





## Product Description

LF-GSD120YV012A is a 120W constant voltage tunable white LED driver supporting DALI or PUSH dimming. Its input voltage ranges from 220 to 240Vac; rated output voltage: 12V; rated current: 10A. It features high efficiency, low THD and flicker-free effect. It is suitable for indoor LED strips.



## Features

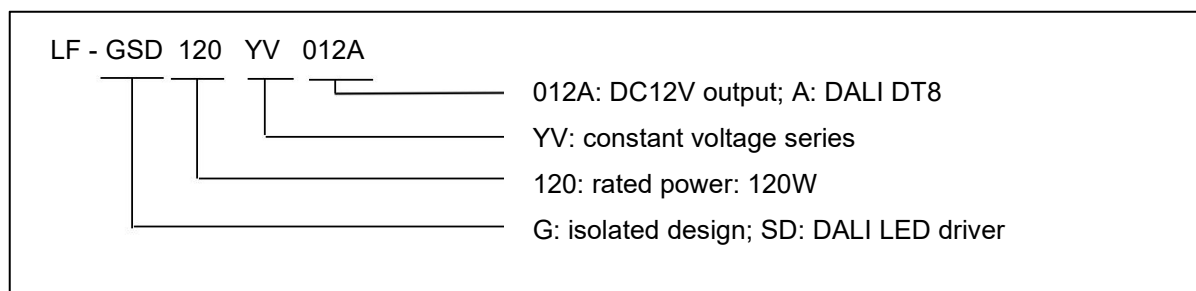
- IP20
  - Suitable for Class II light fixtures
  - Built-in active PFC function
  - Supports DALI DT8 dimming + PUSH dimming, dimming depth <0.1%
  - Flicker free
  - Small size; high efficiency (typical value  $\geq 92\%$ )
  - All-round protections: over voltage protection, over load protection, short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






## Applications

- LED strip
- Luminous character
- Light box

## Naming



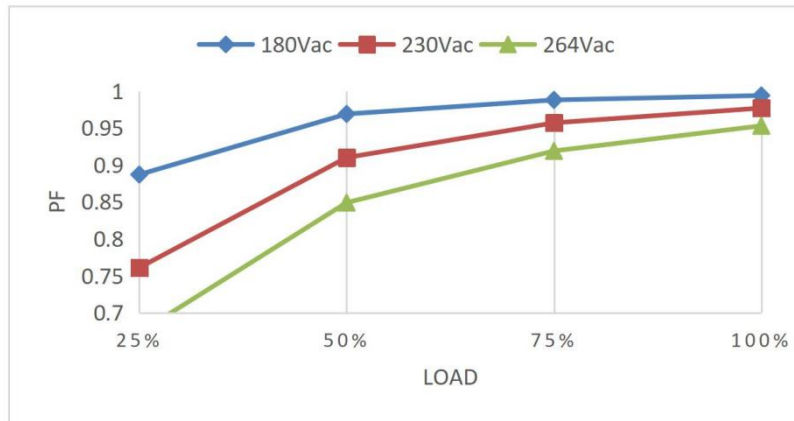
## Electrical Characteristics

Model		LF-GSD120YV012A				
Output	Output Voltage	12Vdc				
	Output Current	0-10A				
	Output Power	120W max. @220-240Vac				
	Flicker Index	IEC-Pst ≤1, CIE SVM ≤0.9, Modulation Depth ≤1% Complies with flicker-free standard (IEEE Std 1789-2015)				
	Ripple Current	200mV 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 (full load)				
	Efficiency	≥92%@230Vac (full load)				
	Inrush Current	≤72A&210uS@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	<18V				
	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); 10-90%RH (no condensation)				
	Atmospheric Pressure	86kPa~106kPa				

