LTSYS

SE-10-100-500-W1D
SE-10-500-1000-W1D

**DALI-2 DT6 PUSH DIM**

## Intelligent LED Driver(Constant Current)

- Housing made from SAMSUNG/Covestro's V-0 flame-retardant PC materials.
- Ultra small, thin and lightweight, screwless end cap.
- Supports DALI-2, Push DIM, and corridor light DIM modes.
- Parameters such as output current and DALI address can be changed via the mobile phone APP through NFC. Advanced templates such as groups and scenes can also be set up to achieve the data interaction function of the driver.
- Current step value as low as 1mA by NFC setting, with higher compatibility and more precision
- It supports the CLO light decay compensation function to ensure constant illumination brightness.
- It supports online OTA (Over-The-Air) upgrade of the device firmware.
- T-PWM ultra-deep dimming technology, dimming depth can reach 0.01%.
- Soft-on and fade-in dimming function enhances your visual comfort.
- 0-100% full dimming without visible flicker, high frequency exemption assessment level.
- EU ERP no-load power consumption, network standby power consumption < 0.5W.
- No-load 0V output to prevent damage to LED lamps due to poor contact.
- Overheat, over voltage, overload, short circuit protection and automatic recovery.
- Suitable for ClassI/II/III indoor light fixtures.
- Normal service life can reach 100,000 hours.
- 5-year warranty (Rubycon capacitor).

DALI 2

DIM

**T-PWM**
Dimming Technology

**Flicker Free**
IEEE1789

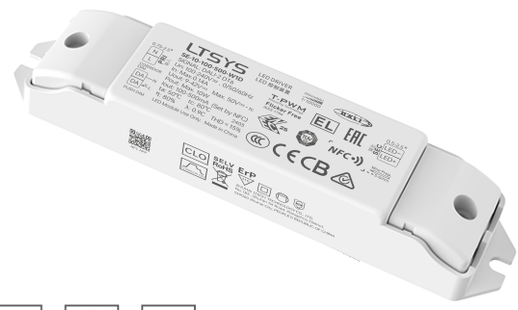
Dimmable: 1:10000

NFC CLO corridor DIM EL

SELV RoHS ErP

The certification icon represents undergoing certification applications only, and final certification qualification subject to actual product.

DALI | T-PWM Dimming Technology | Flicker Free IEEE 1789 | NFC Multi current setting | Over voltage protection | Short circuit protection | Over Load protection | Overheat Protection

