

## Product Description

LF-GSD040YG is a 40W constant current DALI or PUSH dimmable LED driver. Its rated input voltage ranges from 198 to 264Vac and output current is adjustable from 550mA to 1050mA via a DIP switch, in steps of 50mA.

## Features

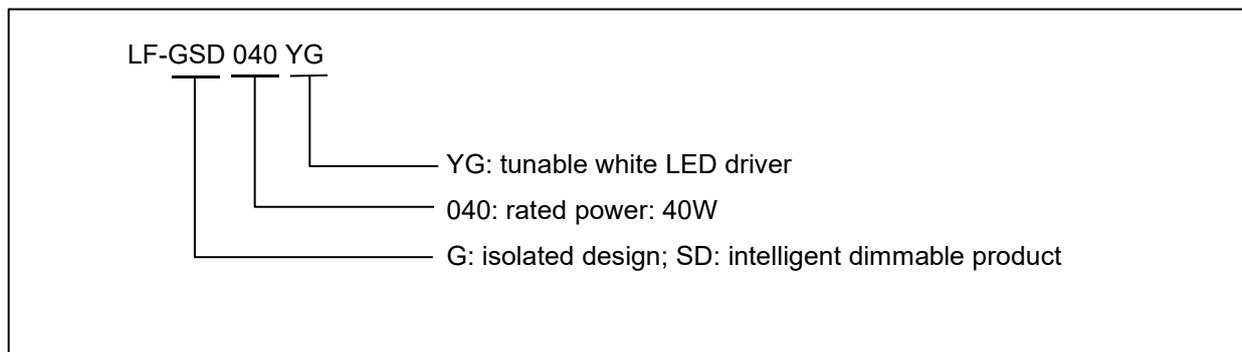
- DALI or PUSH dimming (logarithmic or linear dimming curve selectable on DALI interface)
- Constant current output and output current adjustable via DIP switch
- Built-in active PFC function
- Standby power consumption <0.5W
- CCT change: 2700-6500K
- IP20
- Suitable for Class II light fixtures
- 5-year warranty (please refer to the warranty condition)



## Applications

- Horticultural lighting
- Indoor office lighting
- Decorative lighting
- Commercial lighting
- Residential lighting