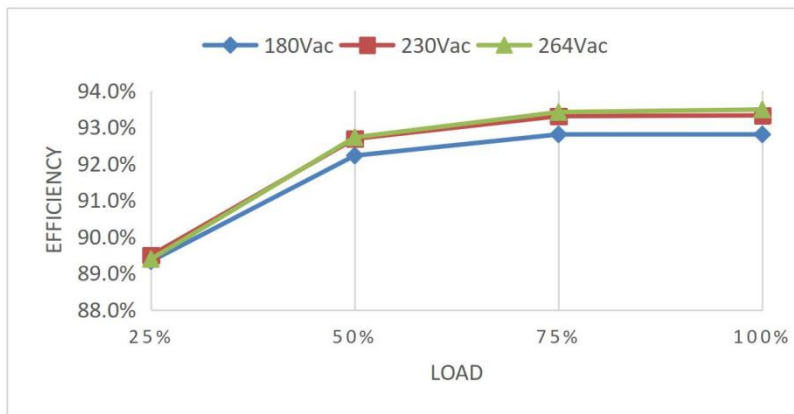
Safety and Electromagnetic Compatibility	Certifications	TUV-ENEC, CE, CB, RCM, SAA, CCC
	Withstanding Voltage	I/P-O/P: 3.75kV 5mA 60S
	Insulation Resistance	I/P-O/P: >100MΩ@500VDC
	Safety Standards	ENEC: EN61347-1:2015, EN 61347-2-13:2014/A1:2017, EN 62384: 2016/A1:2009 CE-LVD: EN 61347-2-13:2014/A1:2017, EN 61347-1:2015, EN 62493:2015 CB:IEC 61347-1:2015, IEC61347-2-3:2014, IEC 61347-2-13:2014/AMD1:2016 RCM:AS 61347.2-13:2018 CCC:GB19510.1-2009, GB19510.14-2009 SAA:AS 61347.2-13:2018
	EMI	CE-EMC/RCM:EN55015, EN61000-3-2, EN61000-3-3 CCC:GB/T17743, GB17625.1, GB17625.2
	EMS	CE-EMC/RCM: EN61000-4-2,3,4,5,6,11 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≤83℃)
	DALI Standard	IEC 62386-101 102 207 209: DALI 2.0
Remarks	<p>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.</p> <p>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.</p> <p>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.</p> <p>4. Unless otherwise stated, the parameters of PF, THD and efficiency are test results under the conditions of ambient temperature of <math>25 \pm 5^{\circ}\text{C}</math>, humidity of 50%, input voltage of 230Vac and full load.</p>	

