

- Small size and light weight. Adopt SAMSUNG/COVESTRO V0 flame resistant polycarbonate protective housings.
- The design of dismountable end cap allows you to adjust the length of housing depending on your needs.
- Dimming interfaces: DALI-2, Push DIM.
- Dimming range: 0~100%, dimming down to 0.1%
- Flicker-free with high frequency exemption level in 0~100% dimming process.
- High-performance drivers: Efficiency 88%, PF>0.95, THD<8%.
- Comply with the EU's ErP Directive, stand-by power consumption<0.5W.
- The secure and reliable design for signal isolation.
- Innovative thermal management technology intelligently protects the lifetime the driver.
- Over-heat / Over voltage / Over load / Short circuit protection, recover automatically.
- DALI bus standard IEC62386-101,102,207.
- Suitable for lamp applications of indoor I /II/III types.
- Up to 50000-hour life time.
- 5 year warranty (Rubycon Capacitor).



Flicker-free  
IEEE 1789  
Achieve high frequency exemption level.

Dimmable:  
0.1%-100%



(The certification icons represent on-going certification applications only, and final certification qualification is subject to actual products.)



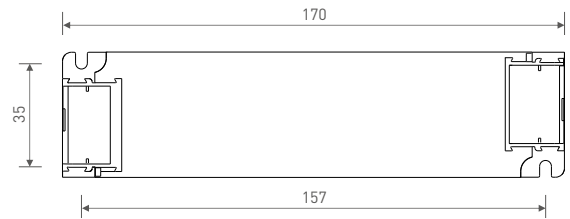
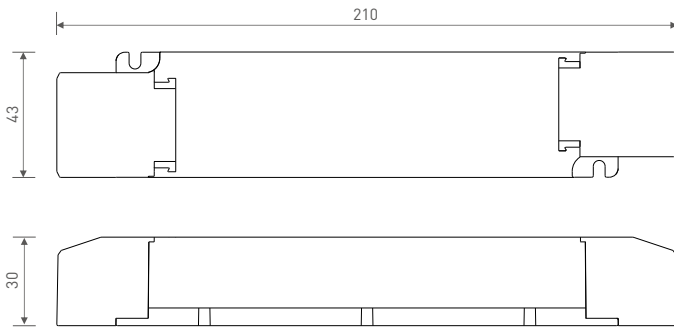
## Technical Specs