## Product Naming



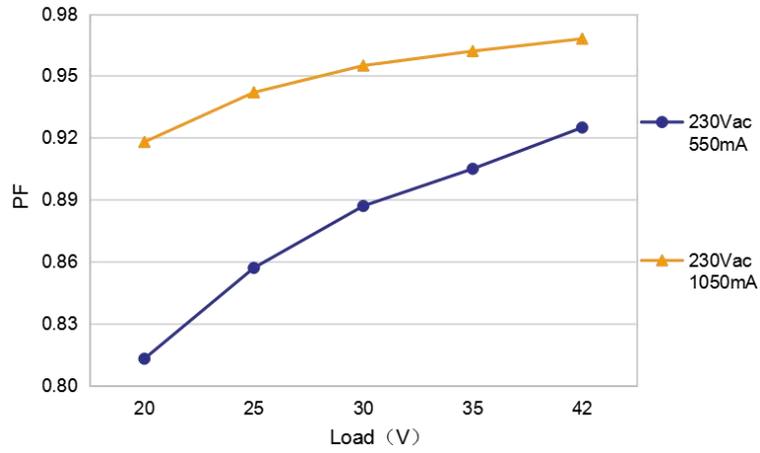
**Electrical Characteristics**

Model		LF-GSD040YG										
<b>Output</b>	Output Voltage	20-42V										
	Output Current	The output current is adjustable via DIP switch. Please refer to the DIP switch table.										
		550mA	600mA	650mA	700mA	750mA	800mA	850mA	900mA	950mA	1000mA	1050mA
	Flicker Index	IEC-Pst $\leq$ 1%, CIE SVM $\leq$ 0.4%, modulation depth $\leq$ 1% (Complies with flicker-free standard: IEEE Std 1789-2015)										
	Ripple Current	<5% (rated current)							<3% (rated current)			
	Current Tolerance	$\pm$ 5%										
	Temperature Drift	$\pm$ 5%										
Start-up Time	<1S@230Vac											
<b>Input</b>	Input Voltage	220-240Vac (voltage limit: 198-264Vac)										
	DC Input Voltage	310-340Vdc (voltage limit: 280-374Vdc)										
	Input Frequency	47Hz-63Hz										
	Input Current	0.3A max.										
	Power Factor	$\geq$ 0.9	$\geq$ 0.92	$\geq$ 0.94	$\geq$ 0.95							
		THD $\leq$ 15%										
	Efficiency	$\geq$ 85%	$\geq$ 86%	$\geq$ 87%								
	Inrush Current	$\leq$ 60A&100uS@230Vac										
	Load Quantity Carried by the Circuit Breaker	Circuit Breaker Model	B10	C10	B16	C16						
		Quantity (pcs)	22	22	35	35						
	Leakage Current	$\leq$ 0.7mA										
	Standby Power Consumption	$\leq$ 0.5W (when DALI OFF signal is effective)										
<b>Protection Characteristics</b>	Open Circuit Protection	<59V										
	Short Circuit Protection	Hiccup mode (auto-recovery)										
<b>Environment Descriptions</b>	Operating Temperature	-30 $^{\circ}$ C - +45 $^{\circ}$ C										
	Operating Humidity	20-90%RH (no condensation)										
	Storage Temperature/ Humidity	-30 $^{\circ}$ C - 80 $^{\circ}$ C (six months under class I environment); 10-90%RH (no condensation)										
		Atmospheric Pressure	86kPa~106kPa									

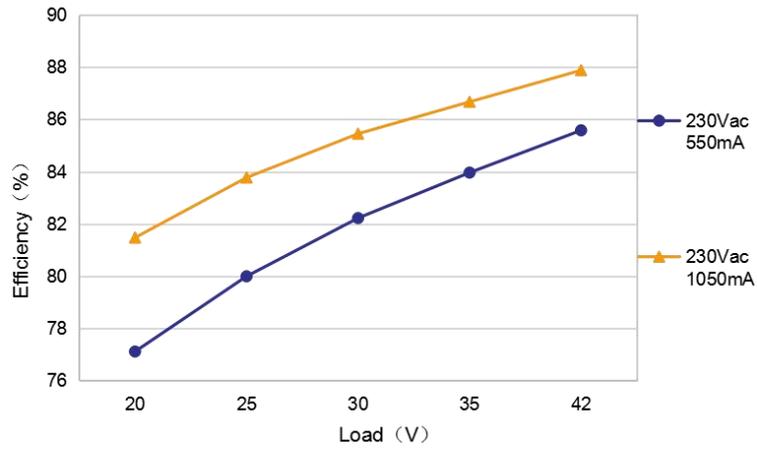
<b>Safety and Electromagnetic Compatibility</b>	Certifications	ENEC, CE, CB, RCM, CCC
	Withstanding Voltage	I/P-O/P: 3.75kV 5mA 60S
	Insulation Resistance	I/P-O/P: >100MΩ@500Vdc
	Safety Standards	ENEC: EN61347-1: 2015, EN 61347-2-13: 2014/A1: 2017, EN 62384: 2016/A1: 2009 CCC: GB19510.1-2009, GB19510.14-2009 RCM: AS 61347.2-13: 2018 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
	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 (lightning strike 1kV), 6, 11 CCC: GB/T17626.2, 3, 4, 5 (lightning strike 1kV), 6, 11
<b>Others</b>	IP Rating	IP20
	RoHS	RoHS 2.0 (EU) 2015/863
	Warranty Condition	5 yrs (TC≤77°C)
	DALI Standard	IEC 62386-101 102 207 209: DALI-2
<b>Remarks</b>	<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 LED driver used in combination with the end device is one of the accessories of the whole light fixture, and the EMC of the whole light fixture is not only susceptible to the driver itself, but to the LED light fixture and the whole light fixture's wiring. Thus, the manufacturer of LED light fixture should re-confirm the EMC of the whole light fixture before the whole light fixture is finished.</p> <p>3. The test conditions of the circuit breaker configuration quantity are the same as that of the inrush current test.</p> <p>4. Unless otherwise stated, the parameters above are test results under the conditions of ambient temperature of 25°C, humidity of 50%, DALI signal input, 100% load, maximum output current, CCT of 3115K and input voltage of 230Vac.</p>	