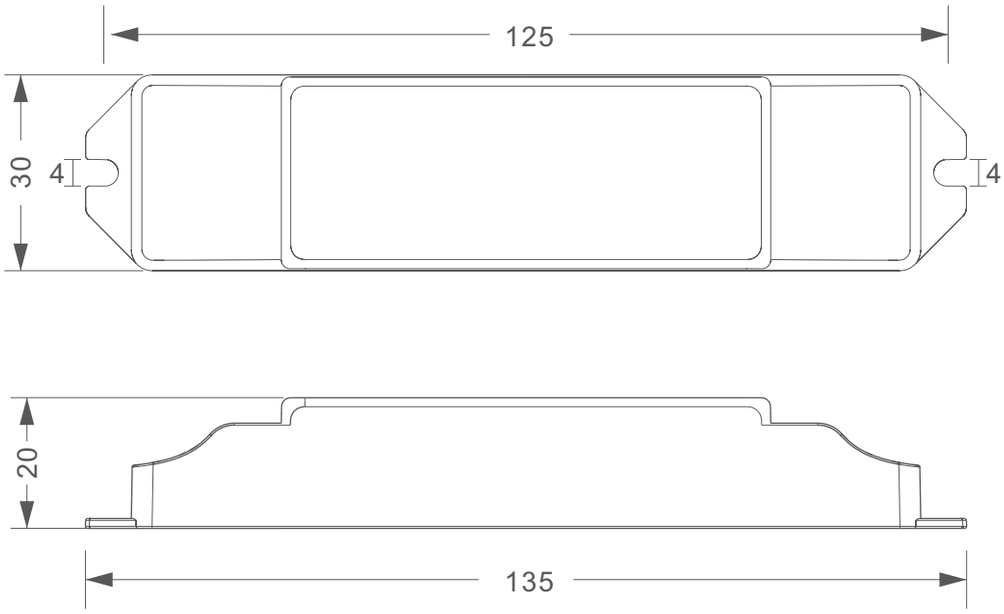


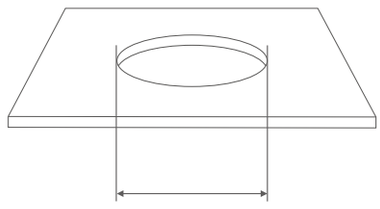

## Technical Specs

| Model | | SE-10-100-500-W1D | | SE-10-500-1000-W1D |
|---|---|---|---|---|
| Features | Output Type | Constant current | | |
| | Dimming Interface | DALI-2 DT6, PUSH DIM | | |
| | Output Feature | Isolation | | |
| | Protection Grade | IP20 | | |
| | Insulation Grade | Class II (Suitable for class I/ II /III light fixtures) | | |
| OUTPUT | Output Voltage | 9-42Vdc | | 2-12Vdc |
| | Maximum output voltage | ≤50Vdc | | ≤20Vdc |
| | Output Current Range | 100-500mA | | 500-1000mA |
| | Output Power Range | 0.9W-10W | | 1W-10W |
| | Dimming Range | 0~100%, down to 0.01% | | |
| | LF Current Ripple | < 5% ((Maximum current for non dimming state) | | |
| | Current Accuracy | ±5% | | |
| | PWM Frequency | ≤3600Hz | | |
| INPUT | DC Voltage Range | 100-240Vdc | | |
| | AC Voltage Range | 100-240Vac | | |
| | Rated Voltage | 115Vac/230Vac | | |
| | Frequency | 0/50/60Hz | | |
| | Input Current | ≤0.14A/115Vac(at full load) , ≤0.07A/230Vac(at full load) | | |
| | Power Factor | PF≥0.95/115Vac(at full load), PF≥0.9/230Vac(at full load) | | |
| | THD | THD≤15%/230Vac(at full load) | | |
| | Efficiency (Typ.) | 80%(at full load) | | 78%(at full load) |
| | Inrush Current | Cold start 15A(Test twidth=102us tested under 50% Ipeak)/230Vac | | |
| | Anti Surge | L-N:2KV | | |
| | Leakage Current | Max.0.24mA | | |
| ENVIRONMENT | Working Temperature | ta: -20°C ~ 50°C tc: 80°C | | |
| | Working Humidity | 20 ~ 95%RH, non-condensing | | |
| | Storage Temperature/Humidity | -40 ~ 80°C/10~95%RH | | |
| | Temperature CoeŞcient | ±0.03%/°C(-20°C~45°C) | | |
| | Vibration | 10~500Hz, 2G 12min/1cycle, 72 min for X, Y and Z axes respectively | | |
| PROTECTION | Overload Protection | Automatically protect the device when the load exceeds 102% of the rated power. Automatically recover once load is reduced | | |
| | Overheat Protection | Intelligently adjust or turn or the current output if the PCB temperature ≥110°C. When the PCB temperature <90°C, automatically recover normal output | | |
| | Overvoltage Protection | Automatically protect the device when voltage exceeds the no-load voltage. It can be recovered automatically | | |
| | Short Circuit Protection | Enter hiccup mode if short circuit occurs, and recover automatically | | |
| SAFETY & EMC | Withstand Voltage | I/P-O/P:3750Vac | | |
| | Insulation Resistance | I/P-O/P: 100MΩ/500VDC/25°C/70%RH | | |
| | Safety Standards | CCC | China | GB19510.1，GB19510.14，GB19510.213 |
| | | TUV | Germany | EN61347-1，EN61347-2-13， EN62493 |
| | | CB | CB Member States | IEC61347-1， IEC61347-2-13 |
| | | CE | EuropeanUnion | EN61347-1，EN61347-2-13， EN62384 |
| | | KC | Korea | KC61347-1，KC61347-2-13 |
| | | EAC | Russia | IEC61347-1， IEC61347-2-13 |
| | | RCM | Australia | AS61347-1， AS61347-2-13 |
| | | ENEC | Europe | EN61347-1，EN61347-2-13， EN62384 |
| | | UKCA | Britain | BSEN61347-1，BSEN61347-2-13，BSEN62493 |
| | | BIS | India | IS15885(PART2/SEC13) |
| | EMC Emission | CCC | China | GB/T17743，GB17625.1 |
| | | CE | EuropeanUnion | EN55015，EN61000-3-2，EN61000-3-3，EN61547 |
| | | KC | Korea | KN15，KN61547 |
| | | EAC | Russia | IEC62493，IEC61547，EH55015 |
| | | RCM | Australia | EN55015，EN61000-3-2，EN61000-3-3，EN61547 |
| | | UKCA | Britain | BSENIEC55015，BSENIEC61000-3-2，BSEN61000-3-3，BSEN61547 |
| | EMC Immunity | EN61000-4-2,3,4,5,6,8,11,EN61547 | | |
| ErP | Power Consumption | Networked standby | | < 0.5W(After shutdown by command) |
| | | No-load power consumption | | < 0.5W(When the lamp is not connected) |
| | Flicker/Stroboscopic Effect | IEEE1789 | | Meet IEEE 1789 standard/High frequency exemption level |
| | | CIE SVM | | PstLM≤1.0，SVM≤0.4 |
| | DF | Phase factor | | DF≥0.9 |
| OTHERS | Weight(N.W.) | 80g±10g | | |
| | Dimensions | 135×30×20mm(L×W×H) | | |