| Model        |                              | LM-36-24-G1D2                                                                                                       |                  | LM-36-12-G1D2                                                                                                   |  |
|--------------|------------------------------|---------------------------------------------------------------------------------------------------------------------|------------------|-----------------------------------------------------------------------------------------------------------------|--|
| OUTPUT       | Output Voltage               | 24Vdc                                                                                                               |                  | 12Vdc                                                                                                           |  |
|              | Output Voltage Range         | 24Vdc $\pm$ 0.5Vdc                                                                                                  |                  | 12Vdc $\pm$ 0.5Vdc                                                                                              |  |
|              | Output Current               | Max. 1.5A                                                                                                           |                  | Max. 3A                                                                                                         |  |
|              | Output Power                 | Max. 36W                                                                                                            |                  |                                                                                                                 |  |
|              | Output Power Range           | 0~36W                                                                                                               |                  |                                                                                                                 |  |
|              | Strobe Level                 | High frequency exemption level.                                                                                     |                  |                                                                                                                 |  |
|              | PWM Frequency                | 3600Hz                                                                                                              |                  |                                                                                                                 |  |
|              | Dimming Range                | 0~100%, dimming down to 0.1%                                                                                        |                  |                                                                                                                 |  |
|              | Overload Power Limitation    | $\geq$ 102%                                                                                                         |                  |                                                                                                                 |  |
|              | Ripple & Noise               | Switch ripple $\leq$ 200mV, noise $\leq$ 500mV                                                                      |                  | Switch ripple $\leq$ 200mV, noise $\leq$ 800mV                                                                  |  |
| INPUT        | Dimming Interface            | DALI-2, Push DIM                                                                                                    |                  |                                                                                                                 |  |
|              | Input Voltage                | 200-240Vdc / 200-280Vdc                                                                                             |                  |                                                                                                                 |  |
|              | Frequency                    | 50/60Hz                                                                                                             |                  |                                                                                                                 |  |
|              | Input Current                | Max. 0.26A/230Vac                                                                                                   |                  |                                                                                                                 |  |
|              | Power Factor                 | PF>0.95/230Vac, at full load                                                                                        |                  |                                                                                                                 |  |
|              | THD                          | <8% at 230Vac, at full load                                                                                         |                  |                                                                                                                 |  |
|              | Efficiency [typ.]            | 88%                                                                                                                 |                  | 87%                                                                                                             |  |
|              | Standby Power Loss           | <0.5W                                                                                                               |                  |                                                                                                                 |  |
|              | Inrush Current[typ.]         | Cold start 25A at 230Vac                                                                                            |                  |                                                                                                                 |  |
|              | Control Surge Capability     | L-N:2KV                                                                                                             |                  |                                                                                                                 |  |
| ENVIRONMENT  | Leakage Current              | Max. 0.5mA                                                                                                          |                  |                                                                                                                 |  |
|              | Working Temperature          | ta: -20°C ~ 50°C tc: 90°C                                                                                           |                  |                                                                                                                 |  |
|              | Working Humidity             | 20 ~ 95%RH, non-condensing                                                                                          |                  |                                                                                                                 |  |
|              | Storage Temperature Humidity | -40°C ~ 80°C, 10~95%RH                                                                                              |                  |                                                                                                                 |  |
|              | Temperature Coefficient      | $\pm$ 0.03%/°C [-20~50°C]                                                                                           |                  |                                                                                                                 |  |
| PROTECTION   | Vibration                    | 10~500Hz, 2G 12min./1cycle, 72 min for X, Y and Z axes respectively .                                               |                  |                                                                                                                 |  |
|              | Over-heat Protection         | Intelligently adjust or turn off the output current if the PCB temperature $\geq$ 110°C, and recover automatically. |                  |                                                                                                                 |  |
|              | Over Voltage Protection      | Shut down the output when non-load voltage $\geq$ 28V, re-power on to recover after fault condition is removed.     |                  | Shut down the output when non-load voltage $\geq$ 16V, re-power on to recover after fault condition is removed. |  |
|              | Over Load Protection         | Shut down the output when current load $\geq$ 102%, and recover 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:500Vdc/25°C/70%RH $\geq$ 100M $\Omega$                                                                      |                  |                                                                                                                 |  |
|              | Safety Standards             | CCC                                                                                                                 | China            | GB19510.1, GB19510.14                                                                                           |  |
|              |                              | TUV                                                                                                                 | Germany          | EN61347-1, EN61347-2-13, EN62493                                                                                |  |
|              |                              | CE                                                                                                                  | European Union   | EN61347-1, EN61347-2-13, EN62384                                                                                |  |
|              |                              | KC                                                                                                                  | Korea            | KC61347-1, KC61347-2-13                                                                                         |  |
|              |                              | RCM                                                                                                                 | Australia        | AS61347-1, AS61347-2-13                                                                                         |  |
|              |                              | ENEC                                                                                                                | Europe           | EN61347-1, EN61347-2-13, EN62384                                                                                |  |
|              |                              | CB                                                                                                                  | CB member states | IEC61347-1, IEC61347-2-13                                                                                       |  |
|              | EMC Emission                 | EAC                                                                                                                 | Russia           | IEC61347-1, IEC61347-2-13                                                                                       |  |
|              |                              | CCC                                                                                                                 | China            | GB/T17743, GB17625.1                                                                                            |  |
|              |                              | CE                                                                                                                  | European Union   | EN55015, EN61000-3-2, EN61000-3-3, EN61547                                                                      |  |
|              |                              | KC                                                                                                                  | Korea            | KN15, KN61547                                                                                                   |  |
|              |                              | RCM                                                                                                                 | Australia        | EN55015, EN61000-3-2, EN61000-3-3, EN61547                                                                      |  |
|              |                              | EAC                                                                                                                 | Russia           | IEC62493, IEC61547, EH55015                                                                                     |  |
|              | EMC Immunity                 | EN61000-4-2,3,4,5,6,8,11, EN61547                                                                                   |                  |                                                                                                                 |  |
|              | Strobe Test Standard         | IEEE 1789                                                                                                           |                  |                                                                                                                 |  |
| OTHERS       | Weight[G.W.]                 | 210g $\pm$ 10g                                                                                                      |                  |                                                                                                                 |  |
|              | Dimensions                   | 210 $\times$ 43 $\times$ 30mm[L $\times$ W $\times$ H]                                                              |                  |                                                                                                                 |  |
|              | Package Size                 | 213 $\times$ 44 $\times$ 33mm[L $\times$ W $\times$ H]                                                              |                  |                                                                                                                 |  |
|              | Carton Size                  | 440 $\times$ 218 $\times$ 235mm[L $\times$ W $\times$ H] 60pcs/ctn 13.4kg $\pm$ 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.), then we can prepare the special programs.

