## Product Description

LF-GSD150YV024A is a 150W constant voltage tunable white LED driver supporting DALI or PUSH dimming. Its input voltage ranges from 220 to 240Vac; rated output voltage: 24V; rated current: 6.25A. It features high efficiency, low THD and flicker-free effect. It is suitable for indoor LED strips.

## Features

- IP20
- Suitable for Class II light fixtures
- Built-in active PFC function
- Supports DALI DT8 dimming + PUSH dimming, dimming depth <0.1%
- Flicker free
- Small size; high efficiency (typical value ⩾92%）
- All-round protections: over voltage protection, over load protection, short circuit protection
- 5-year warranty (please refer to the warranty condition.)

## Applications

- LED strip
- Luminous character
- Light box

## Naming

LF - GSD 150 YV 024A

- 024A: DC24V output; A: DALI DT8
- YV: constant voltage series
- 150: rated power: 150W
- G: isolated design; SD: DALI LED driver

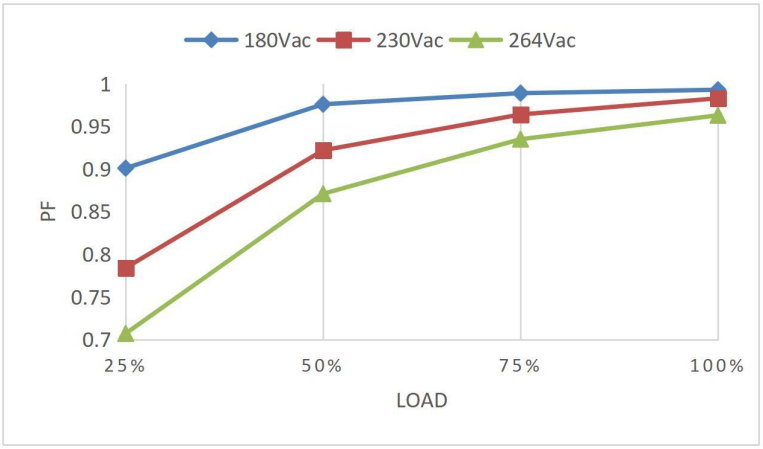
## Electrical Characteristics

| Model | | LF-GSD150YV024A | | | | |
|---|---|---|---|---|---|---|
| Output | Output Voltage | 24Vdc | | | | |
| | Output Current | 0-6.25A | | | | |
| | Output Power | 150W max. @220-240Vac | | | | |
| | Flicker Index | IEC-Pst ≤1, CIE SVM ≤0.9, Modulation Depth ≤1%<br>Complies with flicker-free standard (IEEE Std 1789-2015) | | | | |
| | Ripple Current | 240mV max. | | | | |
| | Voltage Tolerance | ±2% | | | | |
| | Temperature Drift | ±5% | | | | |
| | Start-up Time | <1S@230Vac | | | | |
| Input | Input Voltage | 220-240Vac (voltage limit: 198-264Vac) | | | | |
| | DC Input Voltage | 282-340Vdc (voltage limit: 255-373Vdc) | | | | |
| | Input Frequency | 47Hz-63Hz | | | | |
| | Input Current | 1A max. | | | | |
| | Power Factor | ≥0.95@230Vac (full load) | | | | |
| | THD | ≤10%@230Vac | | | | |
| | Efficiency | ≥93%(230Vac full load) | | | | |
| | Inrush Current | ≤73A&230uS@230Vac | | | | |
| | Load Quantity Carried by the Circuit Breaker | Circuit Breaker Model | B10 | C10 | B16 | C16 |
| | | Quantity (pcs) | 5 | 6 | 9 | 10 |
| | Leakage Current | ≤0.7mA | | | | |
| | Standby Power Consumption | ≤1W@230Vac | | | | |
| Protection Characteristics | Open Circuit | <33.6V | | | | |
| | Over Temperature | No output (auto-recovery) | | | | |
| | Short Circuit | Hiccup mode (auto-recovery) | | | | |
| Environment Descriptions | Operating Temperature | -20℃ - +50℃ | | | | |
| | Operating Humidity | 20-90%RH (no condensation) | | | | |
| | Storage Temperature/ Humidity | -40℃- 80℃ (six months under class I environment);<br>10-90%RH (no condensation) | | | | |
| | Atmospheric Pressure | 86kPa~106kPa | | | | |