## Characteristic Curves

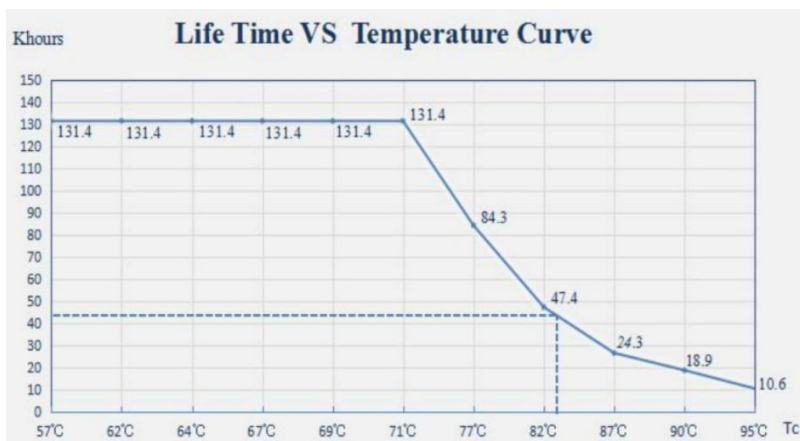
### ■ PF Curve



### ■ Efficiency Curve



### ■ Lifetime Curve



## Dimming Operation Instructions

### ■ Definitions of Input & Output

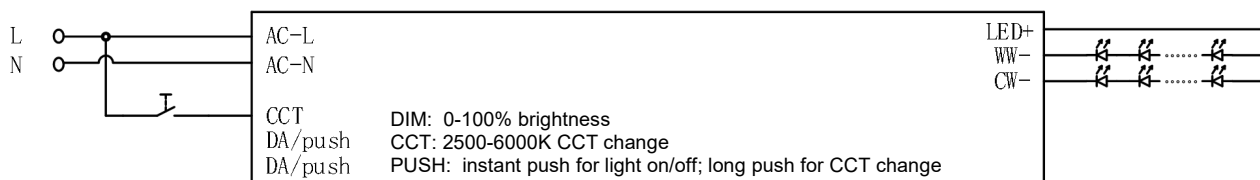
#### INPUT

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 function, AC-L/AC-N should be powered on first, and then the CCT terminal can be powered on. Otherwise, the CCT terminal will be burned.

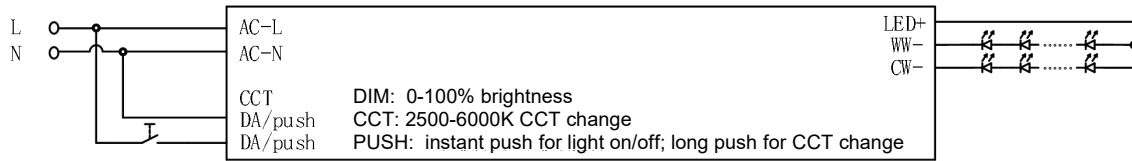
### ■ Operation Instructions of CCT Change in PUSH Dimming Mode

Operation	Operation Time	Function
Instant Push	0.1-0.5 sec	LED Light on / off
Long Push	0.6-5 sec	CCT change
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 function, AC-L/AC-N should be powered on first, and then the PUSH terminal can be powered on. Otherwise, the PUSH terminal will be burned.

## ■ 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

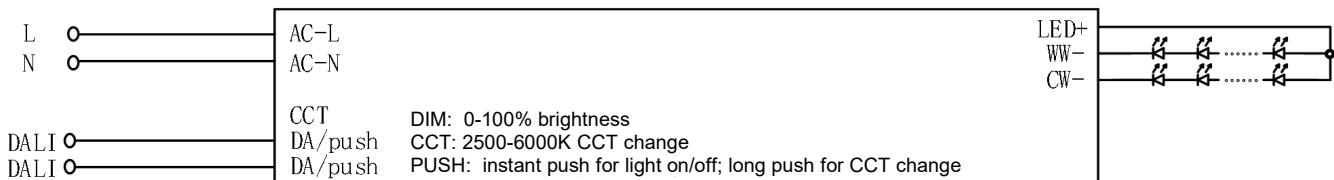
The PUSH operation won't cause any variations if it's less than 0.1 sec.

- Minimum dimming depth of PUSH dimming: 1% (lout)
- 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.

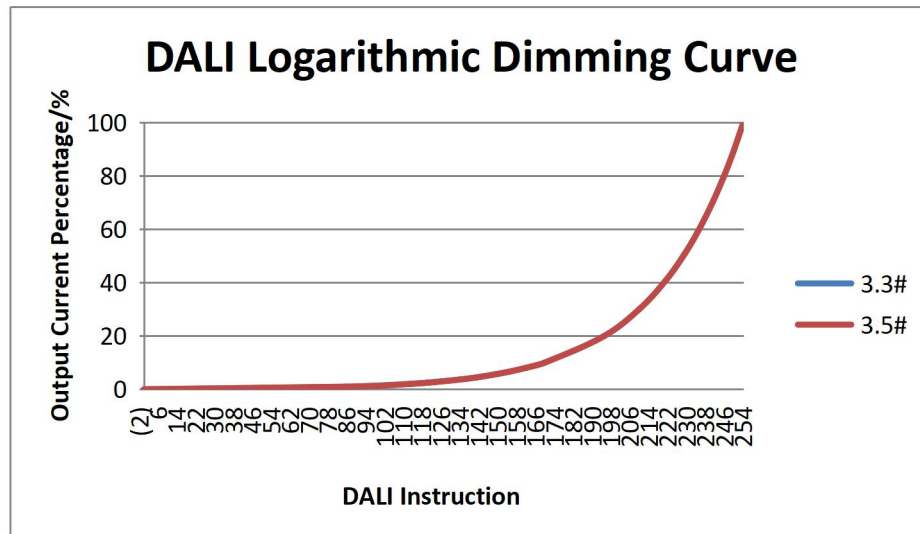
## ■ DALI Dimming Operations

- 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% (lout).