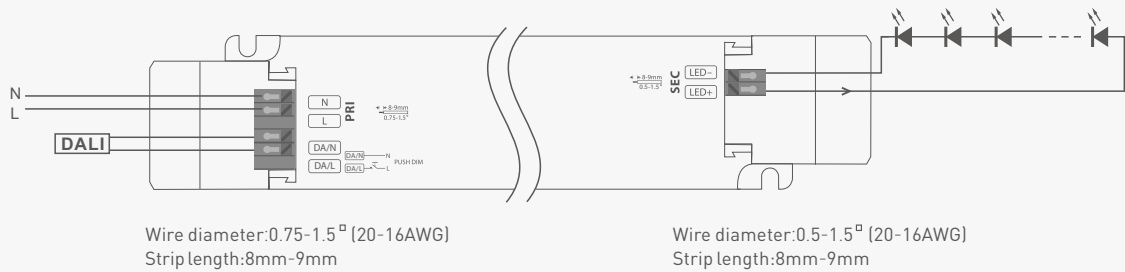
## Product Size

Unit: mm

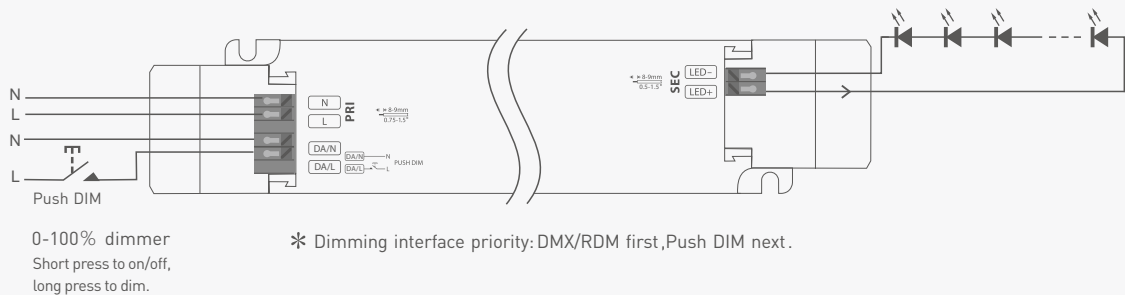


## Wiring Diagram

### DALI Connection Mode



### Push DIM Connection Mode



## Push DIM

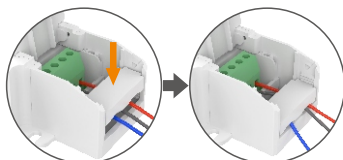


Reset switch

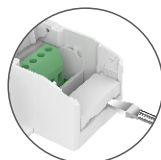
- On/off control: Short press.
- Stepless dimming: Long press.
- With every other long press, the brightness level goes to the opposite direction.
- Dimming memory: Go to the brightness level adjusted previously when lights are turned on.

## Protective Housing Application Diagram

### Tension plate

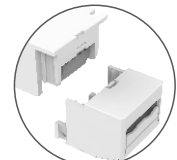
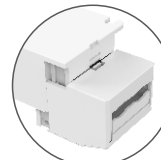


Push the tension plate down to fix the electric wires.



