

## Product Description

LF-GSD040PF is a 40W isolated constant current DALI DT6 dimmable LED driver. It has DALI dimming and push dimming functions. Its rated input voltage limit is 198-264Vac. The output current can be adjusted via the DIP switch from 550mA to 1050mA, in steps of 50mA.

## Features

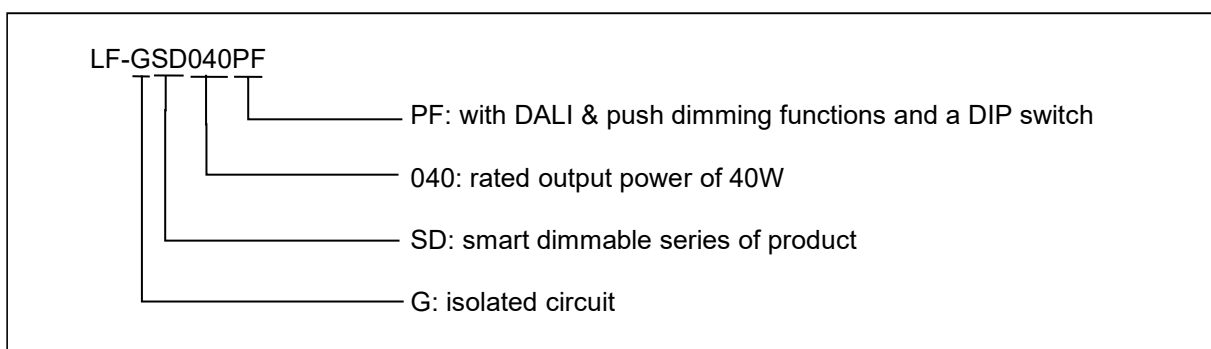
- IP20
- Suitable for Class II light fixtures
- Constant current output. The output current can be adjusted via the DIP switch
- Built-in active PFC function
- Standby power consumption is less than 0.5W
- DALI dimming function. The logarithmic dimming curve or the linear dimming curve of DALI dimming can be selected via the software
- Push dimming function
- 5-year warranty (Please refer to the warranty condition.)

## Applications

- Plant lighting
- Indoor office lighting
- Decorative lighting
- Commercial lighting
- Residential lighting