## Product Size

Unit:mm

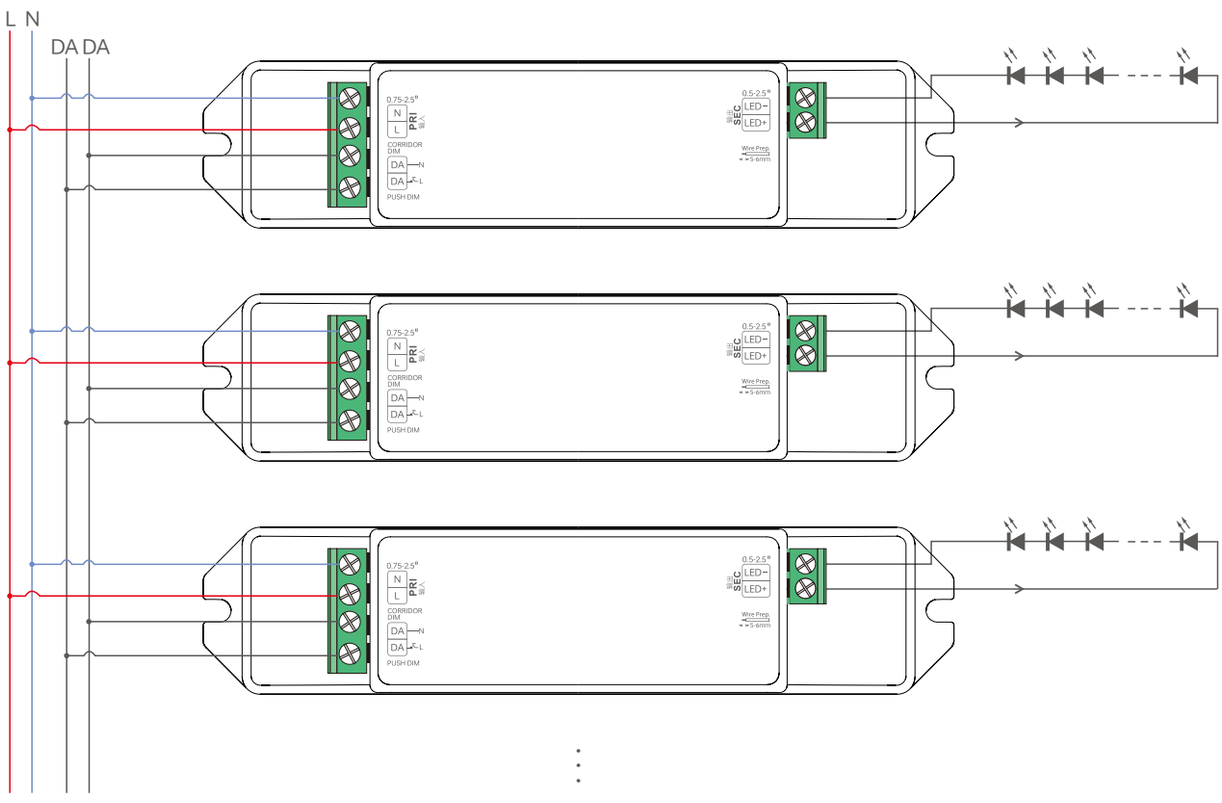


Minimum hole size: ϕ35mm(1.4")

## DALI Dimming Application

### Wiring diagram




Wire diameter:0.75-2.5²
Strip length:5mm-6mm

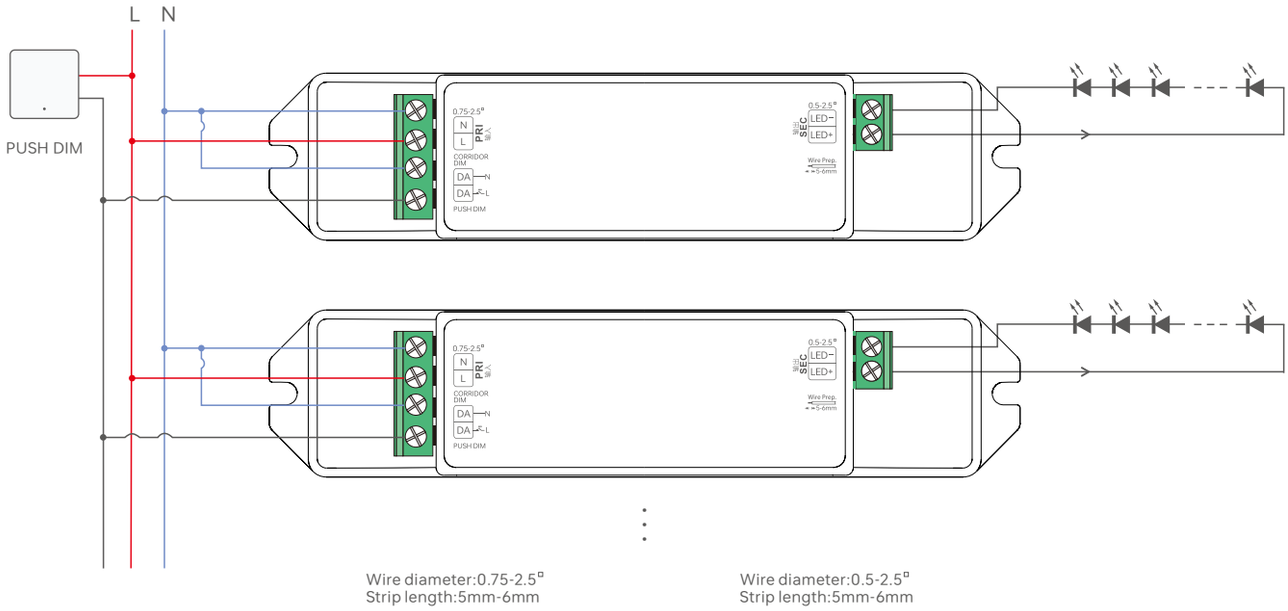
Wire diameter:0.5-2.5²
Strip length:5mm-6mm

### Switch to DALI Dimming Mode

After installation according to the wiring diagram of the DALI dimming application, the driver will automatically switch to the DALI dimming mode upon receiving any DALI command.

