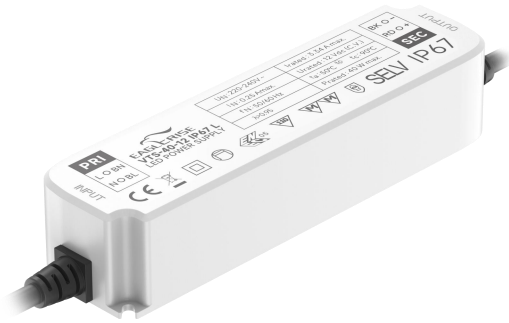


## 40W Constant Voltage Driver



### Features

- High efficiency up to 88%
- Built-in active PFC function
- All-Around Protection: OLP,SCP,OTP
- Compact Plastic Case, Free Air Convection
- Waterproof(IP67) and UL Dry/Damp/Wet Location
- Input Surge Protection:2kV line-line
- High Reliability & Long Lifetime & 3 Years Warranty

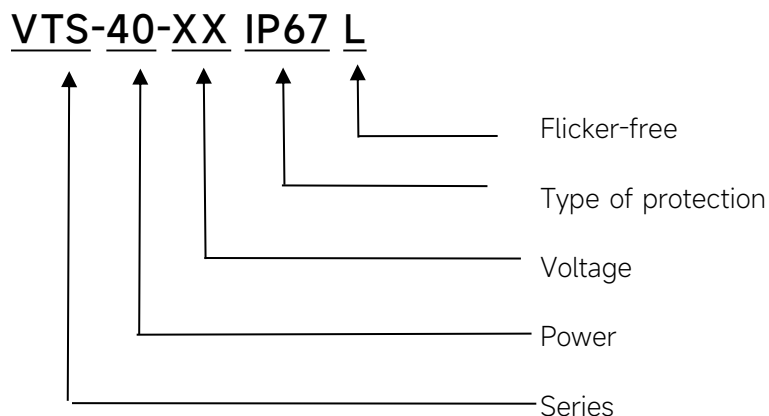
### Applications

- LED strips

### ◆ Description

The VTS-40-XX IP67 L series is a 40W, constant-Voltage IP67 LED driver that operates from 198-264Vac input with excellent power factor and THD feature. This series of products is specially designed for direct power supply applications such as LED strips. The high efficiency of these drivers and compact plastic case enable them to run cooler, significantly improving reliability and extending product life. To ensure trouble-free operation, protection is provided against input surge, output over voltage, short circuit, and over temperature.

### ◆ Model code



## ◆ Specification

|             |  |                                |         |
|-------------|--|--------------------------------|---------|
| Output      | Constant Voltage   | 12VDC                          | 24VDC   |
|             | Current Range  | 0-3.34A                        | 0-1.67A |
|             | Voltage Accuracy   | ±5%                            |         |
|             | Output HF current ripple(≥1KHz)  | ±5%                            |         |
|             | Output LF current ripple(≤120Hz)   | ±5%                            |         |
|             | SVM  | ≤0.4                           |         |
|             | P <sub>st</sub>  | ≤1                             |         |
|             | Efficiency(Typ.)   | 86%                            | 88%     |
| Input       | Rated input voltage  | 220-240VAC                     |         |
|             | Range of input voltage   | 198-264VAC                     |         |
|             | Frequency(Hz)  | 47-63 Hz                       |         |
|             | Displacement factor  | ≥0.9                           |         |
|             | Power Factor   | 0.95@Full load,230V            |         |
|             | Input Current max  | 0.25A                          |         |
|             | Start-up time  | < 0.5S                         |         |
|             | No Load Power  | ≤0.5W                          |         |
|             | THD (Typ.)   | <10%@Full load,230V            |         |
| Protection  | Over Load Protection   | 110-150%<br>YES/Auto Resume    |         |
|             | Short circuit Protection   | YES/Auto Resume                |         |
|             | Over Temperature Protection  | YES/Auto Resume                |         |
|             |  |                                |         |
| Environment | Operating Temperature  | -20°C~+70°C                    |         |
|             | Humidity   | 20%-90%RH                      |         |
|             | Tc   | 90°C                           |         |
|             | Storage Temperature  | -20°C~+85°C                    |         |
|             | Life time  | > 50000h@Tc=85°C               |         |
| Surface     | Dimension  | 148X 42 X 30(LXWXH)mm          |         |
| standards   | EN 61347-1;EN 61347-2-13;EN 62384;EN 61547;EN55015,EN61000-3-2,EN 61000-3-3  |                                |         |
| Others      | ErP  | EU 2019/2020                   |         |
|             | RoHS   | RoHS (2011/65/EU) (EU)2015/863 |         |
| Note        | 1.All parameters NOT specially mentioned are measured at 230Vac input 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 μF parallel capacitor.<br>3.This LED driver meets the EMI specifications above, but EMI performance of a lighting fixture also depends on the other devices on the fixture.<br>4.When the withstand voltage test is performed, the gas discharge tube grounding/disconnecting device (nut and metal lock piece) located on the driver input should be temporarily removed to prevent the gas discharge tube inside the driver from functioning(refer to IEC60598-1-10.2).After the test is completed, the nut and metal lock piece must be reinstalled to restore the power line to the ground surge protection function and ensure reliable contact between the metal lock piece and the end cover. |                                |         |