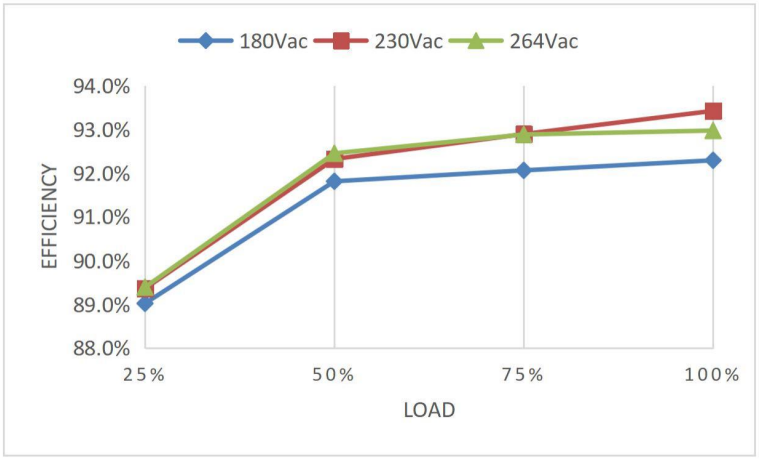
| | | |
|---|---|---|
| Safety and Electromagnetic Compatibility | Certifications | TUV-ENEC, CE, CB, RCM, SAA, CCC |
| | Withstanding Voltage | I/P-O/P: 3.75kV 5mA 60S |
| | Insulation Resistance | I/P-O/P: >100MΩ@500Vdc |
| | Safety Standards | ENEC: EN61347-1: 2015, EN 61347-2-13: 2014/A1: 2017,<br>EN 62384: 2016/A1: 2009<br>CE-LVD: EN 61347-2-13: 2014/A1: 2017, EN 61347-1: 2015,<br>EN 62493: 2015<br>CB: IEC 61347-1: 2015, IE61347-2-3: 2014,<br>IEC 61347-2-13: 2014/AMD1: 2016<br>RCM: AS 61347.2-13: 2018<br>SAA: AS 61347.2-13: 2018<br>CCC: GB19510.1-2009, GB19510.14-2009 |
| | EMI | CE-EMC/RCM: EN55015, EN61000-3-2, EN61000-3-3<br>CCC: GB/T17743, GB17625.1, GB17625.2 |
| | EMS | CE-EMC/RCM: EN61000-4-2, 3, 4, 5, 6, 11<br>CCC: GB/T17626.2, 3, 4, 5, 6, 11 |
| Others | IP Rating | IP20 |
| | RoHS | RoHS 2.0 (EU) 2015/863 |
| | Warranty Condition | 5 yrs (Tc≤79℃) |
| | DALI Standard | IEC 62386-101 102 207 209: DALI 2.0 |
| Remarks | 1. It is recommended that customer should install over voltage and under voltage protection devices and surge protection devices in the power supply circuits of the light fixtures to ensure safety before connecting to electricity.<br><br>2. The PC cover, casing, end caps and other parts of the LED driver inside the LED light fixture must conform to UL94-V0 flammability standard or above.<br><br>3. As an accessory, the LED driver is not the only factor determining the EMC performance of the LED light fixture. The structure and the wiring of the light fixture are also relevant. Thus it's strongly recommended the LED light fixture manufacturer should re-confirm the EMC of the whole LED light fixture.<br><br>4. Unless otherwise stated, the parameters of PF, THD and efficiency are test results under the conditions of ambient temperature of 25 ± 5℃, humidity of 50%, input voltage of 230Vac and full load. | |