## PUSH DIM Dimming Application

### Wiring diagram




Wire diameter:0.75-2.5㎡
Strip length:5mm-6mm

Wire diameter:0.5-2.5㎡
Strip length:5mm-6mm

### Switch to the Push-DIM dimming mode

Switch to the Push-DIM Dimming Mode

Method 1: If it has been switched to the corridor dimming mode, connect the wires according to the Push-DIM wiring diagram. Within 3 seconds of resetting the switch, press it briefly 5 times; then press and hold it for 6 seconds; finally, press it briefly 5 times within 3 seconds. The driver will automatically switch to the Push-DIM dimming mode.

Method 2: If it is switched to the corridor mode, you can switch to the Push-DIM dimming mode via the NFC Lighting app.

Remarks: If the DALI master controller is not connected, the factory default mode is Push-DIM mode.

### Operation Instructions

PUSH DIM

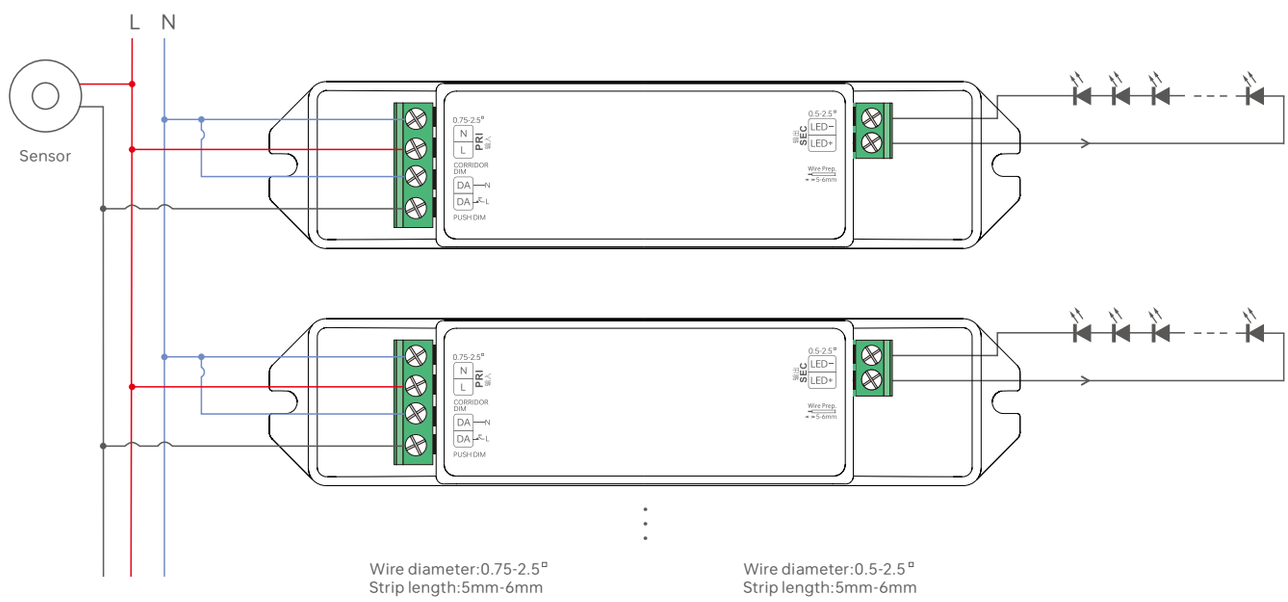
**Short press for on/off control.**

**Long press: Adjust the current brightness.**

**Push-DIM memory function: When the light is switched on/off again, it will return to the previously adjusted brightness level.**

## Corridor Dimming Application

### Wiring diagram




Wire diameter:0.75-2.5㎡
Strip length:5mm-6mm

Wire diameter:0.5-2.5㎡
Strip length:5mm-6mm

**Switch to the corridor light mode**

**Method 1:** Configure and switch the corridor light function via NFC, and the Push DIM function will be turned off .

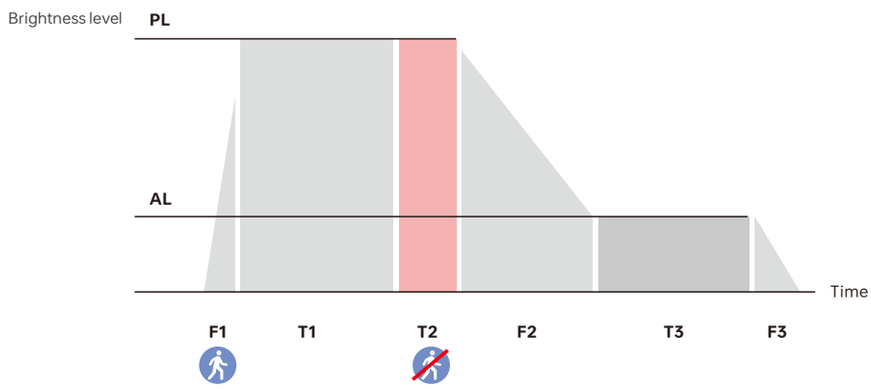
**Method 2:** After connecting the wires according to the corridor dimming wiring diagram, keep moving within the effective sensing area for more than 2 minutes, and it will automatically switch to the corridor dimming mode with all lights on at full brightness.