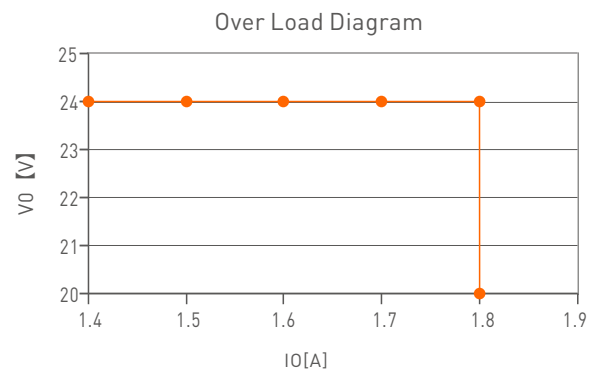
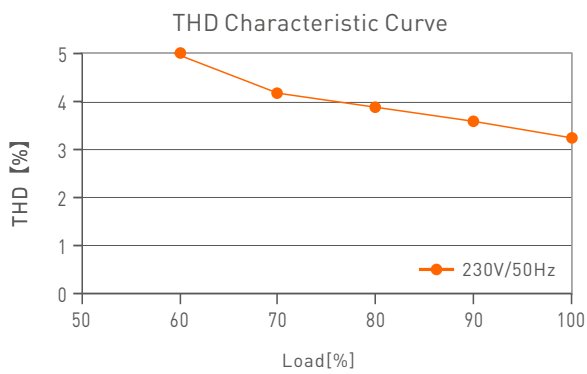
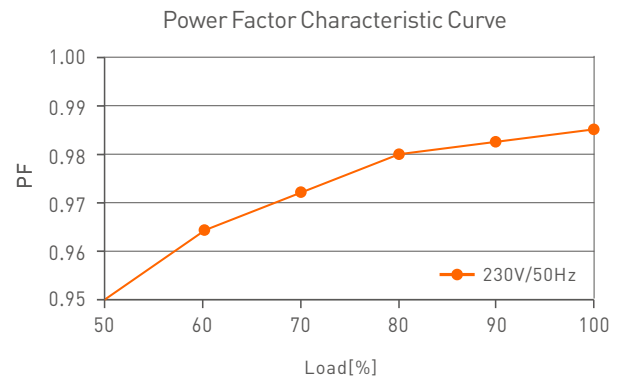
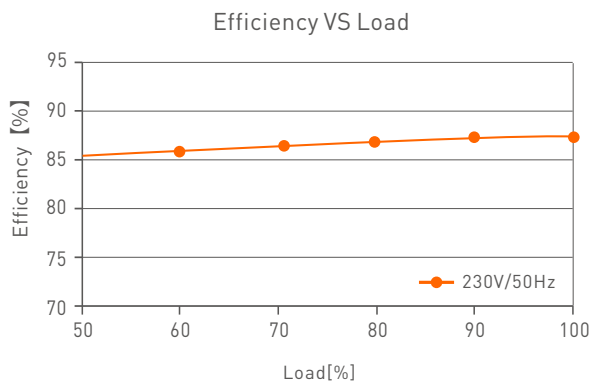
Push the side plate outwards and remove the tension plate by prying it up with a tool at the same time.