## ◆ Model list

| Model            | Input Voltage Range | Output Voltage | Output Current Range | Max output Power | Power Factor | Typical Efficiency |
|------------------|---------------------|----------------|----------------------|------------------|--------------|--------------------|
| VTS-40-12 IP67 L | 198~264Vac          | 12V            | 0~3.34A              | 40W              | 0.95         | 86%                |
| VTS-40-24 IP67 L | 198~264Vac          | 24V            | 0~1.67A              | 40W              | 0.95         | 88%                |

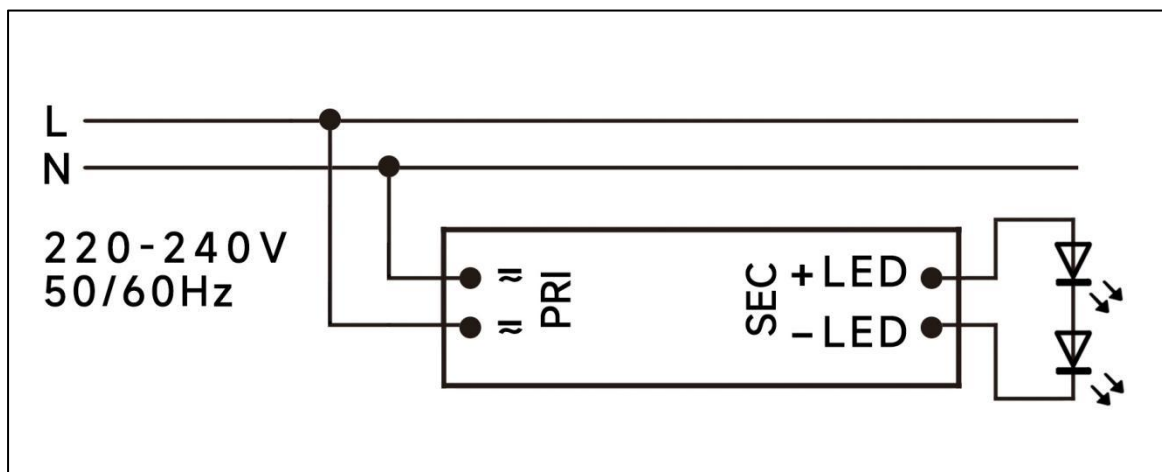
Note:

Test condition: 230Vac/50Hz, at full Load;

