

## LED Intelligent Driver (constant current)

- Dimming interface: DMX512/RDM
- **T-PWM** digital dimming, present a perfect visual experience.
- With soft-on and fade in function, visual more comfortable.
- With RDM remote device management protocol.
- DIP switch for multiple optional currents' quick selection.
- Dimming range: 0~100%, LED start at 0.01% possible.
- 0-100% flicker-free, High frequency exemption level.
- Innovative thermal management technology, intelligent power life protection.
- Over-heat / Over load / Short circuit protection, recover automatically.
- Suitable for internal lights application for I / II / III
- Up to 50000-hour life time.
- 5 years warranty (Rubycon capacitor)..

### T-PWM

Super depth dimming technology

### Flicker-free

IEEE 1789

Dimmable:

1:10000



CE CB UKA SELV RoHS

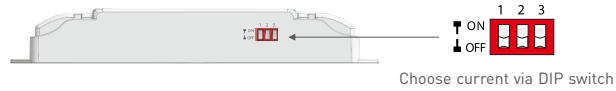


## Specification

| Model        |                           | SE-10-350-700-W1M                                                                                       | SE-12-100-400-W1M          | SE-12-350-700-W1M |
|--------------|---------------------------|---------------------------------------------------------------------------------------------------------|----------------------------|-------------------|
| OUTPUT       | Output Voltage            | 2-12Vdc                                                                                                 | 10-42Vdc                   | 10-24Vdc          |
|              | Max Output Voltage        | 20Vdc                                                                                                   | 50Vdc                      | 35Vdc             |
|              | Output Current            | 350-700mA                                                                                               | 100-400mA                  | 350-700mA         |
|              | Output Power Range        | 0.7W-8.4W                                                                                               | 1W-12W                     | 3.5W-12W          |
|              | Strobe Level              | No video flicker / High frequency exemption assessment level.                                           |                            |                   |
|              | Dimming Range             | 0~100%, 0.01% dimming depth.                                                                            |                            |                   |
|              | LF current ripple(<120Hz) | <1%                                                                                                     |                            |                   |
|              | Current Accuracy          | ±5%                                                                                                     |                            |                   |
|              | Ripple & Noise            | ≤2V                                                                                                     |                            |                   |
|              | PWM Dimming Frequency     | ≤3600Hz                                                                                                 |                            |                   |
| INPUT        | Dimming Interface         | DMX512/RDM                                                                                              |                            |                   |
|              | Input Voltage             | 100-240Vac    Max. 265Vac                                                                               |                            |                   |
|              | Frequency                 | 50/60Hz                                                                                                 |                            |                   |
|              | Input Current             | 0.15A@115Vac, 0.1A@230Vac                                                                               | 0.25A@115Vac, 0.15A@230Vac |                   |
|              | Power Factor              | PF>0.95/115Vac , PF>0.80/230Vac, at full load                                                           |                            |                   |
|              | Efficiency                | 75%                                                                                                     | 82%                        | 81%               |
|              | Inrush Current(typ.)      | Cold start 5A at 230Vac                                                                                 |                            |                   |
|              | Anti Surge                | L-N: 1kV                                                                                                |                            |                   |
|              | Leakage Current           | <0.35mA/230Vac                                                                                          | <0.5mA/230Vac              |                   |
| ENVIRONMENT  | Working Temperature       | ta: -30°C ~ 50°C   tc: 75°C                                                                             |                            |                   |
|              | Working Humidity          | 20 ~ 95%RH, non-condensing                                                                              |                            |                   |
|              | Storage Temp., Humidity   | -40°C ~ 80°C, 10~95%RH                                                                                  |                            |                   |
|              | Temp. Coefficient         | ±0.03%/°C (0-50°C)                                                                                      |                            |                   |
|              | Vibration                 | 10-500Hz, 2G 12min./1cycle, period for 72min. each along X, Y, Z axes.                                  |                            |                   |
| PROTECTION   | Over-heat Protection      | Intelligently adjusting or turning off the output current if the PCB temperature ≥110°C, auto recovers. |                            |                   |
|              | Over Load Protection      | Shut down the output when current load    102%, auto recovers.                                          |                            |                   |
|              | Short Circuit Protection  | Shut down automatically if short circuit occurs, auto recovers.                                         |                            |                   |
| SAFETY & EMC | Withstand Voltage         | I/P-O/P: 3750Vac                                                                                        |                            |                   |
|              | Isolation Resistance      | I/P-O/P: 100MΩ/500VDC/25°C/70%RH                                                                        |                            |                   |
|              | Safety Standards          | IEC/EN61347-1 , IEC/EN61347-2-13                                                                        |                            |                   |
|              | EMC Emission              | EN55015 , EN61000-3-2 Class C , IEC61000-3-3                                                            |                            |                   |
|              | EMC Immunity              | EN61000-4-2,3,4,5,6,8,11   EN61547                                                                      |                            |                   |
|              | Strobe Test Standard      | IEEE 1789                                                                                               |                            |                   |
| OTHERS       | Dimension                 | 135×30×20mm[L×W×H]                                                                                      |                            |                   |
|              | Packing                   | 140×34×23mm[L×W×H]                                                                                      |                            |                   |
|              | Weight[G.W.]              | 80g±10g                                                                                                 |                            |                   |