**Method 3:** After connecting the wires according to the corridor dimming wiring diagram, first replace the sensor with a common switch, then turn on the common switch and keep it conducting for 2 minutes. The driver will automatically switch to the corridor dimming mode. After that, remove the common switch and replace it with the sensor again.

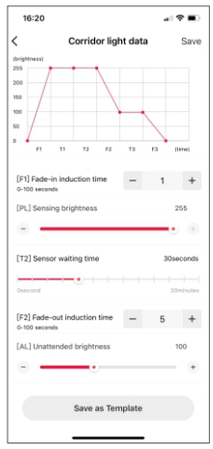
Remarks: During normal operation, it is recommended to set the hold-time of the motion sensor to the minimum.

It is necessary to select a motion sensor with an AC switch.

## Corridor Dimming: Working Process




| Name | Default | Setting Range |
|---|---|---|
| (F1) Gradual Entry Sensing Time | 1 s | 0-100 s |
| (PL) Sensing Brightness | 255 | 0-255 |
| (T1) Sensing Holding Time | Set through the sensor | |
| (T2) Delay Time | 30 s | 0 s,5 s,10 s,20 s,30 s,45 s,1 min,<br>2 s, 3 s,5 s,10 s,20 s,30 s |
| (F2) Gradual Exit Sensing Time | 1 s | 0-100 s |
| (AL) Standby Brightness | 100 | 0-255 |
| (T3) Sensing Standby Time | 30 s | 0 s,5 s,10 s,20 s,30 s,45 s,1 min,2 mins,3 mins,<br>5 mins,10 mins,20 mins,30 mins,Permanent |
| (F3) Gradual Exit to Oś Time | 1 s | 0-100 s |



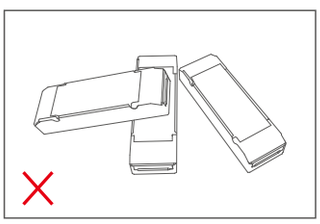

Remarks: *If the lamp needs to be on standby at a low brightness level, the [T3] Sensing Standby Time should be set to "Permanent".
*The above parameters are set through the NFC lighting APP.

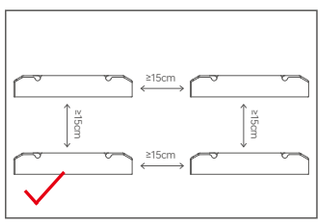
## Typical Current Corresponding Parameter Table

| Model | The typical 9 current data sets below are for reference when selecting LED fixture models.<br>More current levels can be set by NFC using mobile APP with 100-500mA adjustable in 1mA step | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SE-10-100-500-W1D | Output Current | 100mA | 150mA | 200mA | 250mA | 300mA | 350mA | 400mA | 450mA | 500mA |
| | Output Voltage | 9-42Vdc | 9-42Vdc | 9-42Vdc | 9-40Vdc | 9-33Vdc | 9-28.5Vdc | 9-25Vdc | 9-22Vdc | 9-20Vdc |
| | Output Power | 0.9-4.2W | 1.35-6.3W | 1.8-8.4W | 2.25-10W | 2.7-9.9W | 3.15-9.975W | 3.6-10W | 4.05-9.9W | 4.5-10W |

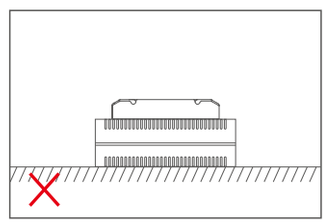
| Model | The typical 9 current data sets below are for reference when selecting LED fixture models.<br>More current levels can be set by NFC using mobile APP with 100-500mA adjustable in 1mA step | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SE-10-500-1000-W1D | Output Current | 500mA | 550mA | 600mA | 650mA | 700mA | 750mA | 800mA | 850mA | 900mA | 950mA | 1000mA |
| | Output Voltage | 2-12Vdc | 2-12Vdc | 2-12Vdc | 2-12Vdc | 2-12Vdc | 2-12Vdc | 2-12Vdc | 2-12Vdc | 2-11Vdc | 2-10.5Vdc | 2-10Vdc |
| | Output Power | 1-6W | 1.1-6.6W | 1.2-7.2W | 1.3-7.8W | 1.4-8.4W | 1.5-9W | 1.6-9.6W | 1.7-10.2W | 1.8-9.9W | 1.9-10W | 2-10W |

