |          |     |         |
|             | Output HF current ripple(≥1KHz)                                                                                                                                                                                                                                  | ±5%                            |          |          |     |         |
|             | Output LF current ripple(≤120Hz)                                                                                                                                                                                                                                 | ±5%                            |          |          |     |         |
|             | SVM                                                                                                                                                                                                                                                              | ≤0.4                           |          |          |     |         |
|             | Pst                                                                                                                                                                                                                                                              | ≤1                             |          |          |     |         |
|             | Efficiency(Typ.)                                                                                                                                                                                                                                                 | ≥78%                           |          |          |     |         |
| Input       | Rated input voltage                                                                                                                                                                                                                                              | 220-240VAC                     |          |          |     |         |
|             | Range of input voltage                                                                                                                                                                                                                                           | 176-264VAC                     |          |          |     |         |
|             | Frequency(Hz)                                                                                                                                                                                                                                                    | 50/60 Hz                       |          |          |     |         |
|             | Displacement factor                                                                                                                                                                                                                                              | ≥0.9                           |          |          |     |         |
|             | Power Factor                                                                                                                                                                                                                                                     | 0.8C                           |          |          |     |         |
|             | Input Current max                                                                                                                                                                                                                                                | 0.09A                          |          |          |     |         |
|             | Start-up time                                                                                                                                                                                                                                                    | < 0.5S                         |          |          |     |         |
|             | No Load Power                                                                                                                                                                                                                                                    | ≤0.5W                          |          |          |     |         |
| Protection  | Over Load Protection                                                                                                                                                                                                                                             | 103-120%                       |          |          |     |         |
|             |                                                                                                                                                                                                                                                                  | YES/Auto Resume                |          |          |     |         |
|             | Over Voltage Protection                                                                                                                                                                                                                                          | > 55VDC                        | > 40VDC  | > 35VDC  | ... | > 23VDC |
|             |                                                                                                                                                                                                                                                                  | YES/Auto Resume                |          |          |     |         |
|             | Short circuit Protection                                                                                                                                                                                                                                         | YES/Auto Resume                |          |          |     |         |
| Environment | Operating Temperature                                                                                                                                                                                                                                            | -20°C~+50°C                    |          |          |     |         |
|             | Humidity                                                                                                                                                                                                                                                         | 20%-90%RH                      |          |          |     |         |
|             | Tc                                                                                                                                                                                                                                                               | 75°C                           |          |          |     |         |
|             | Storage Temperature                                                                                                                                                                                                                                              | -40°C~+60°C                    |          |          |     |         |
|             | Life time                                                                                                                                                                                                                                                        | > 44000h@Tc=50°C,230VAC        |          |          |     |         |
| Surface     | Dimension                                                                                                                                                                                                                                                        | 60X34X23.5(LXWXH)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. |                                |          |          |     |         |