## LED current selection

DIP switch for multi optional currents' quick selection  
(see the table below).



|                   |                |          |          |          |       |          |          |          |          |           |
|-------------------|----------------|----------|----------|----------|-------|----------|----------|----------|----------|-----------|
| SE-10-350-700-W1M | DIP Switch     |          |          |          |       |          |          |          |          | ON<br>OFF |
|                   | Output Current | 350mA    | 400mA    | 450mA    | 500mA | 550mA    | 600mA    | 650mA    | 700mA    |           |
|                   | Output Voltage | 2-12V    | 2-12V    | 2-12V    | 2-12V | 2-12V    | 2-12V    | 2-12V    | 2-12V    |           |
|                   | Output Power   | 0.7-4.2W | 0.8-4.8W | 0.9-5.4W | 1-6W  | 1.1-6.6W | 1.2-7.2W | 1.3-7.8W | 1.4-8.4W |           |

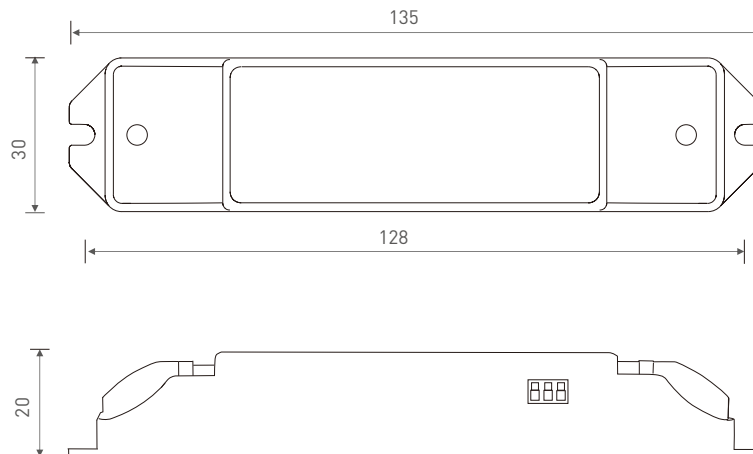
|                   |                |        |          |        |           |        |         |        |  |           |
|-------------------|----------------|--------|----------|--------|-----------|--------|---------|--------|--|-----------|
| SE-12-100-400-W1M | DIP Switch     |        |          |        |           |        |         |        |  | ON<br>OFF |
|                   | Output Current | 100mA  | 150mA    | 200mA  | 250mA     | 300mA  | 350mA   | 400mA  |  |           |
|                   | Output Voltage | 10-42V | 10-42V   | 10-42V | 10-42V    | 10-40V | 10-34V  | 10-30V |  |           |
|                   | Output Power   | 1-4.2W | 1.5-6.3W | 2-8.4W | 2.5-10.5W | 3-12W  | 3.5-12W | 4-12W  |  |           |