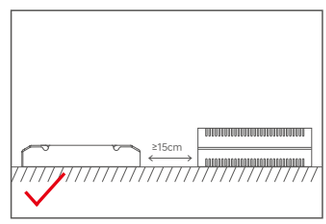
## Installation Precautions



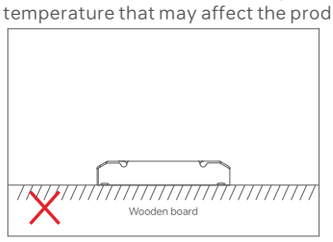


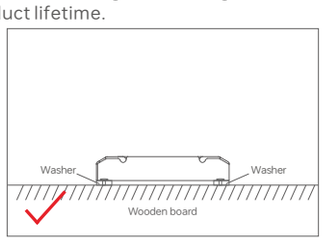

Please do not stack the products. The distance between two products should be ≥15cm so as not to affect heat dissipation and the lifespan of the products.
Note: The temperature within the installation area should be within the working temperature range of the products. Please do not install products inside LED fixtures to avoid temperature exceeding the working temperature that may affect the product lifetime.






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




Please do not fasten the product screws tightly against the wooden board. Instead, add a washer of ≥7mm under the fixing screws. Leaving a gap can effectively dissipate heat, preventing any impact on the product's heat dissipation and service life.

## Use the NFC Lighting APP

Scan the QR code below with your mobile phone and follow the prompts to complete the APP installation (According to performance requirements, you need to use a NFC-capable Android phone, or an iphone 8 and later that are compatible with iOS 13 or higher).

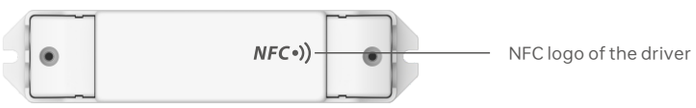
**＊ Before you begin setting the parameters of the driver, please make sure the driver is powered off .**

## Read/Write the LED driver

Use your NFC-capable phone to read LED driver data, then edit the parameters and they can be directly written to the driver.

**1.Read the LED driver**

On the APP home page, click【Read/Write LED driver】, then keep the programmer's sensing area close to the NFC logo of the driver to read the driver parameters.

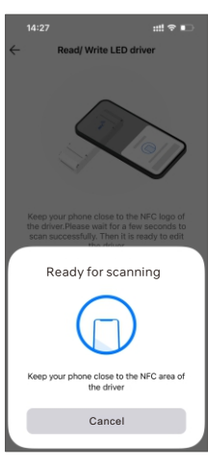


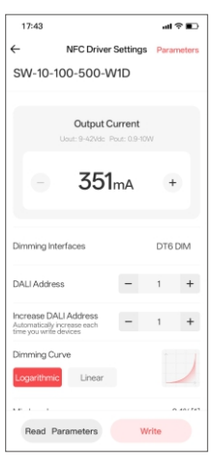

**2.Edit the parameters**

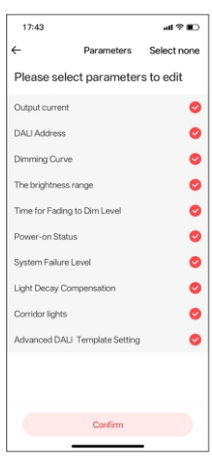
Click【Parameter settings】to edit the advanced parameters, like output current, choose a brand, dimming mode, low power mode, dimming curve, brightness range, etc.

**3.Write to the driver**

After completing the parameter settings, click 【Write】in the upper right corner, and keep the programmer's sensing area close to the NFC logo of the driver, so the parameters can be written to the driver.

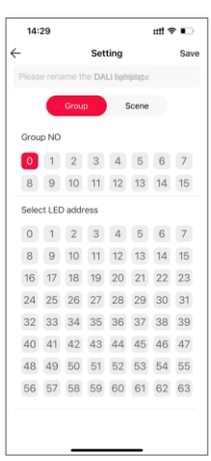


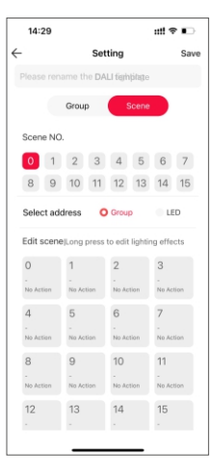




## Advanced DALI template

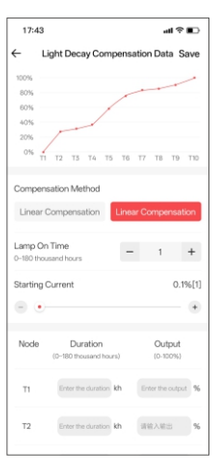
Integrate the functions of the DALI lighting system, edit the DALI group and lighting effects for scenes, then save them in the advanced template to achieve lighting programming.
Setup page (for Read/Write LED driver) : Go to App home page —【⚙】icon in the top right —【DALI template on pnone】