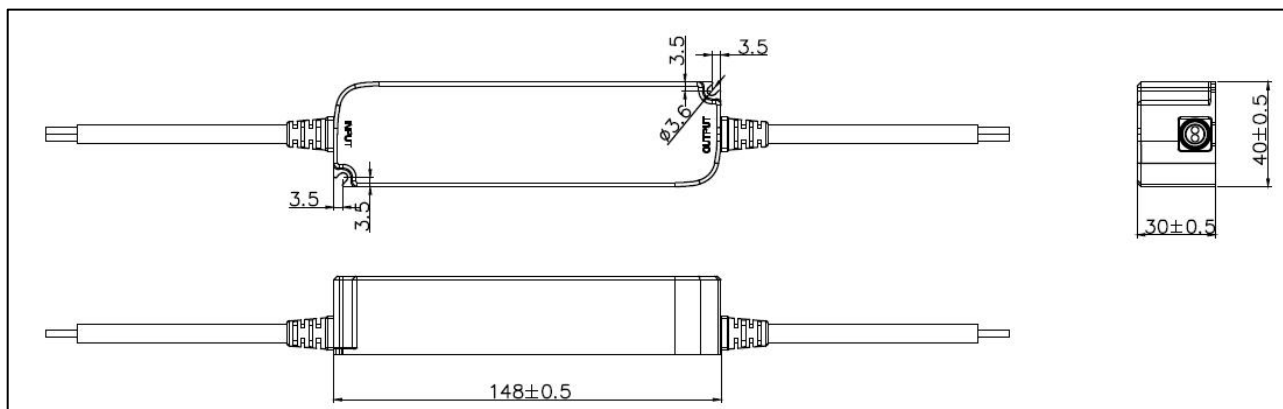
## ◆ Circuit Breaker

| I <sub>peak</sub> | T <sub>width</sub> | B10   | B16   | B20   | C10   | C16   | C20   |
|-------------------|--------------------|-------|-------|-------|-------|-------|-------|
| 26.9A             | 205.2μs            | 14pcs | 23pcs | 29pcs | 24pcs | 39pcs | 49pcs |

## ◆ Wiring diagram



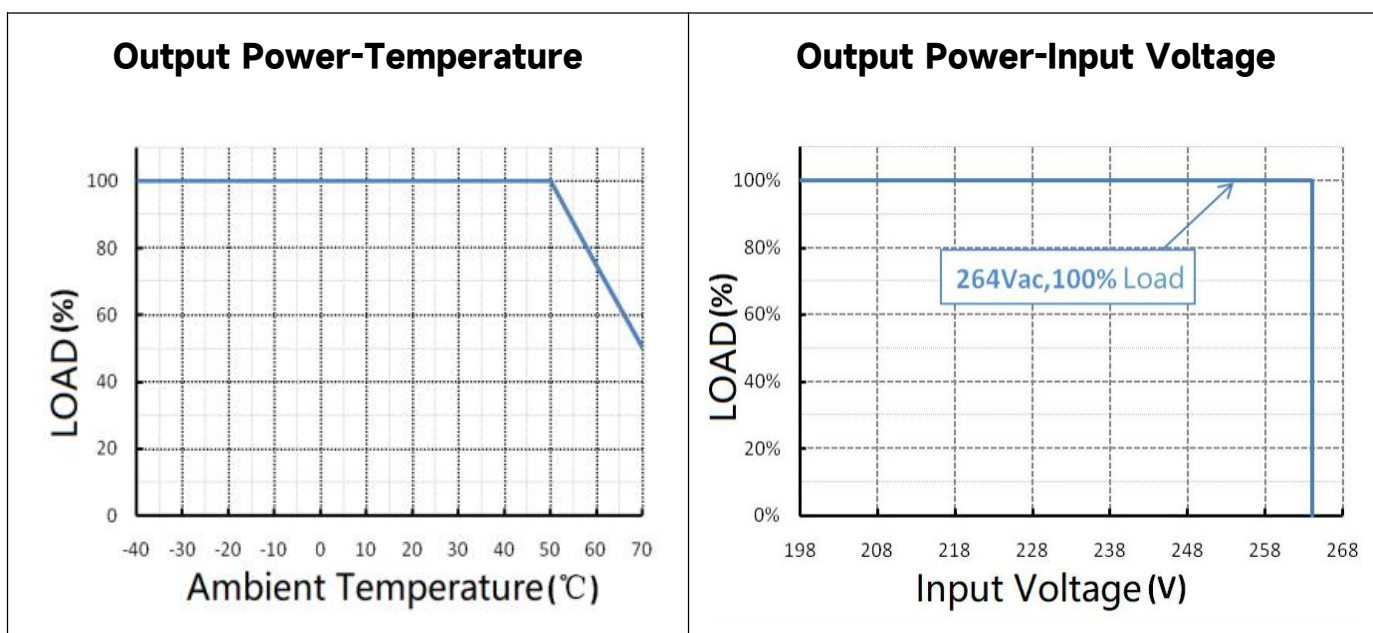
## ◆ 2D diagram



| TYPE        | Total Length | Outside Color | Inside Wires Color | Wire Model/Diameter          |
|-------------|--------------|---------------|--------------------|------------------------------|
| Input wire  | 0.36M        | Black         | Brown/Blue         | H05RN-F/2x1.0mm <sup>2</sup> |
| Output wire | 0.36M        | Black         | Red/Black          | H05RN-F/2x1.0mm <sup>2</sup> |