|                   |                |          |        |           |        |           |        |          |        |           |
|-------------------|----------------|----------|--------|-----------|--------|-----------|--------|----------|--------|-----------|
| SE-12-350-700-W1M | DIP Switch     |          |        |           |        |           |        |          |        | ON<br>OFF |
|                   | Output Current | 350mA    | 400mA  | 450mA     | 500mA  | 550mA     | 600mA  | 650mA    | 700mA  |           |
|                   | Output Voltage | 10-24V   | 10-24V | 10-24V    | 10-24V | 10-22V    | 10-20V | 10-18.5V | 10-17V |           |
|                   | Output Power   | 3.5-8.4W | 4-9.6W | 4.5-10.8W | 5-12W  | 5.5-12.1W | 6-12W  | 6.5-12W  | 7-12W  |           |

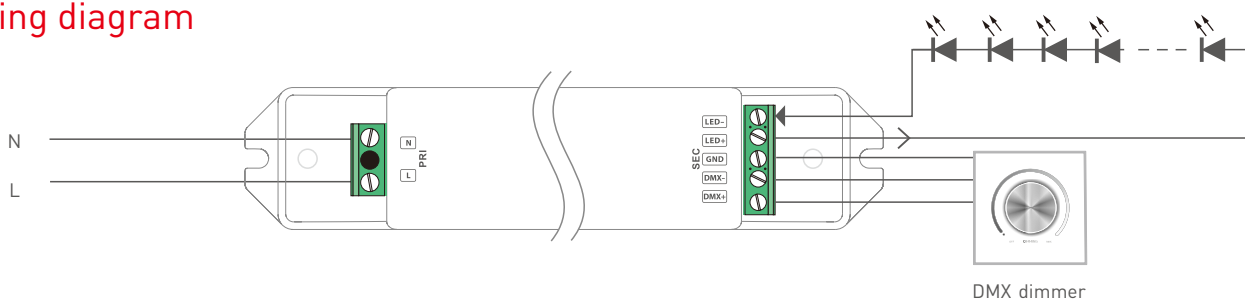
- \* Please choose the current value when the driver is power off.
- \* E.g. LED 3V/pcs: 10-24V can power 3-8pcs LEDs in series, 10-42V can power 3-14pcs LEDs, the max quantity of LEDs in series will be subject to the actual voltage of LED.
- \* Setting DMX address via RDM function