## ■ Wiring Diagram of DALI Dimming Operation



## ■ DALI Logarithmic Dimming Curve



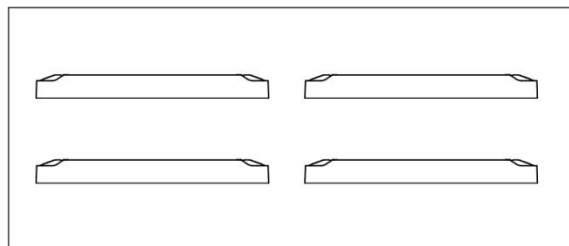
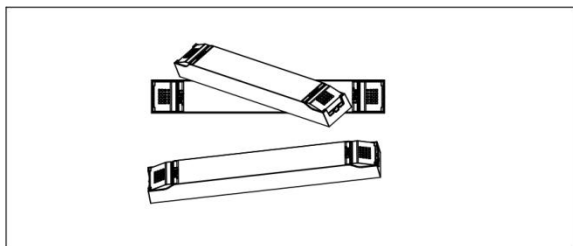
## ■ Instructions of Switching Dimming Modes

- 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.

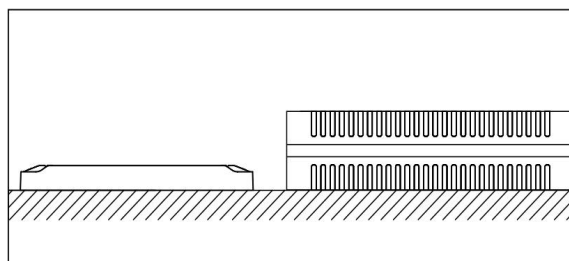
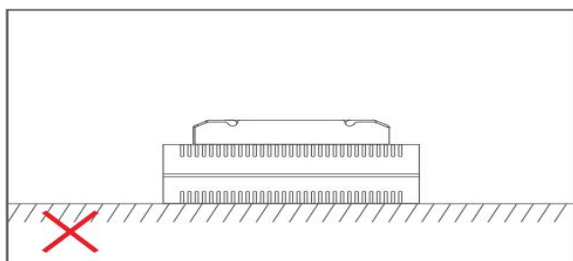
## Label



## Install Notes

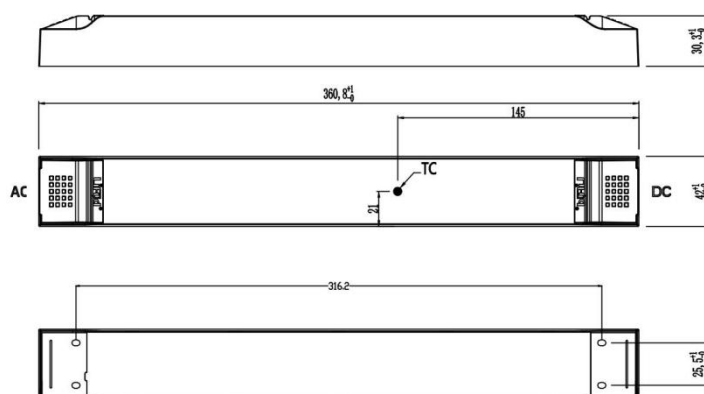


Do NOT stack drivers. Keep at least a certain distance between drivers when using them to avoid affecting the heat dissipation and lifetime of the drivers.



Direct contact between the load and the driver is prohibited when using the driver. Keep a certain distance between the driver and the load to avoid affecting the heat dissipation and lifetime of the drivers.

## Structure & Dimensions (unit: mm)



## Packaging Specifications

Model	LF-GSD120YV012A
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.