### Product Characteristic Curves

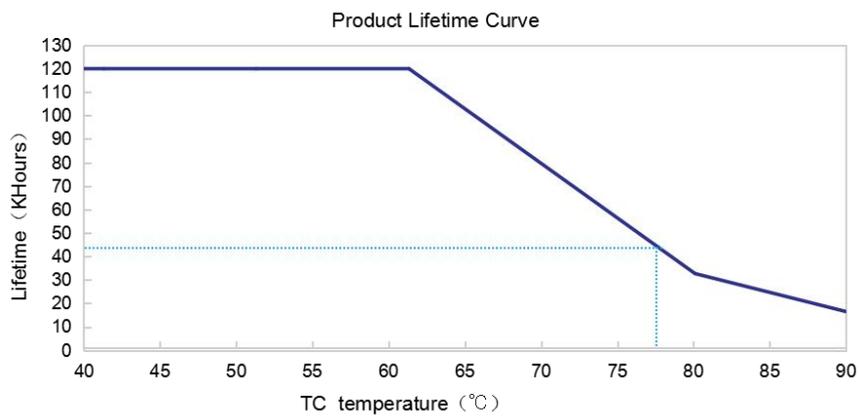
#### ■ PF Curve



#### ■ Efficiency Curve



#### ■ Lifetime Curve



## Dimming Operation Instructions

### ■ Terminals

#### INPUT

AC-L	AC live wire input
AC-N	AC neutral wire input
PUSH	PUSH dimming input
DA1	DA1 dimming signal input
DA2	DA2 dimming signal input

#### OUTPUT

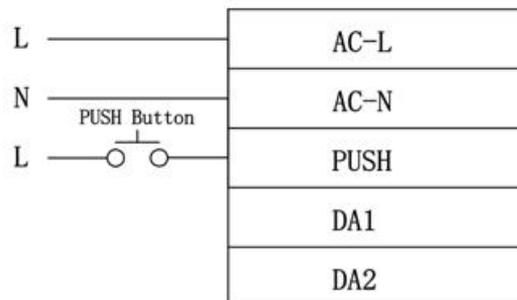
WW+	Positive electrode output of warm white light
WW-	Negative electrode output of warm white light
CW+	Positive electrode output of cold white light
CW-	Negative electrode output of cold white light

### ■ Product DIP Switch

I rated (CC)	1	2	3	4
1050mA	OFF	OFF	OFF	OFF
1000mA	OFF	OFF	OFF	ON
950mA	OFF	OFF	ON	OFF
900mA	OFF	OFF	ON	ON
850mA	OFF	ON	OFF	OFF
800mA	OFF	ON	OFF	ON
750mA	OFF	ON	ON	OFF
700mA	OFF	ON	ON	ON
650mA	ON	OFF	OFF	OFF
600mA	ON	OFF	OFF	ON
550mA	ON	OFF	ON	OFF

Remark: except the known DIP switch methods, the default current of other methods is 1050mA (max).

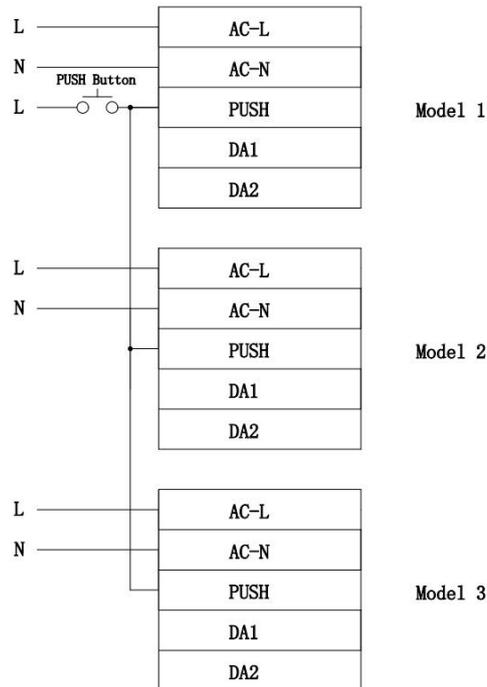
### ■ Wiring Diagram of PUSH CCT Change



- In PUSH dimming mode, continuously click twice (the time of each click is not less than 100ms, and the interval of two clicks is not more than 200ms) to enable the switch between dimmable and tunable white functions.
- The PUSH dimming mode has the memory function in case of any power failure. Power on the driver again and the light will return to the state before the power failure.