## Dimensions

Unit mm



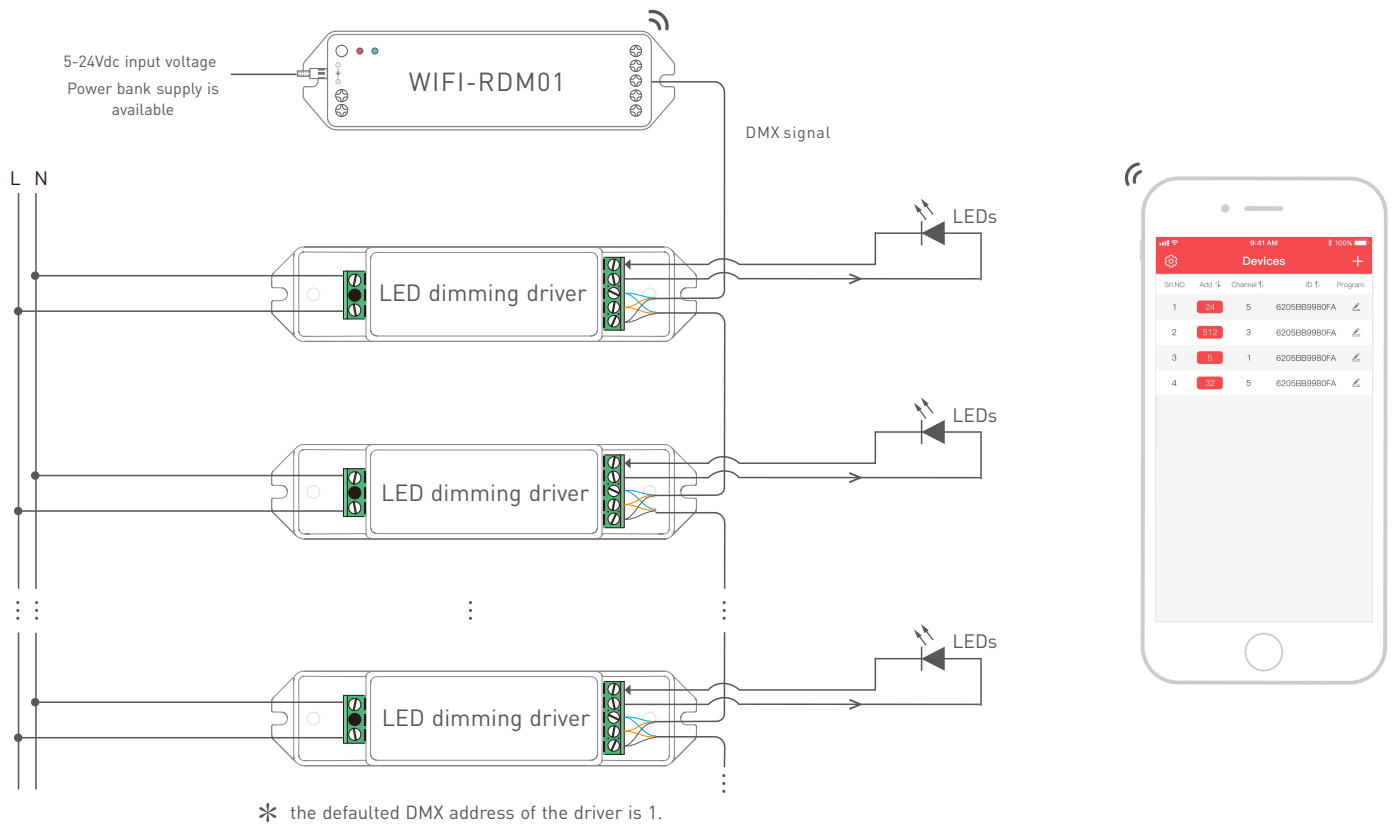
## Wiring diagram



### DMX Address Setting

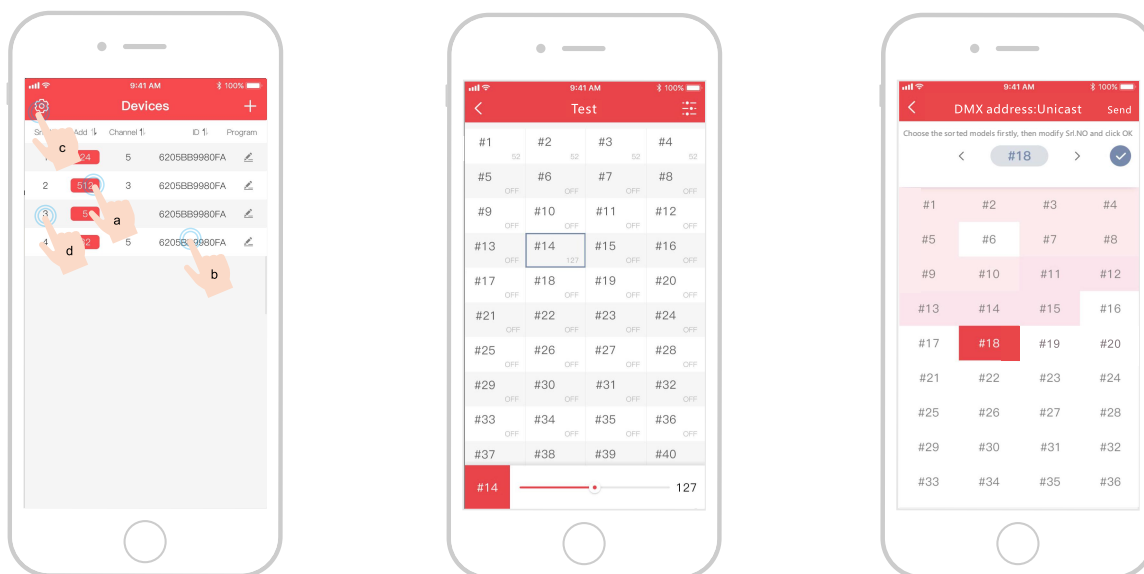
The DMX driver can work with the address editor that complies with standard RDM protocol.