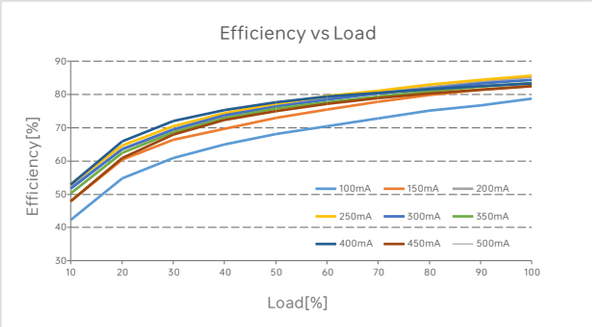



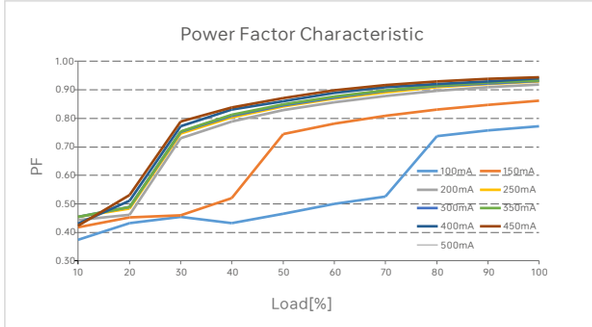

## Light Decay Compensation

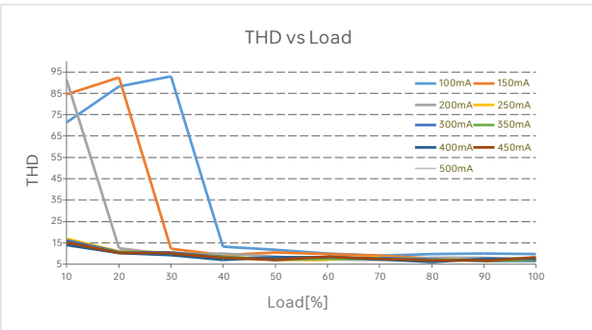
The light decay compensation function is mainly used to maintain the constant lumen output of LEDs. Throughout the entire life cycle of an LED, the driving current of the LED is gradually increased to offset the light decay caused by long-term operation of the LED, thereby ensuring a constant luminous flux output of the LED.

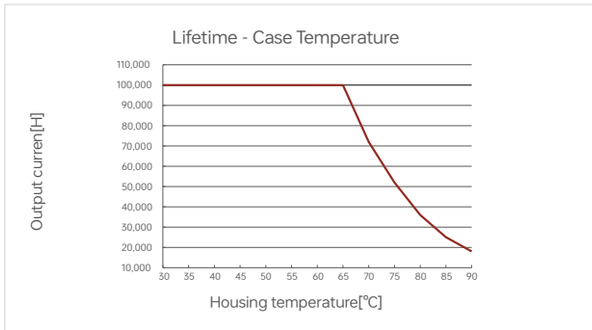


## Relationship Diagrams

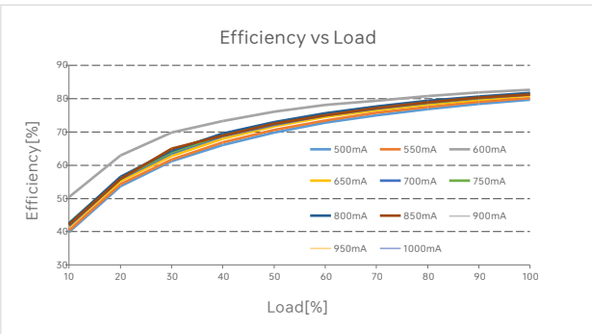


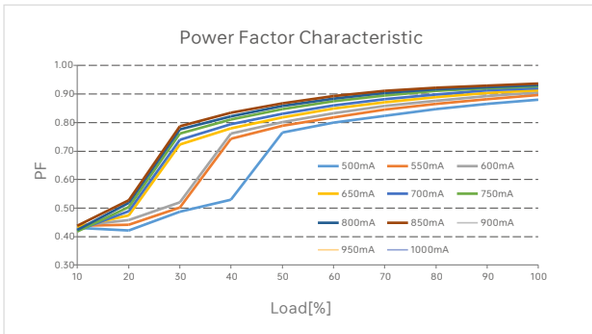



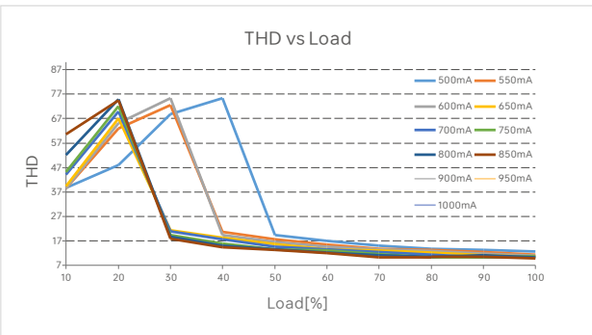



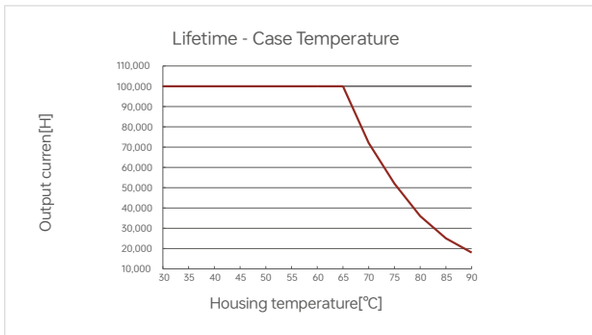




SE-10-100-500-W1D




SE-10-500-1000-W1D

## Surge Current & Corresponding Miniature Circuit Breaker (MCB) Load Capacity Table

| MCB Model | B10 | B13 | B16 | B20 | B25 | C10 | C13 | C16 | C20 | C25 | D10 | D13 | D16 | D20 | D25 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Maximum Load Capacity | 20 | 26 | 32 | 40 | 50 | 23 | 30 | 37 | 47 | 58 | 27 | 34 | 42 | 53 | 66 |