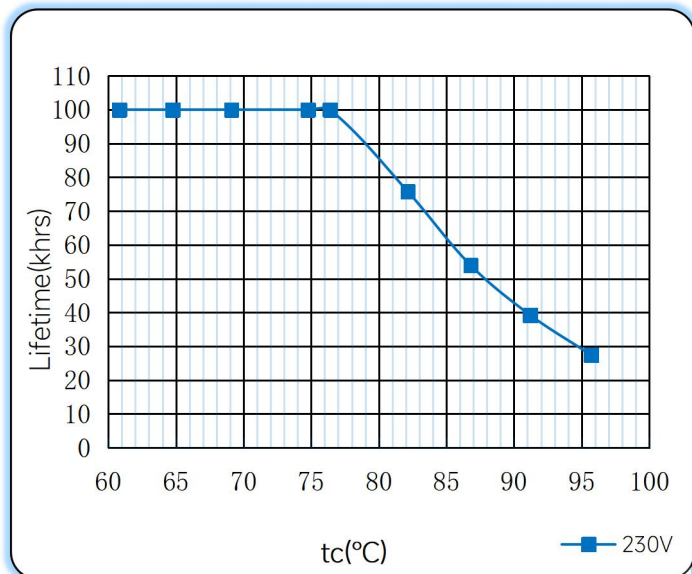
Note: Wire length of input and output can be changed as customer's requirement