■ **Wiring Diagram of PUSH Synchronous Dimming For Multiple Drivers**

- Connect the PUSH signals of multiple drivers together.
- Connect these PUSH dimming signals to wire L via PUSH button.



■ **PUSH Dimming Operation Instructions**

Operation	Operation Time	Function
Instant Push	0.1-0.5 sec	Light on / off
Long Push	0.6 - 4.6 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: 5% (lout)
- Default output state when entering into the PUSH mode for the first time: dimming (100% brightness; two-channel output with 50% warm light and 50% cold light)
- For the first long press on the PUSH button, the CCT (warm light and cold light) remains unchanged and the brightness decreases.
- The present PUSH dimming direction is opposite to the former one.

■ **PUSH CCT Change Operation Instructions**

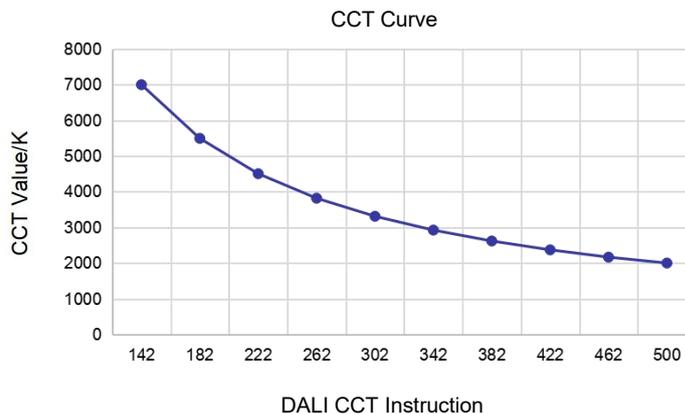
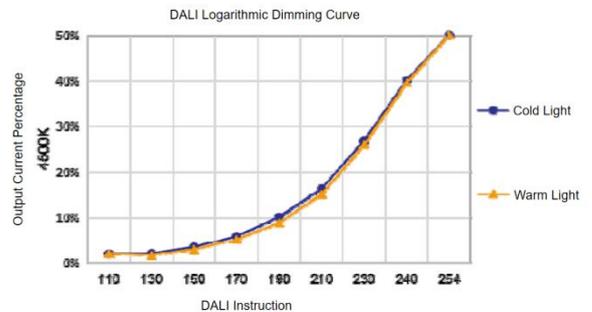
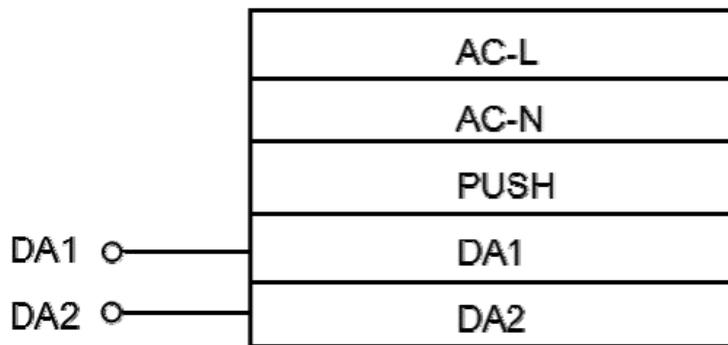
Operation	Operation Time	Function
Instant Push	0.1-0.5 sec	Light on / off
Long Push	0.6 - 4.6 sec	CCT change of luminaire
Reset Push	>9 sec	Reset to the two-channel output with 50% warm light and 50% cold light

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

- Minimum CCT of PUSH dimming: warm light; maximum: cold light.
- Default output state when entering into the PUSH CCT change mode for the first time: two-channel output with 50% warm light and 50% cold light.
- For the first long press on the PUSH button, the brightness remains unchanged and the CCT change adjusts to the cold light.
- The present direction of PUSH CCT change is opposite to the former one.