It is recommended to use LTECH's RDM editor (model WiFi-RDM01), which can achieve more functions such as remote browsing and parameter setting. Wiring diagram as below:



### LTECH RDM editor App interface instruction

Download the App, setting the parameters after well connecting the RDM editor, please check the manual of WiFi-RDM01 for more details.

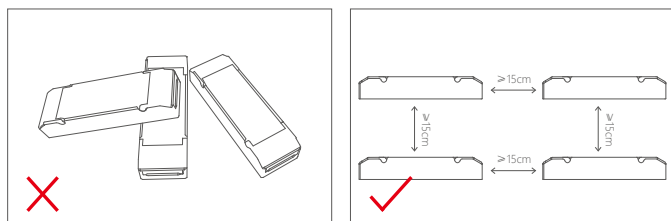


- a: Click "Add", edited the address in corresponding box.
- b: Click "ID", get more product details.
- c: Click "Settings", enter setting interface.
- d: Click "No.", issue the recognizing command.

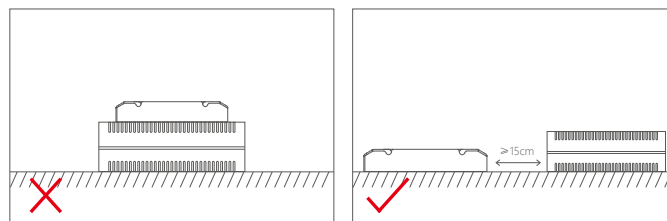
Test

DMX address setting

## Installation Precautions



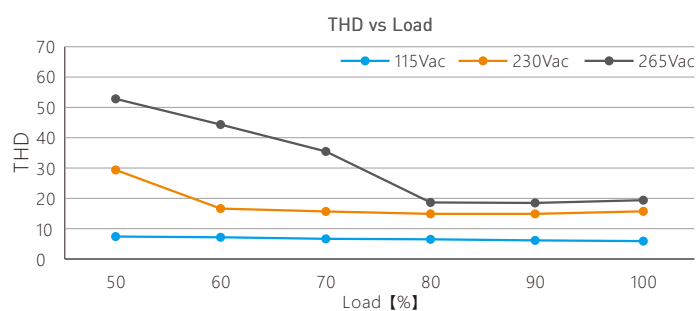
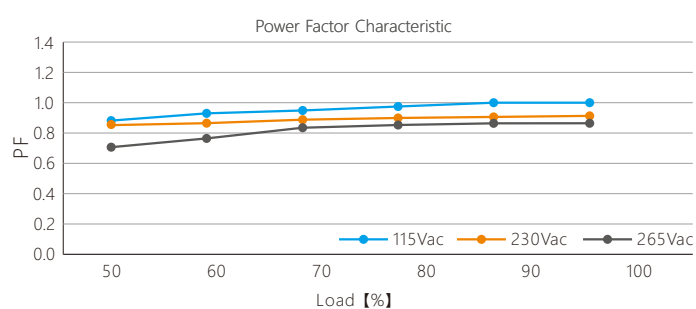
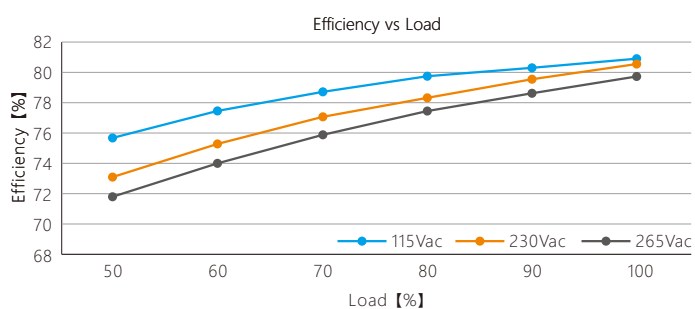
Please do not stack the products. The distance between two products should be  $\geq 15\text{cm}$  so as not to affect heat dissipation and the lifespan of the products.