## ◆ Derating

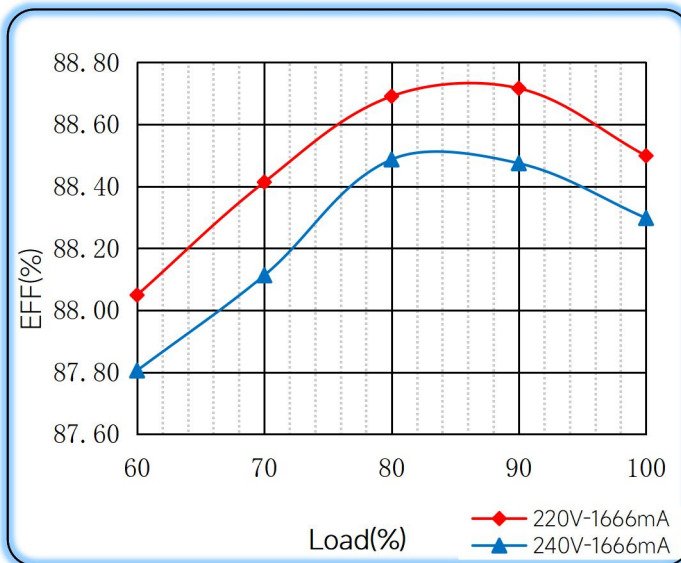


# ◆ Curve for VTS-40-24 IP67 L

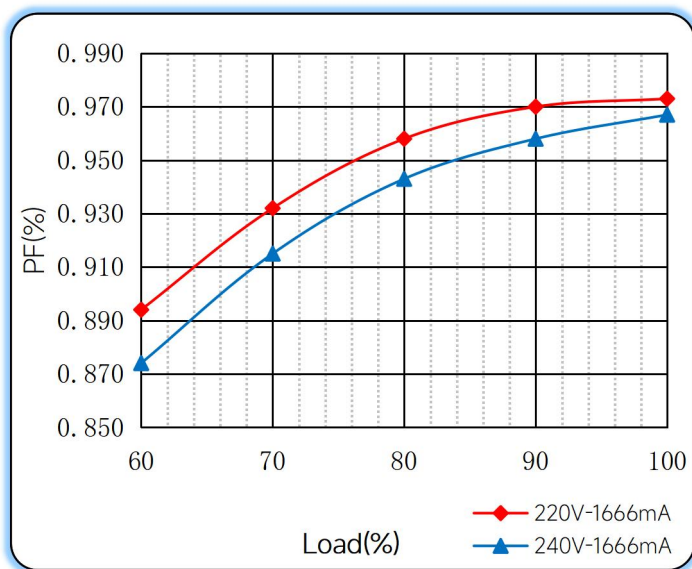
Lifetime vs. Temperature Curve



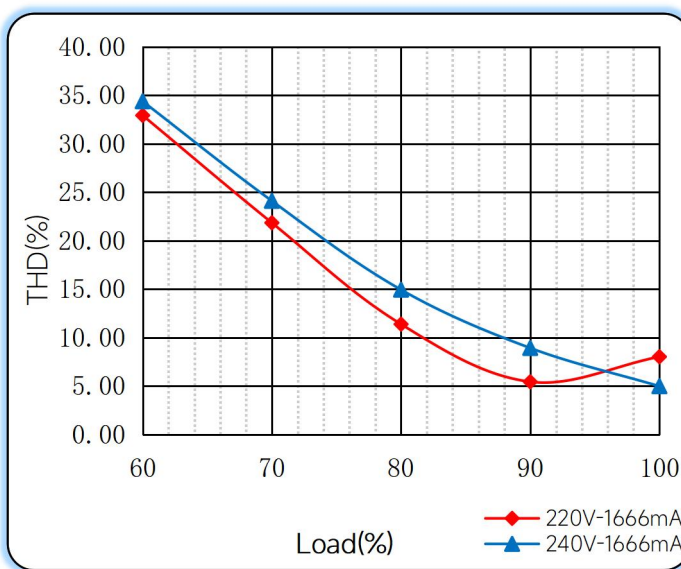
Efficiency vs. Load



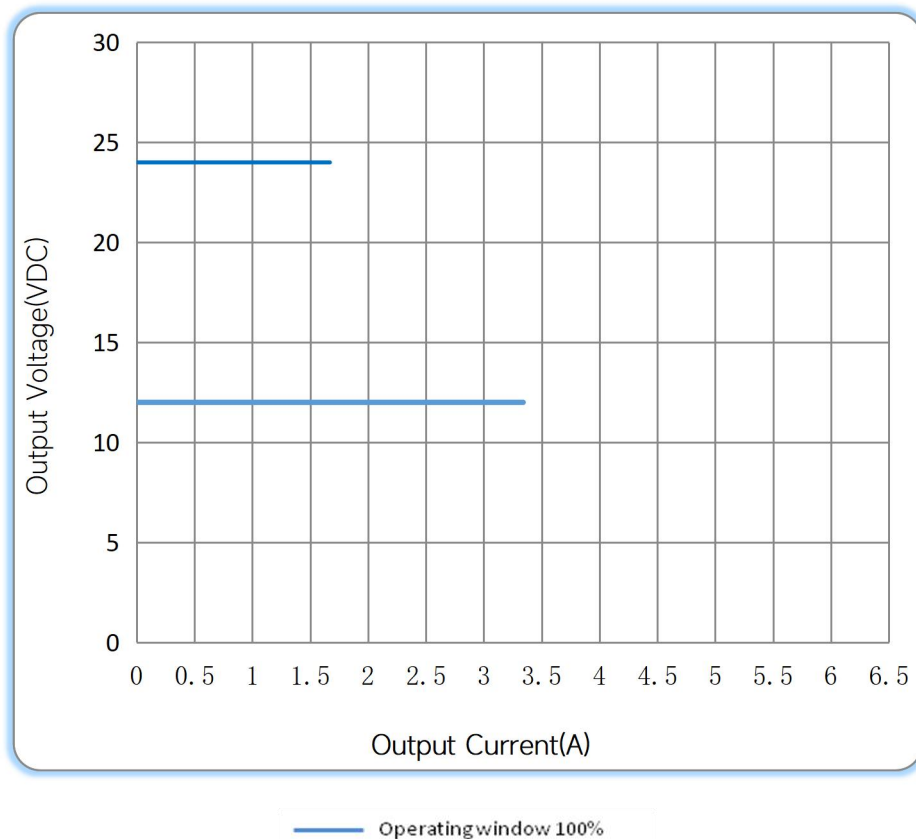
Power Factor Characteristics



THD vs. Load



## ◆ Operating window



## ◆ Revision Updates

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

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Manual