

## Product Description

LF-GSD120YV012B series is a 120W constant voltage LED driver with functions of DALI DT6 dimming and push dimming. Input voltage: 220-240VAC; rated output voltage: 12V; rated output current: 10A. It is a reliable constant voltage LED driver with high efficiency and low THD, suitable for indoor LED strip.

## Features

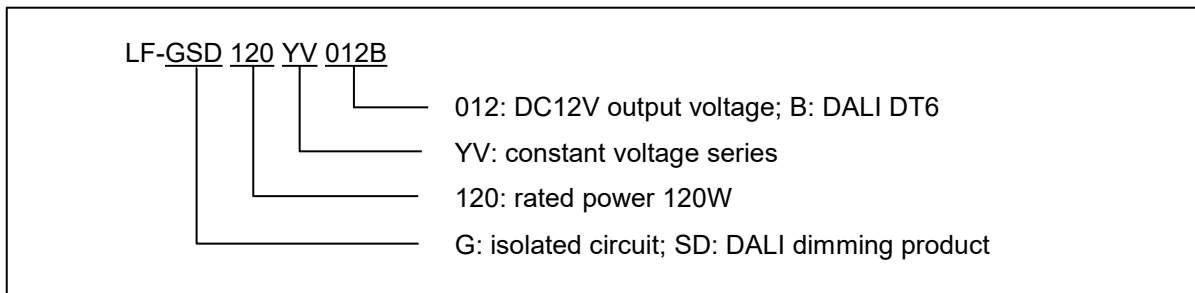
- IP20
- Suitable for Class II light fixtures
- Built-in active power factor correction function
- DALI + Push dimming functions, dimming depth: 0.1%
- Flicker free
- Small size; high efficiency (typical value  $\geq 92\%$ )
- All-round protections: over temperature, over voltage, over load, short circuit
- 5-year warranty (Please refer to the warranty condition.)

## Applications

- LED strip
- Luminous character
- Light box



## Naming



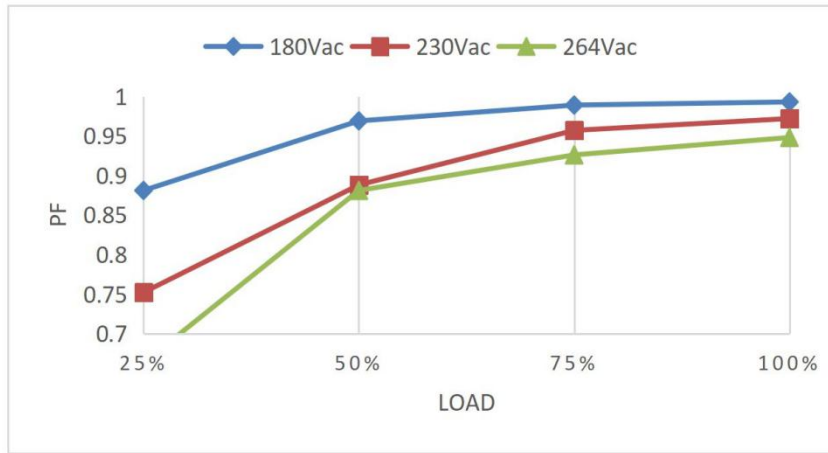
## Electrical Characteristics

Model		LF-GSD120YV012B				
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%, meet with flicker free standard (IEEE Std 1789-2015)				
	Ripple Voltage	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 (when DALI signal is OFF)				
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				

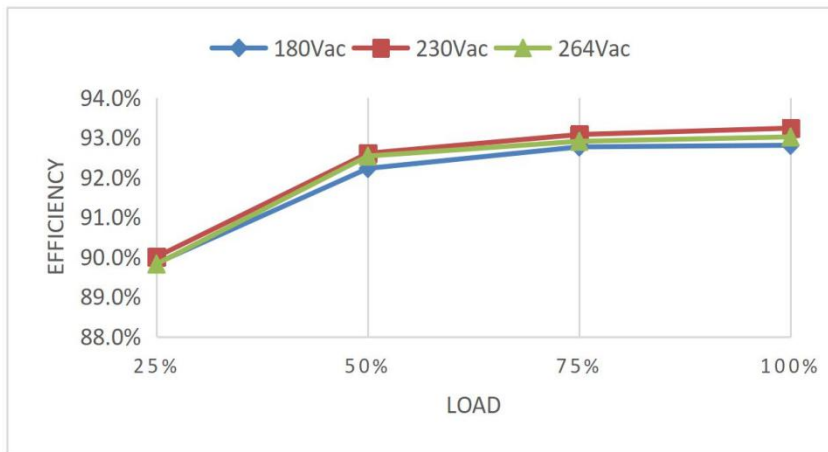
Safety and Electromagnetic Compatibility	Certifications	TUV-ENEC, CE, CB, RCM, CCC
	Withstanding Voltage	I/P-O/P: 3.75KV, 5mA, 60S
	Insulation Resistance	I/P-O/P: >100MΩ @500Vdc
	Safety Standards	ENEC: EN61347-1:2015, EN 61347-2-13:2014/A1:2017, EN 62384: 2016/A1:2009 CE-LVD: EN 61347-2-13:2014/A1:2017, 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: DALI 2.0
Remarks	<p>1. It is recommended that customer should install overvoltage and undervoltage 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 Curve

