

## LED Intelligent Driver (constant voltage)

- Small size and light weight. The housing is made from V0 flame retardant PC materials that SAMSUNG/COVESTRO uses.
- The clamshell design and screwless type for strain-relief. The design of dismountable end cap allows you to adjust the length of housing depending on your needs.
- With soft-on and fade-in dimming function, enhancing your visual comfort.
- Dimming range from 0-100%, LED start at 0.1% possible.
- High Efficient driver: efficiency 93%, PF>0.98, THD<6%.
- In line with the EU energy efficiency ERP directive, standby power consumption < 0.5W.
- Innovative thermal management technology, intelligent power life protection.
- Over-heat / Over voltage / Over load / Short circuit protection, recover automatically.
- Fully-protected plastic housing with design of dismountable end cover.
- DALI bus standard: IEC62386-101,102, 207.
- Suitable for internal lights application for I / II / III.
- Up to 50,000-hour life time.
- 5 years warranty (Rubycon capacitor).

Flicker Free  
IEEE 1789Dimmable:  
0.1%-100%

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

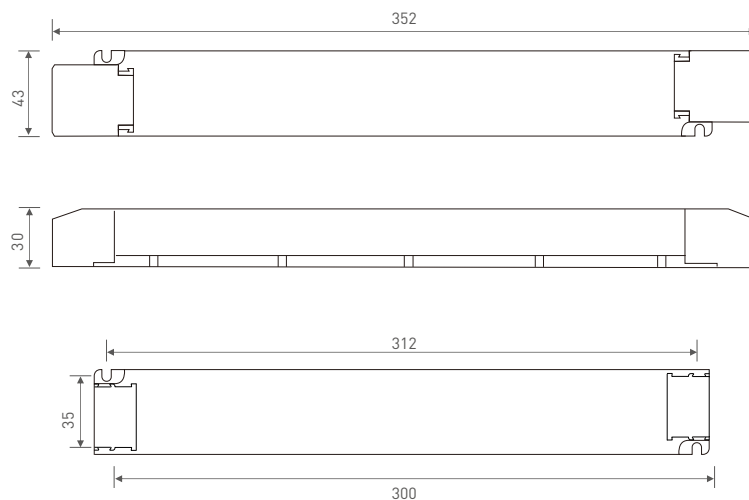
## Technical Specs

| Model         |                               | LM-150-24-G1D2                                                                                               |                                                           | LM-150-12-G1D2                                                                                          |  |
|---------------|-------------------------------|--------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------------------------------------------------------------|--|
| OUTPUT        | Output Voltage                | 24Vdc                                                                                                        |                                                           | 12Vdc                                                                                                   |  |
|               | Output Voltage Range          | 24Vdc ± 0.5Vdc                                                                                               |                                                           | 12Vdc ± 0.5Vdc                                                                                          |  |
|               | Output Current                | Max. 6.25A                                                                                                   |                                                           | Max. 12.5A                                                                                              |  |
|               | Output Power                  | Max. 150W                                                                                                    |                                                           |                                                                                                         |  |
|               | Output Power Range            | 0~150W                                                                                                       |                                                           |                                                                                                         |  |
|               | Strobe Level                  | High frequency exemption level                                                                               |                                                           |                                                                                                         |  |
|               | Dimming Range                 | 0~100%, down to 0.1%                                                                                         |                                                           |                                                                                                         |  |
|               | Overload Power Limitation     | ≥102%                                                                                                        |                                                           |                                                                                                         |  |
|               | Ripple                        | Switch ripple≤200mV, noise≤500mV                                                                             |                                                           | Switch ripple≤200mV, noise≤800mV                                                                        |  |
| PWM frequency | 3600Hz                        |                                                                                                              |                                                           |                                                                                                         |  |
| INPUT         | Dimming Interface             | DALI (IEC62386), Push DIM                                                                                    |                                                           |                                                                                                         |  |
|               | Input Voltage                 | 220-240Vac    200-280Vdc                                                                                     |                                                           |                                                                                                         |  |
|               | Frequency                     | 50/60Hz                                                                                                      |                                                           |                                                                                                         |  |
|               | Input Current                 | ≤0.75A/230Vac                                                                                                |                                                           |                                                                                                         |  |
|               | Power Factor                  | PF>0.98/230Vac (at full load)                                                                                |                                                           |                                                                                                         |  |
|               | THD                           | THD<6%@230Vac (at full load)                                                                                 |                                                           |                                                                                                         |  |
|               | Efficiency (typ.)             | 93%                                                                                                          | 92%                                                       |                                                                                                         |  |
|               | Standby Power Loss            | 0.5W                                                                                                         |                                                           |                                                                                                         |  |
|               | Inrush Current                | Cold start 45A/230Vac                                                                                        |                                                           |                                                                                                         |  |
|               | Anti Surge                    | L-N: 2KV                                                                                                     |                                                           |                                                                                                         |  |
|               | Leakage Current               | Max. 0.5mA                                                                                                   |                                                           |                                                                                                         |  |
| ENVIRONMENT   | Working Temperature           | ta: -20 ~ 50°C   tc: 85°C                                                                                    |                                                           |                                                                                                         |  |
|               | Working Humidity              | 20 ~ 95%RH, non-condensing                                                                                   |                                                           |                                                                                                         |  |