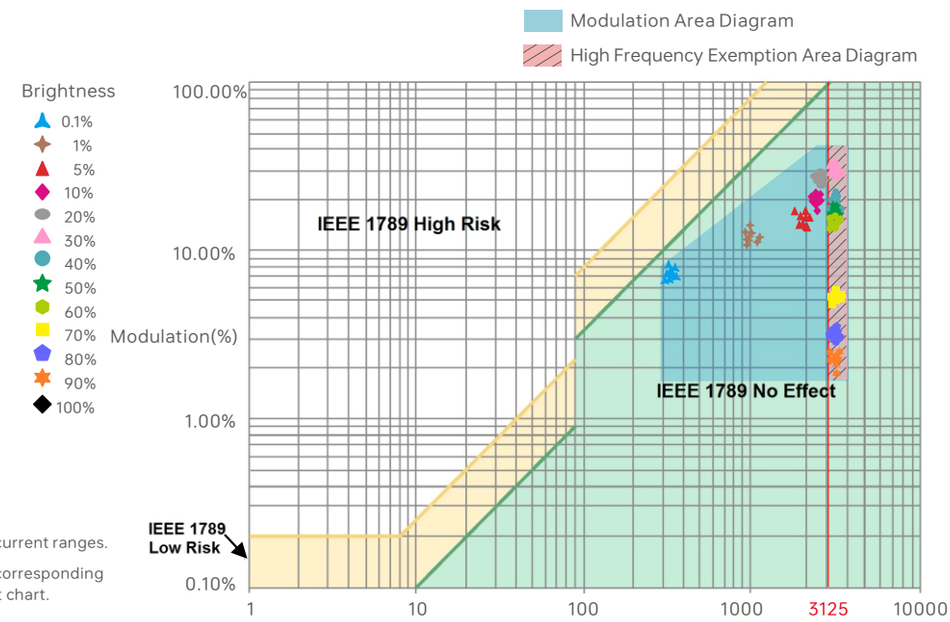
Remarks:

1. Test Conditions: Cold start 15A(Test twidth=102us tested under 50% Ipeak)/230Vac
2. The number of supported drivers may vary depending on the brand and model of the MCB.
3. It is recommended not to exceed the specified load capacity during on-site installation. The actual load should be determined based on field conditions.
4. If the ambient temperature exceeds 30°C or multiple MCBs are installed side by side, the number of installed drivers must be reduced and recalculated accordingly.
5. Electricians typically use Type B MCBs for residential lighting and Type C MCBs for commercial lighting applications.
6. Different testing equipment may yield variations in measured current peaks and pulse widths. Always use professional-grade instruments for accurate testing.

## Flicker Test Sheet

IEEE 1789

| Limit of modulation in low risk area | |
|---|---|
| Waveform frequency of optical output | limit (%) |
| $f \le 8Hz$ | 0.2 |
| $8Hz < f \le 90Hz$ | $0.025 \times f$ |
| $90Hz < f \le 1250Hz$ | $0.08 \times f$ |
| $f > 1250Hz$ | Exemption assessment |
| Limit of modulation in no effect area | |
| Waveform frequency of optical output | limit (%) |
| $f \le 10Hz$ | 0.1 |
| $10Hz < f \le 90Hz$ | $0.01 \times f$ |
| $90Hz < f \le 3125Hz$ | $(0.08/2.5) \times f$ |
| $f > 3125Hz$ | Exemption assessment (High frequency exemption) |




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

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

## Packaging Specifications

| | |
|---|---|
| Model | SE-10-100-500-W1D/SE-10-500-1000-W1D |
| Carton Dimensions | 350×285×180mm (L×W×H) |
| Quantity | 30 PCS/Layer; 5Layers/Carton;150 PCS/Carton |
| Weight | 0.08kg/PC; 12±5% kg/Carton |

## Packaging Image

Inner Packaging Box

Carton Packaging

## Transportation and Storage

1. Transportation

Products can be shipped via vehicles, boats and planes.

During transportation, products should be protected from rain and sun. Please avoid severe shock and vibration during the loading and unloading process.

2. Storage

The storage conditions should comply with the Class I Environmental Standards. The products that have been stored for more than six months are recommended to be re-inspected and can be used only after they have been qualified.

## Attentions

- Products shall be installed by qualified professionals.
- LTECH products are and not lightningproof non-waterproof (special models excepted). Please avoid the sun and rain. When installed outdoors, please ensure they are mounted in a water proof enclosure or in an area equipped with lightning protection devices.
- Good heat dissipation will prolong 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.

ZHUHAI LTECH TECHNOLOGY CO., LTD.

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Update Log

| Version | Updated Time | Update Conten | Updated by |
|---|---|---|---|
| A0 | 20250418 | Original version | Simin Zhong |