## Characteristic Curves

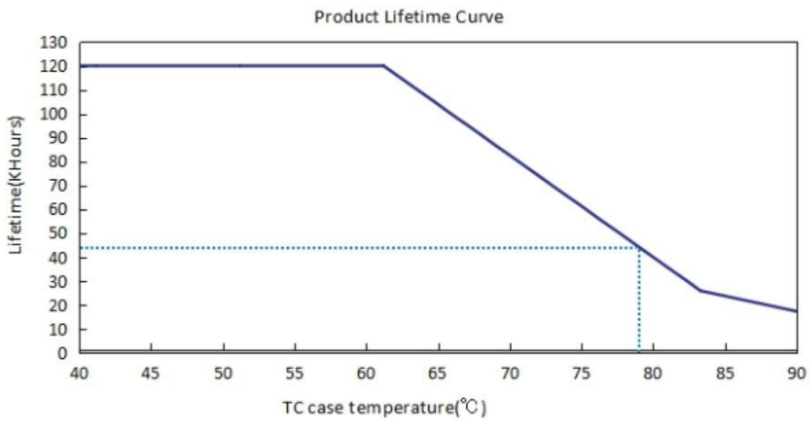
### ■ PF Curve




### ■ Efficiency Curve




### ■ Lifetime Curve



## Dimming Operation Instructions

### ■ Definitions of Input & Output

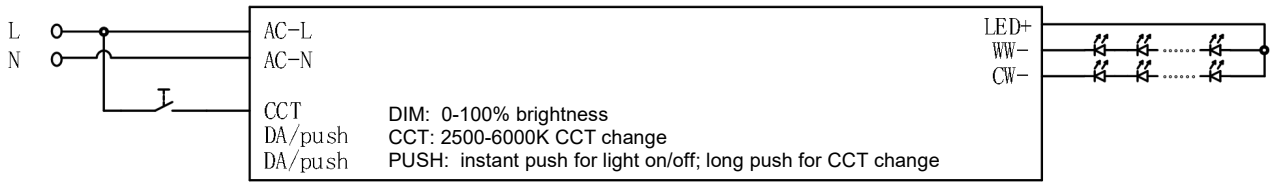
INPUT

| | |
|---|---|
| AC-L | AC live wire input |
| AC-N | AC neutral wire input |
| CCT | CCT change input |
| DA/PUSH | DALI/PUSH dimming input |
| DA/PUSH | DALI/PUSH dimming input |

OUTPUT

| | |
|---|---|
| LED+ | Positive electrode output of driver |
| WW- | Negative electrode output of driver's warm light |
| CW- | Negative electrode output of driver's cold light |

### ■ Wiring Diagram of CCT Change in PUSH Dimming Mode




⚠ Remark: when using the PUSH dimmer for brightness change or CCT change, please connect AC-L and AC-N FIRST, and then connect the PUSH dimmer to AC-L and CCT terminal.

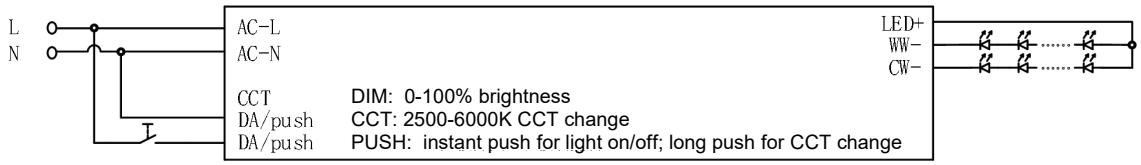
### ■ Operation Instructions of CCT Change in PUSH Dimming Mode

| Operation | Operation Time | Function |
|---|---|---|
| Instant Push | 0.1-0.5 sec | LED Light on / off |
| Long Push | 0.6-5 sec | Dim up / down |
| Reset Push | >9 sec | Reset to 50% warm light & 50% cold light two-channel output |

The PUSH operation won't cause any variations if it's less than 0.1 sec.