## Product Naming



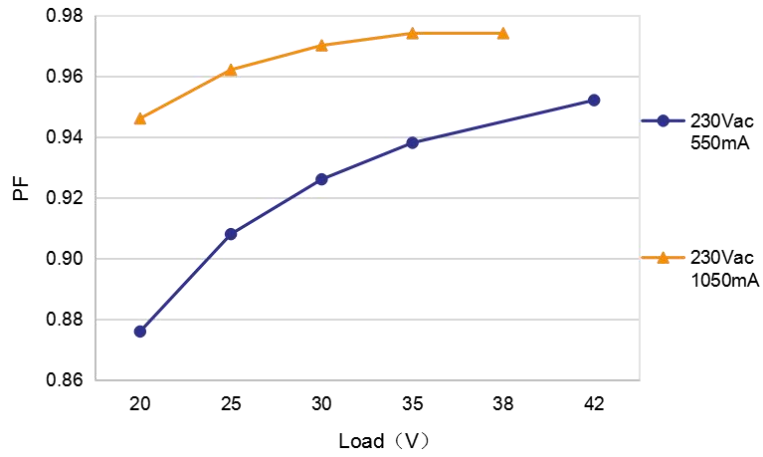
## Electrical Characteristics

Model		LF-GSD040PF										
Output	Output Voltage	20-42V									20-40V	20-38V
	Output Current	The output current can be adjusted via the DIP switch. Please refer to the DIP switch table.										
		550 mA	600 mA	650 mA	700 mA	750 mA	800 mA	850 mA	900 mA	950 mA	1000 mA	1050 mA
	Percent Flicker (Fluctuation Depth)	<0.5%										
	Ripple Current	<10% (rated current)										
	Current Tolerance	±5% (±3%: load ≥80%)										
	Temperature Drift	±10%										
	Start-up Time	<1S@230Vac										
Input	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	≥0.90			≥0.92				≥0.95			
		THD										
	Efficiency	≥84%		≥85%		≥86%		≥86.5%		≥87%		
	Inrush Current	≤60A & 10uS @230Vac										
	Load Quantity Carried by the Circuit Breaker	Circuit Breaker Model		B10		C10		B16		C16		
		Quantity (pcs)		25		40		40		64		
	Leakage Current	≤0.7mA										
Standby Power Consumption	≤0.5W (when the DALI signal is off)											
Protection Characteristics	Open Circuit Protection	<59V										
	Short Circuit Protection	Hiccup mode (auto-recovery)										
Environment Description	Working Temperature	-30°C~+45°C										
	Working Humidity	20-90%RH (no condensation)										

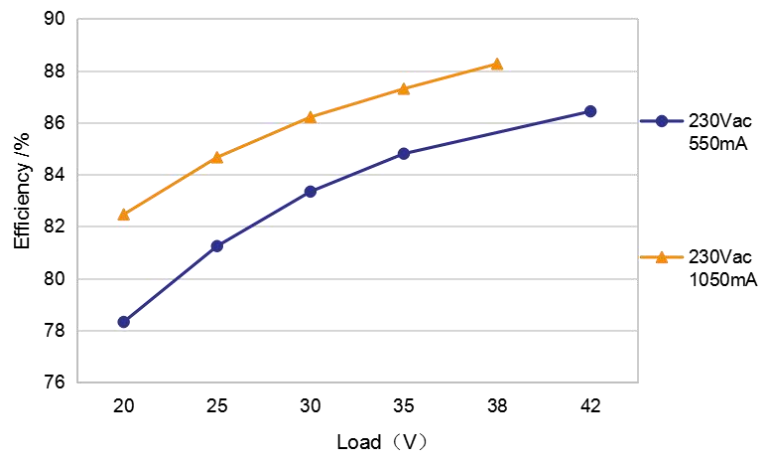
	Storage Temperature/Humidity	-30℃~+ 80℃ (six months under class I environment); 10-90%RH (no condensation)
	Atmospheric Pressure	86KPa~106KPa
Safety & Electromagnetic Compatibility	Certifications	ENEC, CE, CB, RCM, CCC
	Withstanding Voltage	I/P-O/P: 3.75KV, 5mA, 60S
	Insulation Resistance	I/P-O/P: >100MΩ @ 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
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. 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 re-confirms the EMC of the whole LED light fixture.</p> <p>3. The test conditions of the circuit breaker configuration quantity are the same as those of the inrush current test.</p> <p>4. Unless otherwise stated, the parameters above are test results under these conditions: ambient temperature 25℃, humidity 50%, DALI signal, 100% load, maximum output current and input voltage 230Vac.</p>	