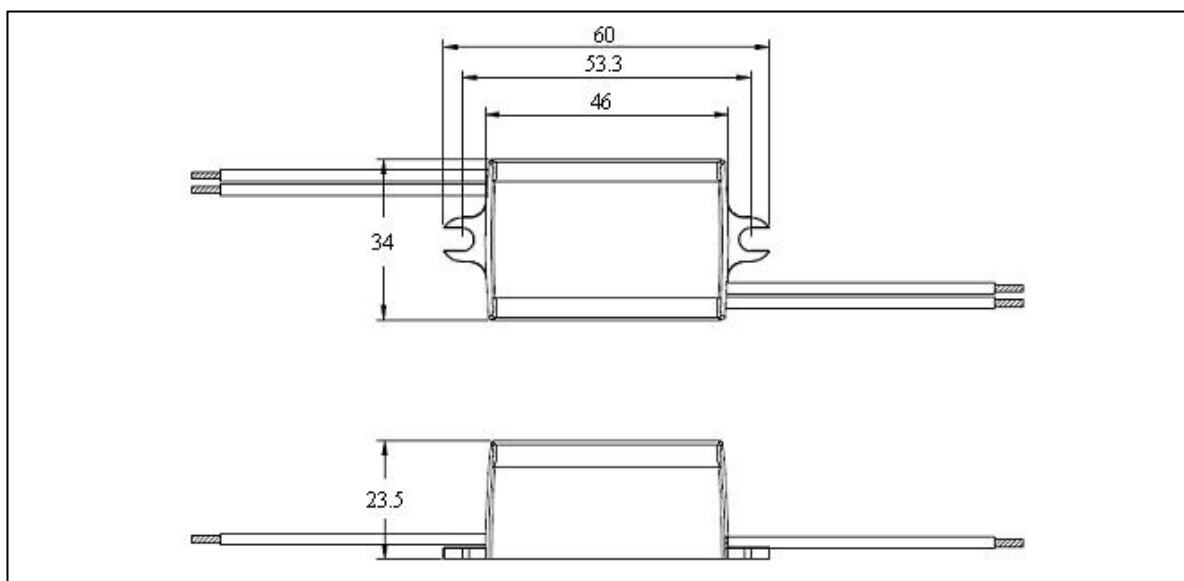
## ◆ Model list

| No | Model number  | Input         |                 |                | Output                |                              |                               |               |
|----|---------------|---------------|-----------------|----------------|-----------------------|------------------------------|-------------------------------|---------------|
|    |               | Voltage (VAC) | Max.Current (A) | Frequency (Hz) | Constant current (mA) | Normal working voltage (VDC) | No load working voltage (VDC) | Max. Power(W) |
| 1  | SS-9-200 MB-G | 220-240       | 0.09            | 50/60          | 200                   | 27-45                        | 55                            | 9             |
| 2  | SS-9-250 MB-G |               |                 |                | 250                   | 21-36                        | 46                            |               |
| 3  | SS-9-300 MB-G |               |                 |                | 300                   | 18-30                        | 40                            |               |
| 4  | SS-9-350 MB-G |               |                 |                | 350                   | 15-26                        | 35                            |               |
| 5  | SS-9-400 MB-G |               |                 |                | 400                   | 13-22.5                      | 33                            |               |
| 6  | SS-9-450 MB-G |               |                 |                | 450                   | 11-20                        | 30                            |               |
| 7  | SS-9-500 MB-G |               |                 |                | 500                   | 8.5-18                       | 28                            |               |
| 8  | SS-9-550 MB-G |               |                 |                | 550                   | 9-16.5                       | 25                            | 9.1           |
| 9  | SS-9-600 MB-G |               |                 |                | 600                   | 9-15                         | 25                            | 9             |
| 10 | SS-9-650 MB-G |               |                 |                | 650                   | 8-14                         | 24                            | 9.1           |
| 11 | SS-9-700 MB-G |               |                 |                | 700                   | 7-13                         | 23                            | 9.1           |

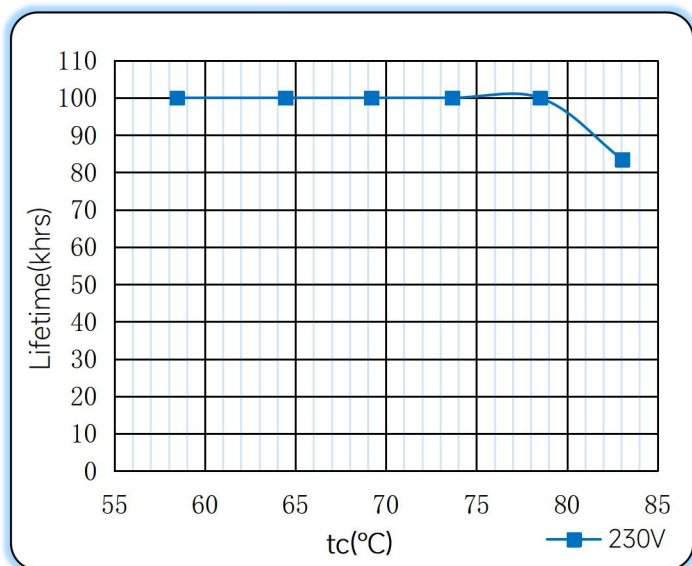
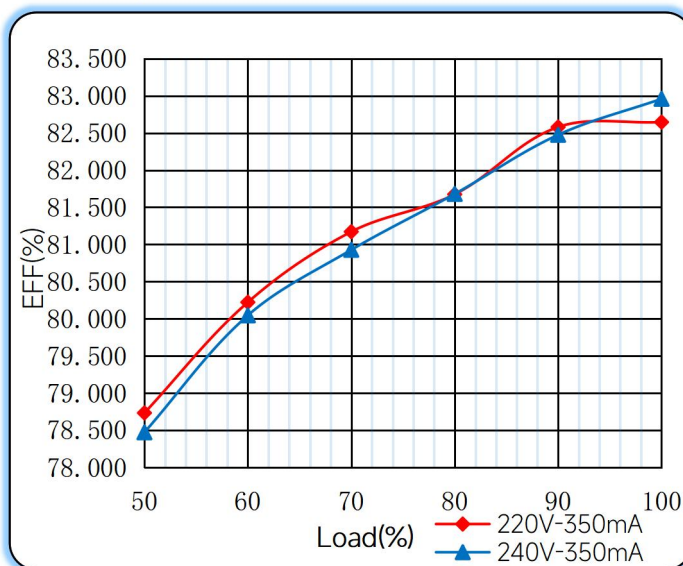
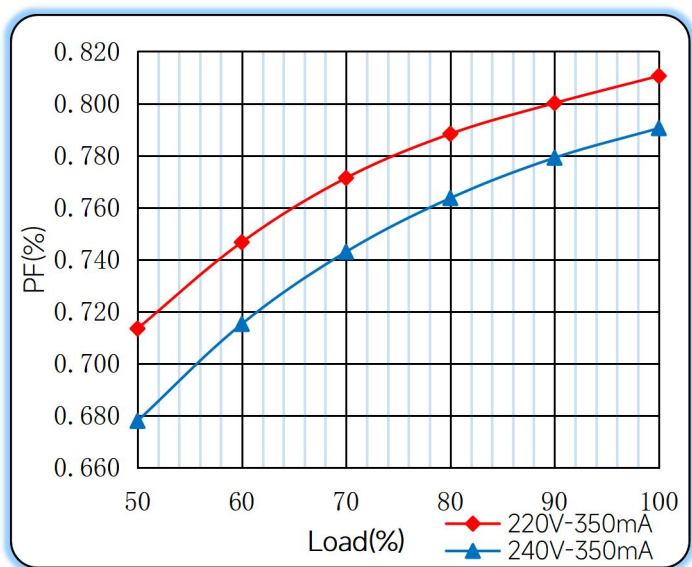
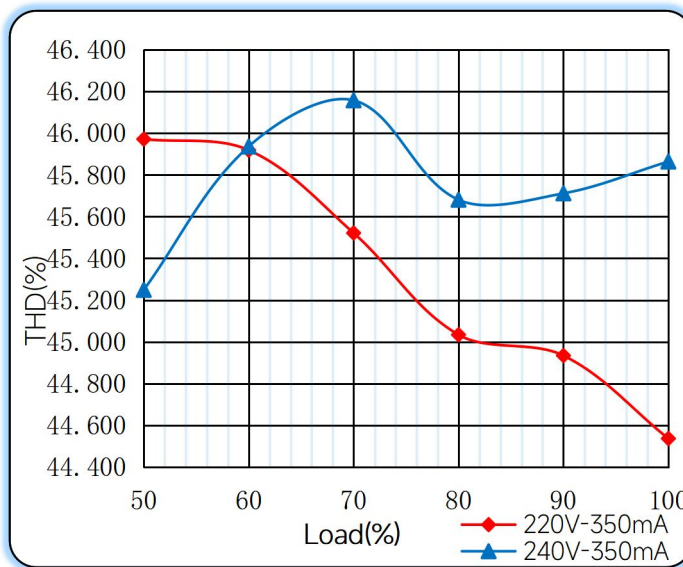
## ◆ Wiring diagram