|               | Storage Temperature, Humidity | -40 ~ 80°C, 10~95%RH                                                                                         |                                                           |                                                                                                         |  |
|               | Temperature Coefficient       | ±0.03%/°C(0-50°C)                                                                                            |                                                           |                                                                                                         |  |
|               | Vibration                     | 10~500Hz, 2G 12min/1cycle, 72 min for X, Y and Z axes respectively                                           |                                                           |                                                                                                         |  |
| PROTECTION    | Overheat Protection           | Intelligently adjust or turn off the output current if the PCB temperature ≥110°C, and recover automatically |                                                           |                                                                                                         |  |
|               | Overload Protection           | Shut down the output when current load≥102%, and recover automatically                                       |                                                           |                                                                                                         |  |
|               | Short Circuit Protection      | Enter hiccup mode if short circuit occurs, and recover automatically                                         |                                                           |                                                                                                         |  |
|               | Overvoltage Protection        | Shut down the output when non-load voltage≥28V, and recover automatically                                    |                                                           | Shut down the output when non-load voltage≥16V, and recover automatically                               |  |
| SAFETY & EMC  | Withstand Voltage             | I/P-O/P: 3750Vac                                                                                             |                                                           |                                                                                                         |  |
|               | Isolation Resistance          | I/P-O/P: 100MΩ/500VDC/25°C/70%RH                                                                             |                                                           |                                                                                                         |  |
|               | Safety Standards              | CCC                                                                                                          | China                                                     | GB19510.1, GB19510.14                                                                                   |  |
|               |                               | TUV                                                                                                          | Germany                                                   | EN61347-1, EN61347-2-13, EN62493                                                                        |  |
|               |                               | CB                                                                                                           | CB member states                                          | IEC61347-1, IEC61347-2-13                                                                               |  |
|               |                               | CE                                                                                                           | European Union                                            | EN61347-1, EN61347-2-13, EN62384, EN61547                                                               |  |
|               |                               | KC                                                                                                           | Korea                                                     | KC61347-1, KC61347-2-13                                                                                 |  |
|               |                               | EAC                                                                                                          | Russia                                                    | IEC61347-1, IEC61347-2-13                                                                               |  |
|               |                               | RCM                                                                                                          | Australia                                                 | AS 61347-1, AS 61347-2-13                                                                               |  |
|               |                               | EMEC                                                                                                         | Europe                                                    | EN61347-1, EN61347-2-13, EN62384                                                                        |  |
|               | UKCA                          | Britain                                                                                                      | BS EN 61347-2-13:2014+A1:2017, BS EN 61347-1:2015+A1:2021 |                                                                                                         |  |
|               | EMC Emission                  | CCC                                                                                                          | China                                                     | GB/T17743, GB17625.1                                                                                    |  |
|               |                               | CE                                                                                                           | European Union                                            | 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                                                   | BS EN IEC 55015:2019/A11:2020, BS EN 61547:2009, BS EN IEC 61000-3-2:2019, BS EN 61000-3-3:2013/A1:2019 |  |
|               |                               | EMC Immunity                                                                                                 | EN61000-4-2,3,4,5,6,8,11, EN61547                         |                                                                                                         |  |
|               | Strobe Test Standard          | IEEE 1789                                                                                                    |                                                           |                                                                                                         |  |
| OTHERS        | Gross weight(G.W)             | 430g±10g                                                                                                     |                                                           |                                                                                                         |  |
|               | Dimensions                    | 352×43×30mm(L×W×H)                                                                                           |                                                           |                                                                                                         |  |
|               | Package size                  | 355×44×33mm(L×W×H)                                                                                           |                                                           |                                                                                                         |  |
|               | Carton Size                   | 370×340×93mm(L×W×H)    20pcs/ctn 9.4kg±5%/ctn                                                                |                                                           |                                                                                                         |  |

The driver is suitable for connecting resistor current-limiting LED fixture (e.g. LED strip). The inrush current will be dozens of times increased if connecting built-in constant current IC current-limiting LED fixtures, the driver will activate the overloaded protection (hiccup flickering). When you order, please remark controlling the constant current LED fixture (e.g. MR16 lamp, underground light, LED wall washer, constant current LED strip, etc.), so that we can prepare them with special procedures.