■ **DALI Dimming Operation Instructions**

- Factory default settings: two-channel output with 50% warm light and 50% cold light; 100% brightness
- Connect the DALI signal to the DA1 and DA2 terminals.
- DALI protocol includes 16 groups and 64 IP addresses.
- Minimum dimming depth of DALI dimming: 5% (lout).



**■ Instructions on Switch of Dimming Modes**

- When powering the driver on for the first time, the driver enters into DALI mode; 100% brightness; two-channel output with 50% warm light and 50% cold light.
- The switch between DALI and PUSH modes:
  1. Switch to PUSH mode: long press on the PUSH button for more than 0.6 sec; the present output state is the former one memorized by PUSH mode.
  2. Switch to DALI mode: the moment the driver receives any DALI instructions; for non-dimmable instructions, the present output state remains unchanged; for dimmable instructions, the driver dims up and down.

**Label**

**Lifud<sup>®</sup> LED Driver (LED 控制装置)**

**Model: LF-GSD040YG** Preparation for input and output

Input: 220-240V~50/60Hz Max.0.3A

U out: 59V<sup>-</sup> PF:>0.9C P rated:44.1W(Max)

For 2 -Channel LED Driver

For Australia and New Zealand, the marking label with

**Output current and setting table**

ta	Vo DC	I rated(CC)	1	2	3	4
45°C	20V-42V	1050mA	OFF	OFF	OFF	OFF
		1000mA	OFF	OFF	OFF	ON
		950mA	OFF	OFF	ON	OFF
		900mA	OFF	OFF	ON	ON
		850mA	OFF	ON	OFF	OFF
		800mA	OFF	ON	OFF	ON
		750mA	OFF	ON	ON	OFF
		700mA	OFF	ON	ON	ON
		650mA	ON	OFF	OFF	OFF
		600mA	ON	OFF	OFF	ON
		550mA	ON	OFF	ON	OFF

**OUTPUT**

WW-  WW+  CW+  CW-

0.5-1.0 □

1 2 3 4

ON

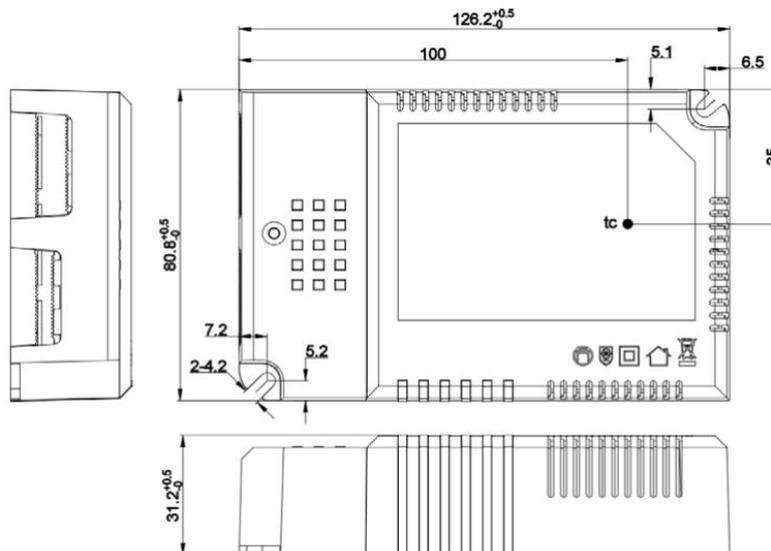
OFF

tc:90°C

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Made in China (中国制造)

**Dimensions (unit: mm)**



## Packaging Specifications

Model	LF-GSD040YG
Packaging Dimension	385*285*210mm (L*W*H)
Quantity	8 pcs/layer; 6 layers/ctn; 48 pcs/ctn
Weight	0.2192 kg/pc; 11.7 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.