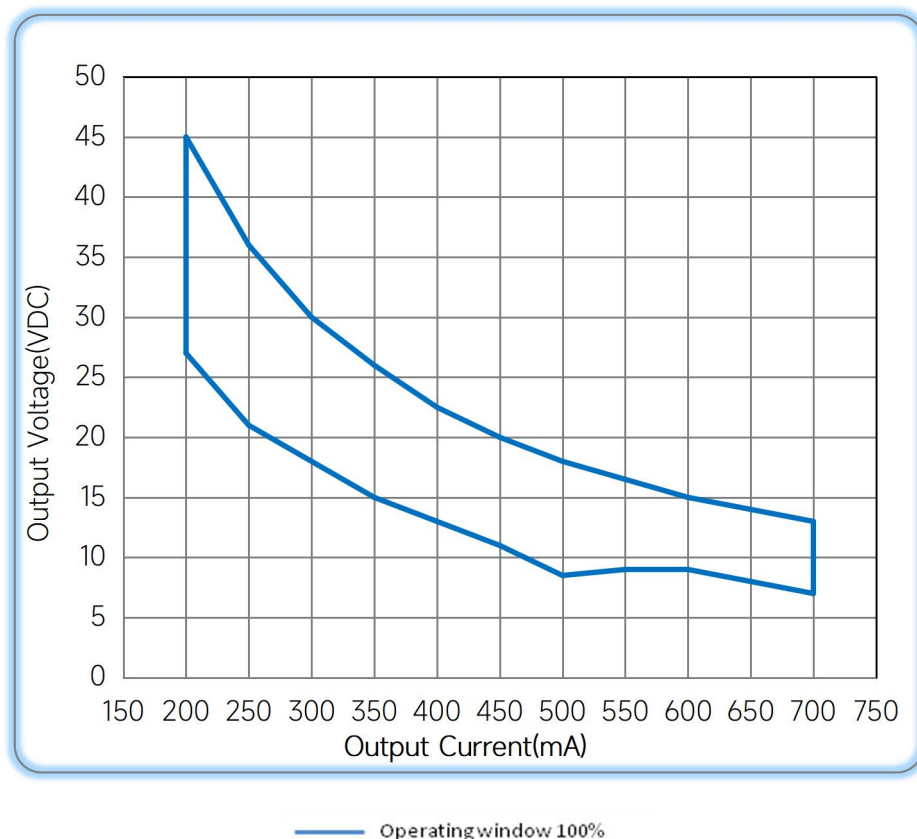
◆ 2D diagram



# ◆ Curve for SS-9-350 MB-G, $I_o=350\text{mA}$

**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 |
|         |        |       |         |            |

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Manual