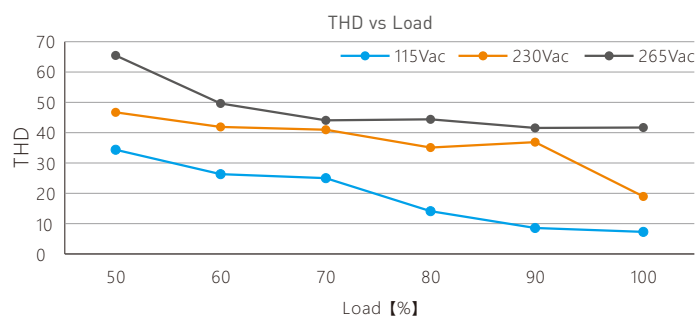
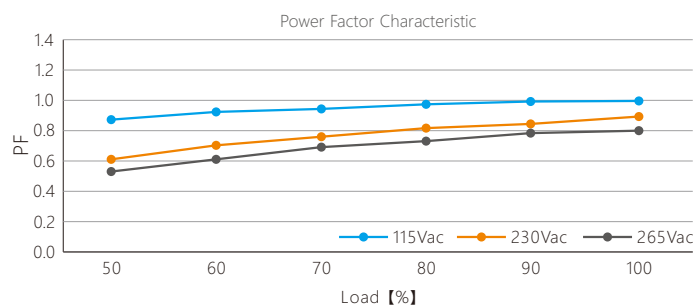
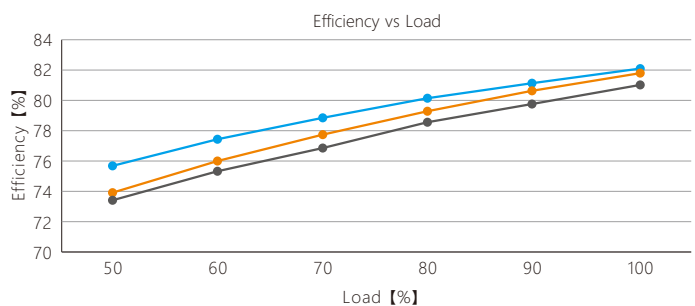
Please not place the products on LED drivers. The distance between the product and the driver should be  $\geq 15\text{cm}$  so as not to affect heat dissipation and shorten the lifespan of the products.