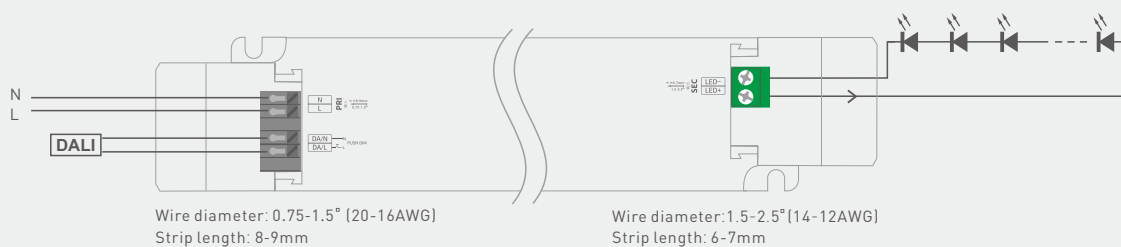
## Dimensions

Unit: mm



## Wiring Diagram

### DALI Connection



### Push DIM Connection



## Push DIM

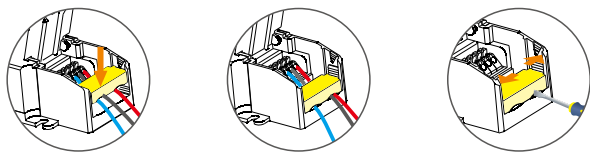


Reset switch

- On/off control: Short press.
- Stepless dimming: Long press.
- With every other long press, the brightness goes to the opposite direction.
- Dimming memory: Brightness will be the same as previously adjusted when turning on again.

## Application of Protective Cover

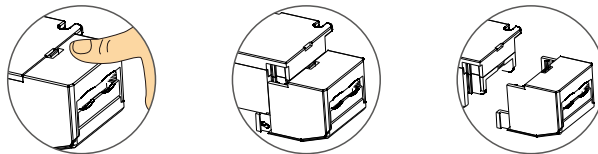
Wire pressing board:



Push the wire pressing board to fix the wires.

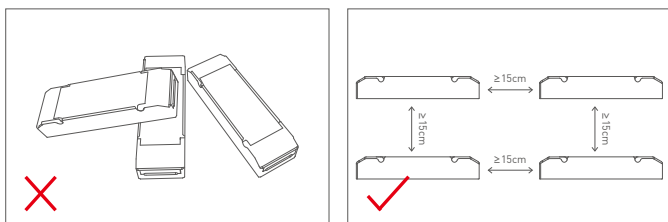
Push outward the side plate, meanwhile use the tool to uninstall the wire pressing board.

Uninstall protective cover:

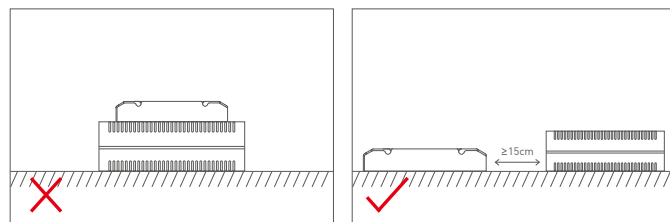


Break off the bottom left and right to remove the protective cover.