## Product Characteristic Curves

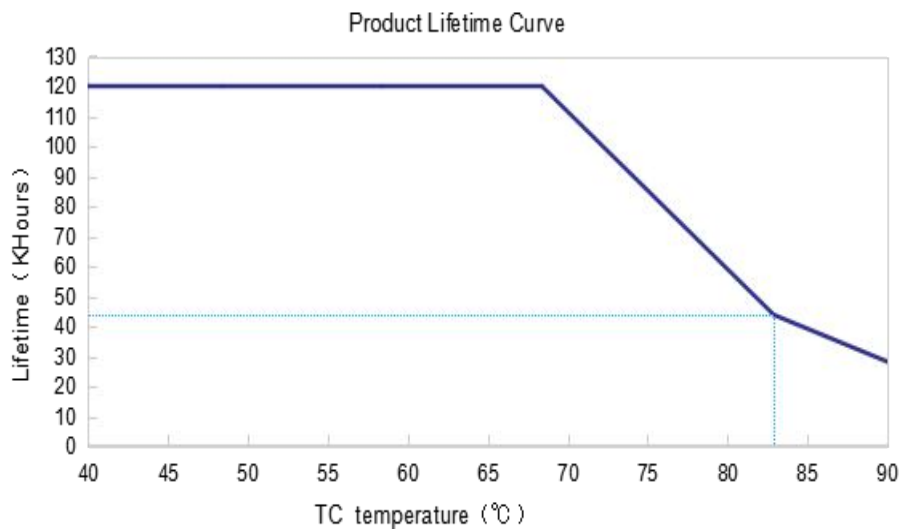
### ■ PF Curve



### ■ Efficiency Curve



### ■ Lifetime Curve



## Instructions of Dimming Operation

### ■ Terminals

#### INPUT

DA1 PUSH	Input terminal of DA1 and push dimming
DA2 PUSH	Input terminal of DA2 and push dimming
AC-L	Input terminal of AC live wire
AC-N	Input terminal of AC neutral wire

#### OUTPUT

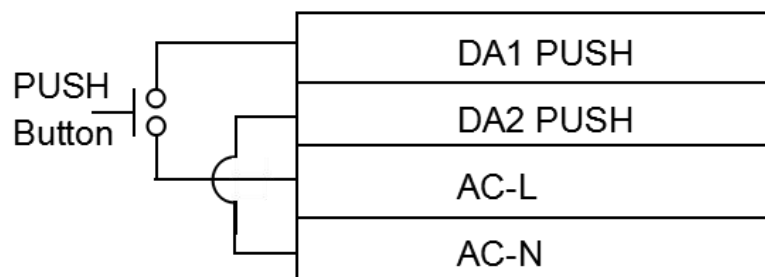
LED+	Positive electrode output of the driver
LED-	Negative electrode output of the driver

### ■ DIP Switch Table

I rated (C.C.)	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 settings mentioned in the table above, other DIP switch settings are default to be the maximum current 1050mA.

### ■ Wiring Instruction of the Push Dimming



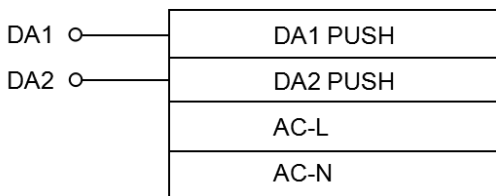
■ **Operation Instructions of Push Dimming**

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

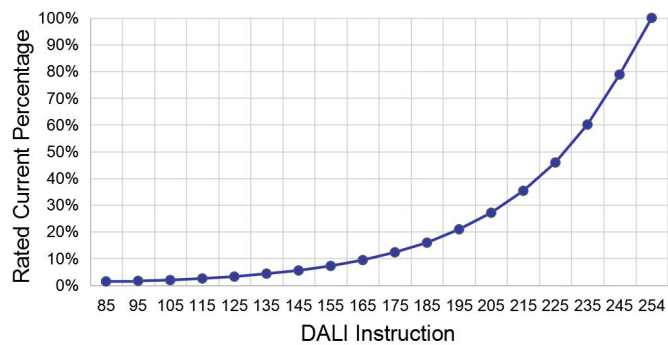
- The push operation won't cause any variation if it's less than 0.1 sec.
- Connect the push dimmer in series to the AC-L and the DA1 terminals of LF-GSD040PF. Connect the AC-N and DA2 terminals in short circuit.
- The minimum dimming depth of push dimming is 1% (Iout).
- The push dimming mode has memory function in case of power failure. When the power supply is restored, the light will return to the exact status before power failure.
- In the push dimming mode, every dimming direction (up or down) is opposite to the last one.
- The maximum wire length between the push switch and the farthest LED driver is 135m. Wire diameter: 16-22AWG.

■ **Operation Instructions of DALI Dimming**

- Factory default setting is of 100% brightness.
- Connect the DALI signal to the DA1 and DA2 terminals.
- DALI protocol includes 16 groups and 64 IP addresses.
- In the DALI dimming mode, the maximum quantity of the LED drivers connected in parallel is 64 pieces.
- The minimum dimming depth of the DALI dimming is 1% (Iout).



DALI Logarithmic Dimming Curve



**⚠** The DALI dimming function and the push dimming function cannot be used at the same time, otherwise the DALI dimming will be damaged.