## Relationship Diagrams

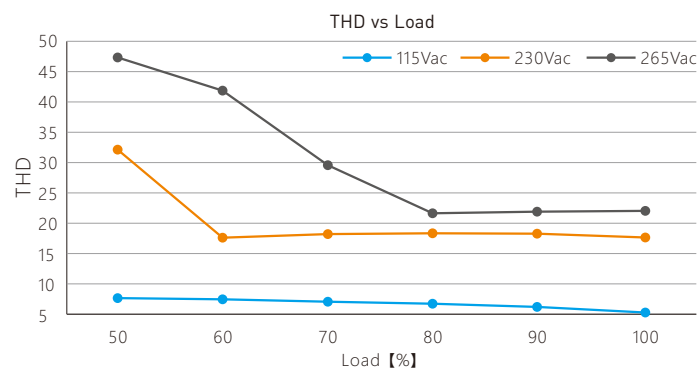
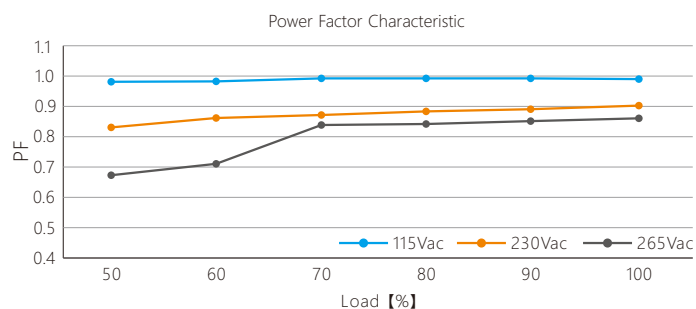
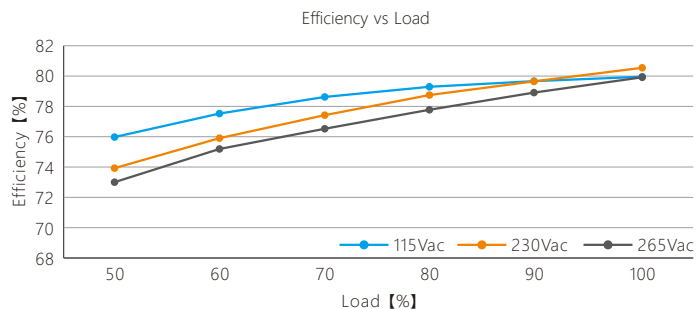
SE-10-350-700-W1M