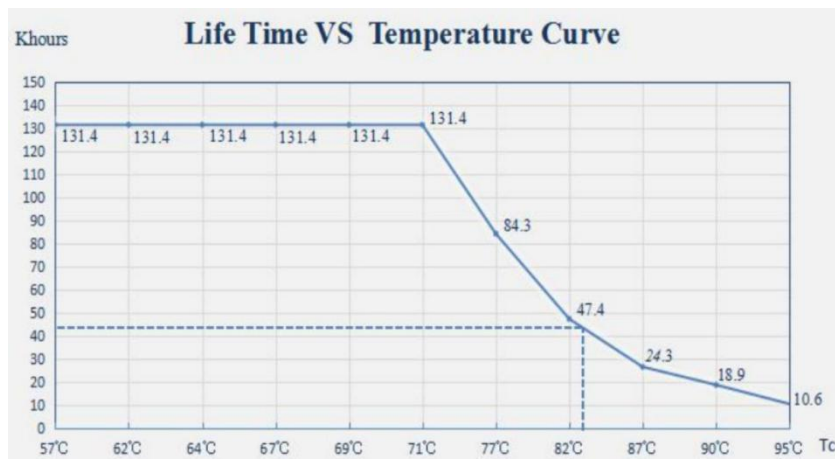
### ■ PF Curve



### ■ Efficiency Curve



### ■ Lifetime Curve



## Operations of Dimming

### ■ Definitions of Input/Output Terminals

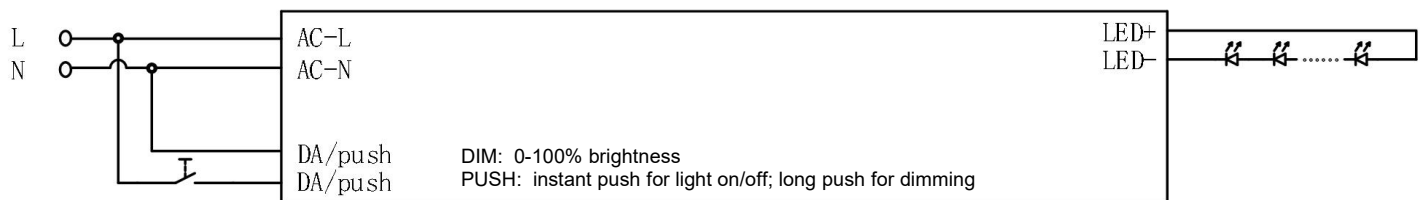
#### INPUT

AC-L	AC live wire input
AC-N	AC neutral wire input
NC	Vacant
DA/PUSH	DALI/PUSH dimming signal input
DA/PUSH	DALI/PUSH dimming signal input

#### OUTPUT

LED+	Positive electrode output of driver
LED-	Negative electrode output of driver

### ■ Wiring Diagram of Brightness Changing in Push Dimming Mode



**⚠ Remark: Before using PUSH dimming function, please connect AC-L/AC-N to electricity FIRST, then connect the PUSH terminal to electricity. Otherwise the PUSH terminal will be burned.**

### ■ Brightness Changing 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 the 50% luminance

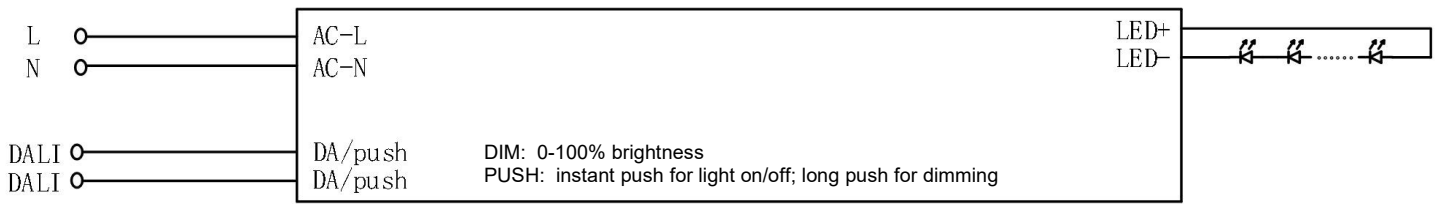
The push operation won't cause any variation if it's less than 0.1 sec.

- The minimum dimming depth of push dimming is 1% (lout).
- When entering to the push dimming mode for the first time, it's default to be 100% luminance output.
- For the first long press on the push button, the luminance dims down.
- In subsequent operations, the brightness changing direction (dim up or dim down) of every long press on the push button is opposite to the last one.