- Minimum CCT of PUSH dimming: warm light; maximum one: cold light
- When entering to the PUSH dimming mode for the first time, it's default to be 50% warm light & 50% cold light two-channel output.
- For the first long press on the PUSH button, the brightness remains the same but the CCT turns to the cold light.
- For the press on the PUSH button again, the dimming is opposite to the last one.

## ■ Wiring Diagram of Brightness Change in PUSH Dimming Mode




⚠ Remark: when using the PUSH dimmer for brightness change or CCT change, please connect AC-L and AC-N FIRST, and then connect the PUSH dimmer to AC-L and CCT terminal.

## ■ Operation Instructions of Brightness Change in PUSH Dimming Mode

| Operation | Operation Time | Function |
|---|---|---|
| Instant Push | 0.1-0.5 sec | LED Light on / off |
| Long Push | 0.6-5 sec | Dim up / down |
| Reset Push | >9 sec | Reset to 50% brightness |

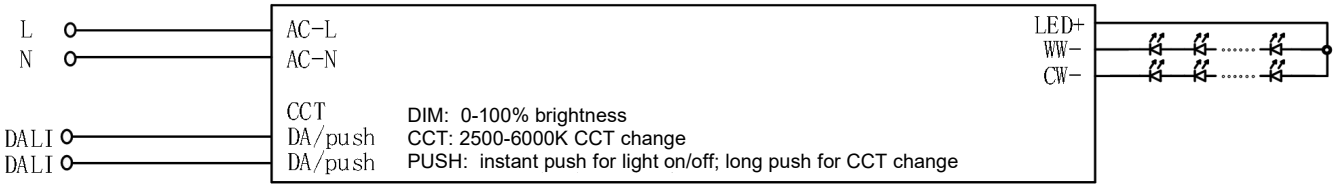
The PUSH operation won't cause any variations if it's less than 0.1 sec.

- Minimum dimming depth of PUSH dimming: 1% (Iout)
- When entering to the PUSH dimming mode for the first time, it's default to be 100% brightness output.
- For the first long press on the PUSH button, the brightness dims down.
- For the press on the PUSH button again, the dimming is opposite to the last one.

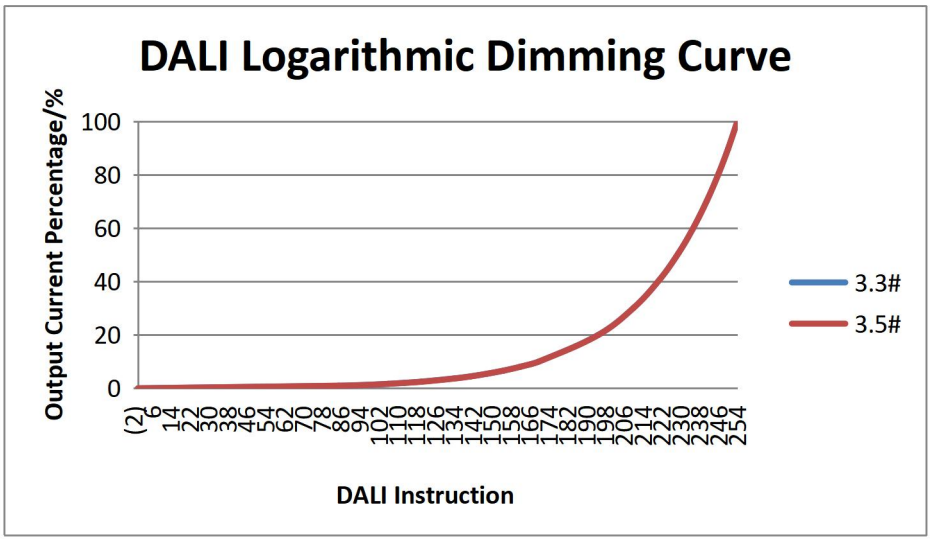
## ■ DALI Dimming Operations

- Factory default setting: 100% brightness; logarithmic dimming curve
- Connect the DALI signal to the DA/PUSH terminal, no positive or negative designation.
- DALI protocol includes 16 groups and 64 IP addresses.
- Minimum dimming depth of DALI dimming: 0.1% (Iout).