SE-12-100-400-W1M



## SE-12-350-700-W1M

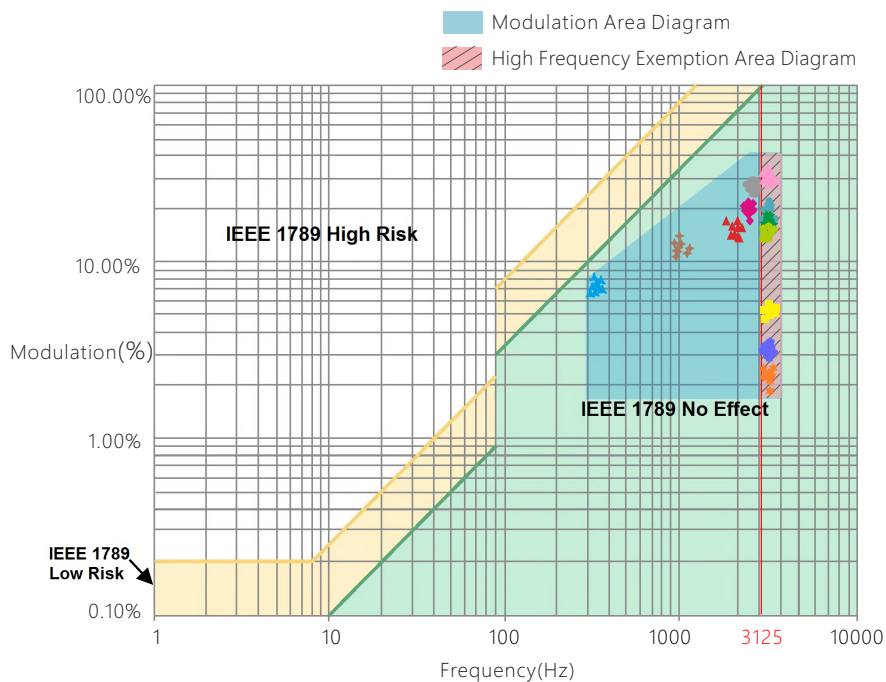


## Flicker Test Form

IEEE 1789

| Limit of Modulation in low risk area  |                                                 |
|---------------------------------------|-------------------------------------------------|
| Waveform frequency of Optical output  | limit (%)                                       |
| $f' \leq 8\text{Hz}$                  | 0.2                                             |
| $8\text{Hz} < f' \leq 90\text{Hz}$    | $0.025 \times f'$                               |
| $90\text{Hz} < f' \leq 1250\text{Hz}$ | $0.08 \times f'$                                |
| $f' > 1250\text{Hz}$                  | Exemption assessment                            |
| Limit of Modulation in no effect area |                                                 |
| Waveform frequency of Optical output  | limit (%)                                       |
| $f' \leq 10\text{Hz}$                 | 0.1                                             |
| $10\text{Hz} < f' \leq 90\text{Hz}$   | $0.01 \times f'$                                |
| $90\text{Hz} < f' \leq 3125\text{Hz}$ | $(0.08 / 2.5) \times f'$                        |
| $f' > 3125\text{Hz}$                  | Exemption assessment [High frequency exemption] |

- Brightness
- ▲ 0.1%
  - ◆ 1%
  - ▲ 5%
  - ◆ 10%
  - 20%
  - ▲ 30%
  - 40%
  - ★ 50%
  - 60%
  - 70%
  - 80%
  - ★ 90%
  - ◆ 100%



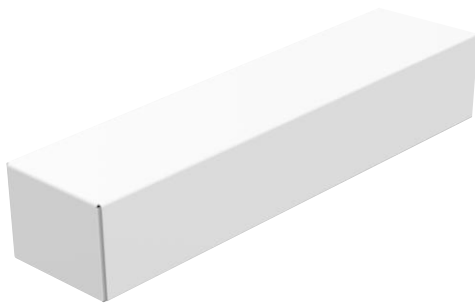
Marks in the right chart were tested results of different current ranges.

The output frequency is 0Hz in 100% brightness and its corresponding modulation is 0%, which could not be shown in the right chart.

## Packaging specification

|                   |                                                         |
|-------------------|---------------------------------------------------------|
| Model             | SE-10-350-700-W1M, SE-12-100-400-W1M, SE-12-350-700-W1M |
| Package Dimension | 140×34×23mm(L×W×H)                                      |
| Carton Dimension  | 350×285×180mm(L×W×H)                                    |
| Quantity          | 30PCS per layer, 5 layers per box, 150PCS per box       |
| Weight            | 0.088kg/pc, 13.5kg±5%/box                               |

## Packaging style drawing



Inner packaging box



Full box packaging

## Attentions

- Products shall be installed by qualified professionals.
- LTECH products are non-waterproof (special models excepted). Please avoid the sun and rain. When installed outdoors, please ensure it is mounted in a water proof enclosure.
- Good heat dissipation will extend the working life of products. Please ensure good ventilation.
- Please check if the working voltage used complies with the parameter requirements of products.
- The diameter of wire used must be able to load the light fixtures you connect and ensure the firm wiring.
- Before you power on products, please make sure all the wiring is correct in case of incorrect connection that causes damage to light fixtures.
- If a fault occurs, please do not attempt to fix products by yourself. If you have any question, please contact your suppliers.

\* This manual is subject to changes without further notice. Product functions depend on the goods. Please feel free to contact our official distributors if you have any question.

## Warranty Agreement

- Warranty periods from the date of delivery : 5 years.
- Free repair or replacement services for quality problems are provided within warranty periods.

### Warranty exclusions below:

- Beyond warranty periods.
  - Any artificial damage caused by high voltage, overload, or improper operations.
  - Products with severe physical damage.
  - Damage caused by natural disasters and force majeure.
  - Warranty labels and barcodes have been damaged.
  - No any contract signed by LTECH.
1. Repair or replacement provided is the only remedy for customers. LTECH is not liable for any incidental or consequential damage unless it is within the law.
  2. LTECH has the right to amend or adjust the terms of this warranty, and release in written form shall prevail.