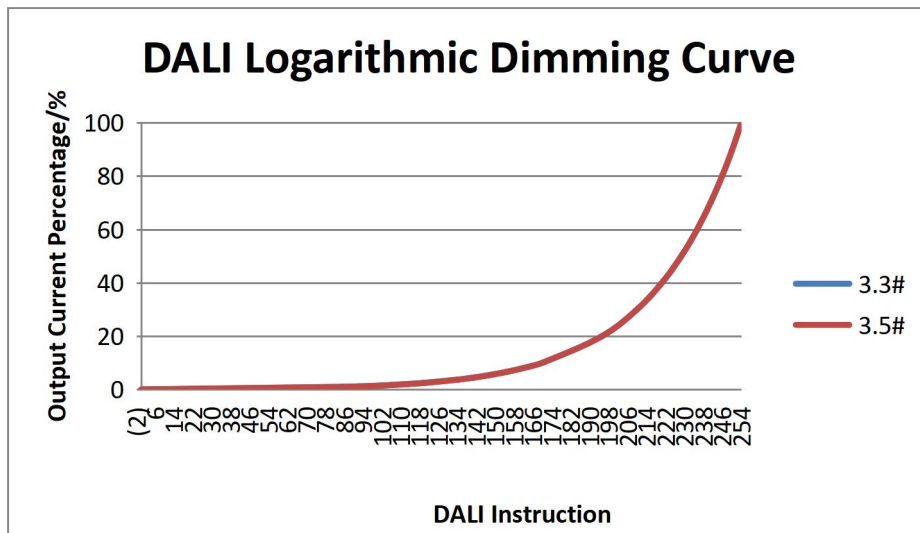
### ■ DALI dimming operations

- Factory default setting is 100% luminance and logarithmic dimming curve
- Connect the DALI signal to the DA/PUSH terminals, no positive or negative designation.
- DALI protocol includes 16 groups and 64 IP addresses.
- The minimum dimming depth of the DALI dimming is 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 in the DALI dimming mode at 100% luminance 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: Receiving any DALI instruction 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 light will be dimmed as the instruction tells.

**Label**

**INPUT**  
 AC-L  
 AC-N  
 0.75-1.5 □

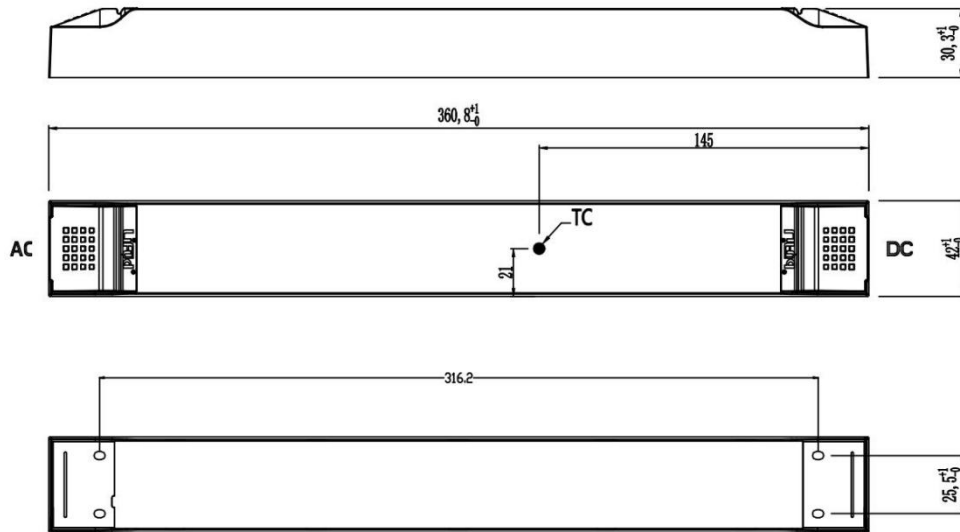
**LIFUD** LED Driver Model: LF-GSD120YV012B  
 Input: 220-240V ~ 50/60Hz Max.1.0A  
 Output Voltage:12V P rated:max.120W  
 I rated: 0-10A  
 PF:>0.95 ta:50°C tc:90°C  
 For Australia and New Zealand, the marking label with   
 Control Mode:DALI DT6

**OUTPUT**  
 LED+  
 LED-  
 0.75-2.5 □

Preparation for input and output   
 Dimmable 0.1%-100%

SELV CE   
 www.lifud.com Made in China

## Dimensions (unit: mm )



## Packaging Specification

Model	LF-GSD120YV012B
Packaging Box Size	385*285*210 mm (L*W*H)
Quantities	6 pcs/layer; 5 layers/ctn; 30 pcs/ctn
Weights	360 g/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.

### Change Resume

Version	Content of Change	Date	Remark
V1.0	Formal release	21 MAY 2021	