## ■ Wiring Diagram of DALI Dimming Operation



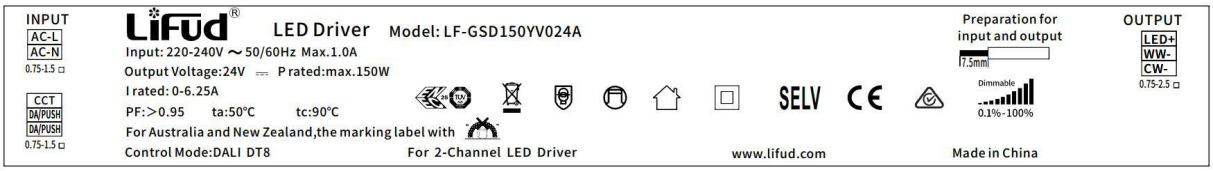
## ■ DALI Logarithmic Dimming Curve



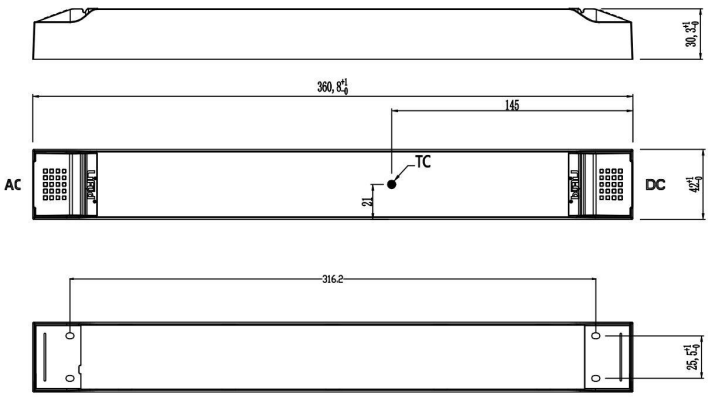

## ■ Instructions of Switching Dimming Modes

- For the first time being powered on, it's default to be the DALI dimming mode at 100% brightness output
- Switching between the DALI dimming and the PUSH dimming modes:
  - Switch to the PUSH dimming mode: long press the PUSH button for over 0.6 sec and then it's switched to the PUSH dimming mode. The current output status is the same as the previous one.
  - Switch to the DALI dimming mode: when receiving any DALI instructions, the driver will switch to the DALI dimming mode. If it's a non-dimming instruction, the output status remains the same. If it's a dimming instruction, the dimming instruction will be executed.

## Label



## Structure & Dimensions (unit: mm)




## Packaging Specifications

| | |
|---|---|
| Model | LF-GSD150YV024A |
| Packaging Box Size | 385*285*210 mm (L*W*H) |
| Quantities | 6 pcs/layer; 5 layers/ctn; 30 pcs/ctn |
| Weights | 0.36 kg/pc; 11.8 kg/ctn |

## Transportation & Storage

■ **Transportation**

- Suitable transportation means: vehicles, boats and aircraft.
- During transportation, there should be awnings for rain protection and sun protection. Civilized loading and unloading are required. There should be no severe vibration or impact.

■ **Storage**

- Storage in accordance with the provisions of the Class I environment. For products which have been stored for more than six months, they mustn't be used until they pass the re-inspection.

## Attention

■ Please use this product according to its specifications otherwise there may be malfunction.

■ Use light fixtures that have not been certified or are not compatible with the LED drivers may cause fire or other hazards.

■ Man-made damage, any use beyond the specification and non-original-factory modification are not covered by warranty.

Remark: The final interpretation right of the contents of this data sheet belongs to Lifud Technology Co., Ltd.