**Label**

**LIFUD** LED Driver(LED控制装置) Model: LF-GSD040PF **DALI**  
 Input: 220-240V~50/60Hz Max.0.3A  
 For Australia and New Zealand, the marking label with " " tc:90°C  
 U out: 59V== PF:>0.9C P rated:40W(Max)

**INPUT**  
 DA 1 PUSH  
 DA 2 PUSH  
 AC-L  
 AC-N  
 0.75-1.5□

**Output current and setting table**

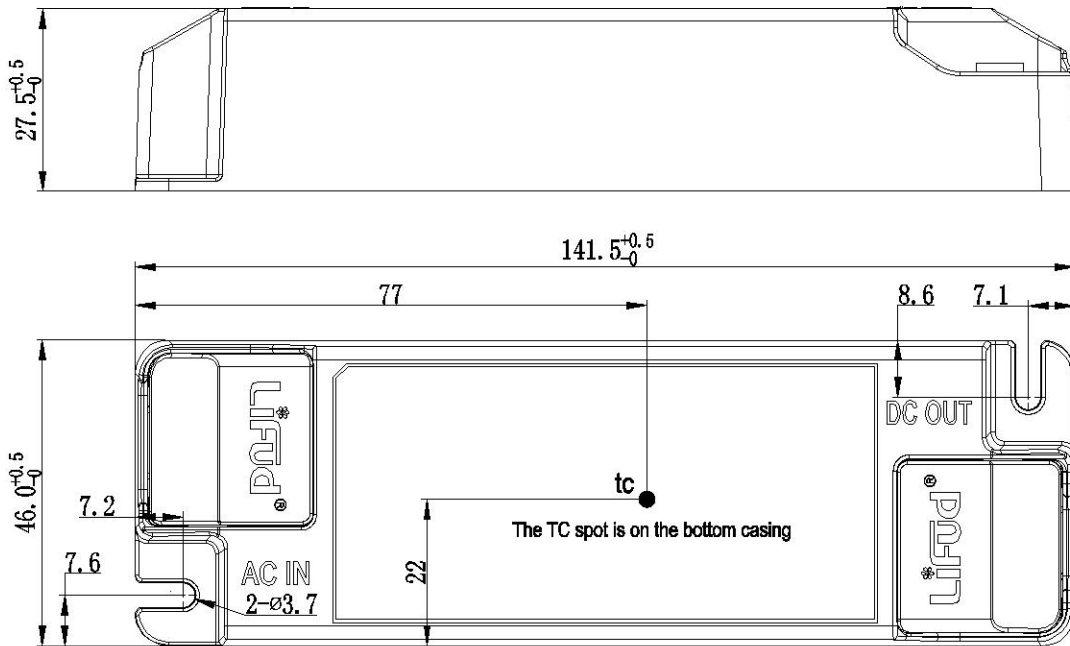
ta	Vo DC	I rated(CC)	1	2	3	4
45°C	20-38V	1050mA	OFF	OFF	OFF	OFF
	20-40V	1000mA	OFF	OFF	OFF	ON
	20-42V	950mA	OFF	OFF	ON	OFF
	20-42V	900mA	OFF	OFF	ON	ON
	20-42V	850mA	OFF	ON	OFF	OFF
	20-42V	800mA	OFF	ON	OFF	ON
	20-42V	750mA	OFF	ON	ON	OFF
	20-42V	700mA	OFF	ON	ON	ON
	20-42V	650mA	ON	OFF	OFF	OFF
	20-42V	600mA	ON	OFF	OFF	ON
20-42V	550mA	ON	OFF	ON	OFF	

Preparation for input and output  
 7.5mm  
 For LED modules only  
 www.lifud.com  
 Made in China  
 (中国制造)

**OUTPUT**  
 LED+  
 LED-  
 0.5-1.0 □

1 2 3 4  
 ON OFF

**Structure & Dimension (Unit: mm)**



**Packaging Specification**

Model	LF-GSD040PF
Packaging Dimension	385*285*210 mm (L*W*H)
Quantity	10 pcs/layer; 6 layers/ctn; 60 pcs/ctn
Weight	0.1355 kg/pc; 9.13 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 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	2 JUN 2020	
V1.1	Revised the current tolerance	11 JUN 2020	