## Installation Precautions

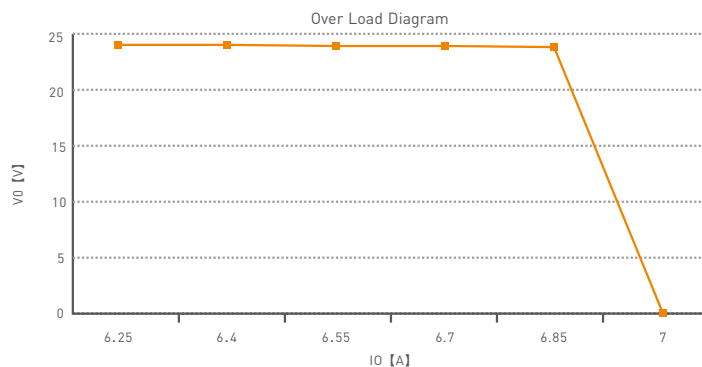
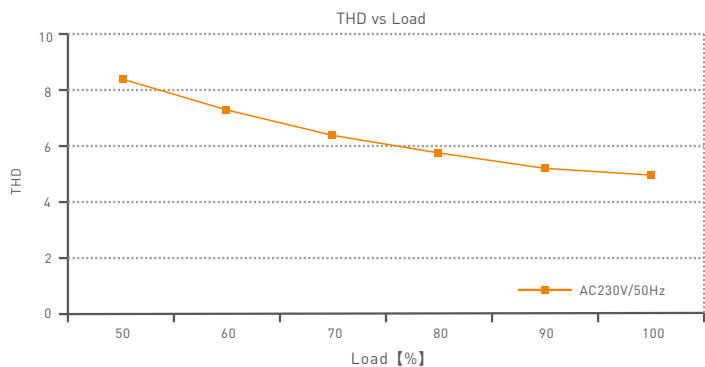
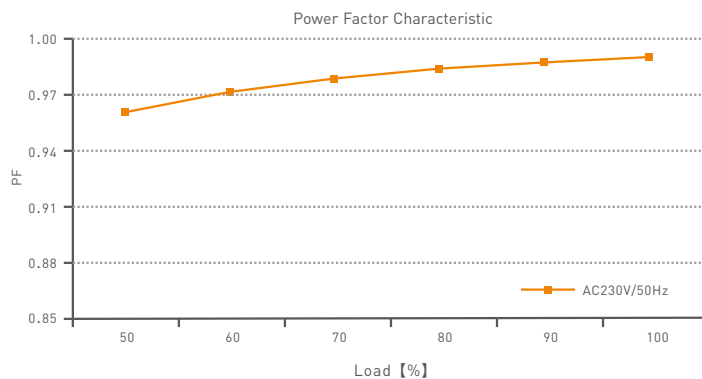
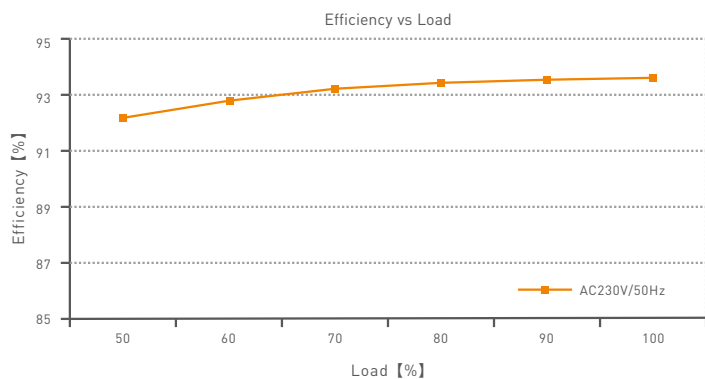


Please do not stack the products. The distance between two products should be  $\geq 15\text{cm}$  so as not to affect heat dissipation and the lifespan of the products.

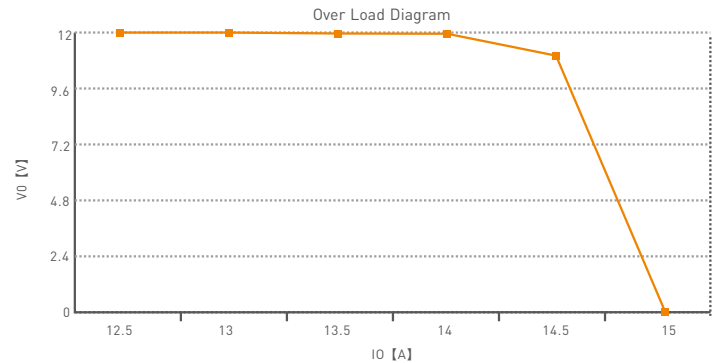
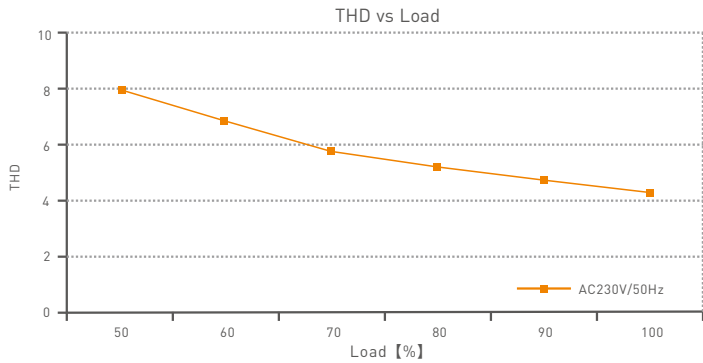
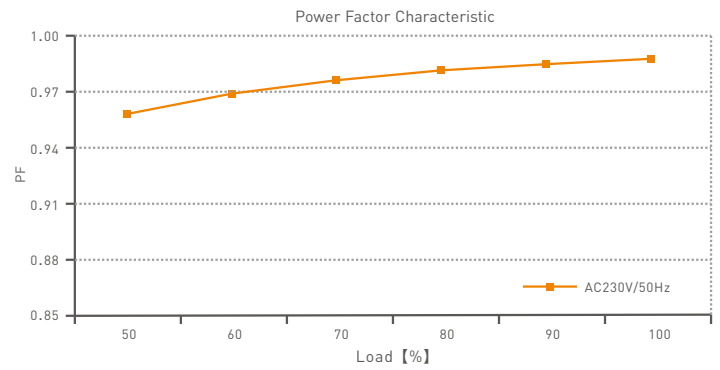
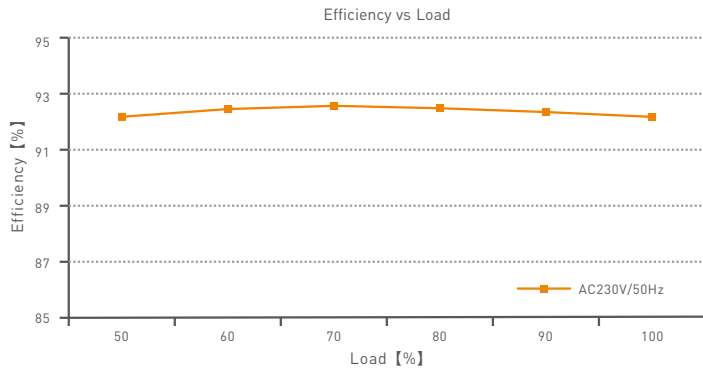