### Remove the protective housing

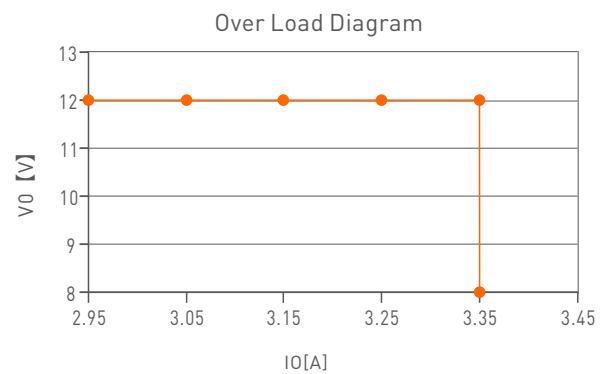
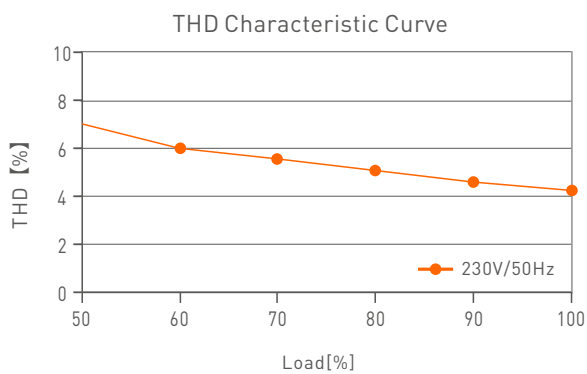
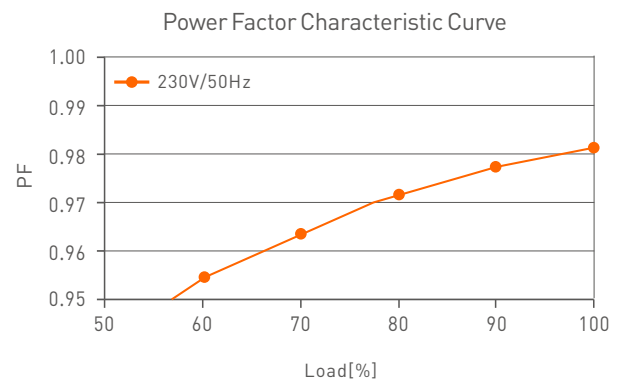
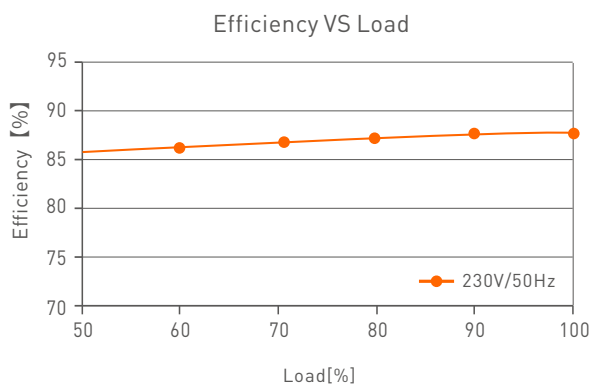


Pull the bottom left and right from the bottom to remove it.

## Relationship Diagrams



LM-36-24-G1D2



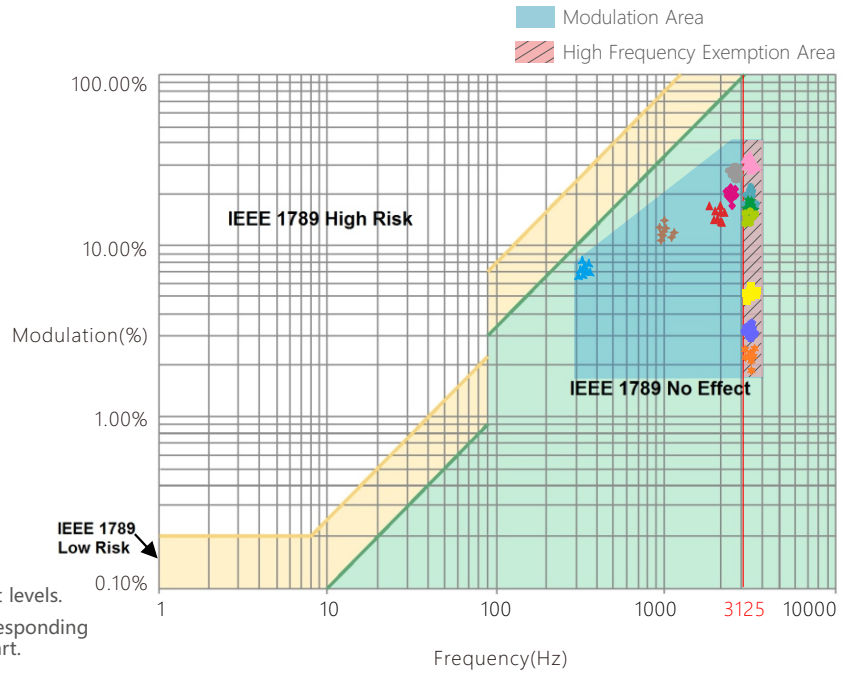
LM-36-12-G1D2

## Flicker Test Table

IEEE 1789

| Limit Value of Modulation in Low Risk Areas  |                                                 |
|----------------------------------------------|-------------------------------------------------|
| Waveform frequency of Optical output         | Limit value (%)                                 |
| $f \leq 8\text{Hz}$                          | 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 Value of Modulation in No Effect Areas |                                                 |
| Waveform frequency of Optical output         | Limit value (%)                                 |
| $f \leq 10\text{Hz}$                         | 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 are tested results of different current levels.

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

## 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      | 2021.03.22   | Original version | Xu Shujun  |

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