Please not place the products on LED drivers. The distance between the product and the driver should be  $\geq 15\text{cm}$  so as not to affect heat dissipation and shorten the lifespan of the products.

## Relationship Diagrams



LM-150-24-G1D2



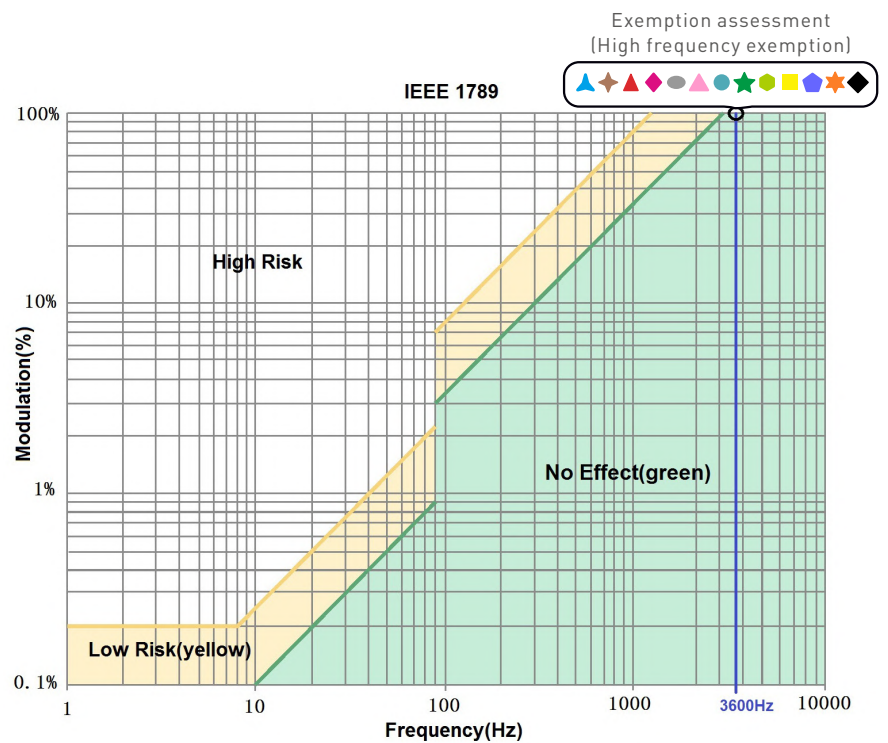
LM-150-12-G1D2

## 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 %



## 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.

## Update Log

| Version | Updated Time | Update Content                                                                                               | Updated by    |
|---------|--------------|--------------------------------------------------------------------------------------------------------------|---------------|
| A0      | 2020.03.24   | Original version                                                                                             | Huang Yunting |
| A1      | 2020.04.21   | Increase the input voltage 200-280Vdc; update the relationship chart; increase the life span of 50,000 hours | Huang Yunting |
| A2      | 2021.12.10   | Update product silk screen; update TUV certification icon                                                    | Liu Weili     |