

Product Description

LF-GSD020PF is a 20W 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 250mA to 500mA, in steps of 50mA.

Features

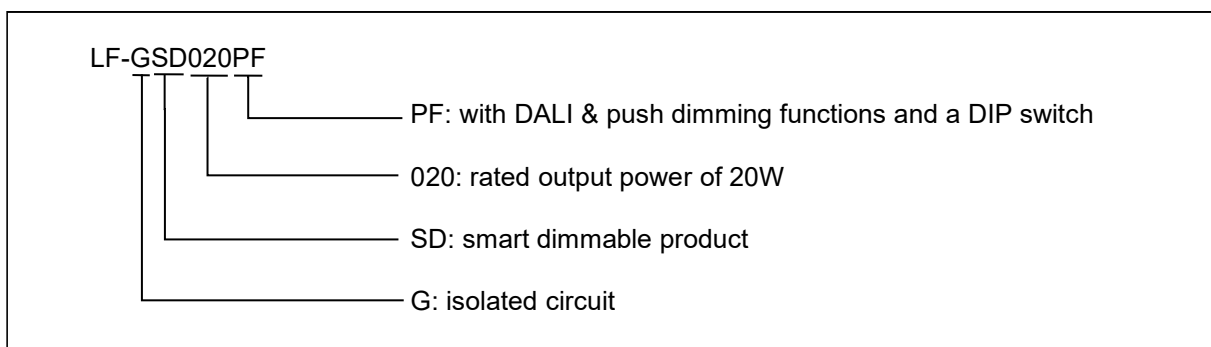
- IP20
- Suitable for Class II light fixtures
- Constant current output. The output current can be adjusted via the DIP switch
- Built-in active PFC function
- Standby power consumption is less than 0.5W
- DALI dimming function. The logarithmic dimming curve or the linear dimming curve of DALI dimming 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



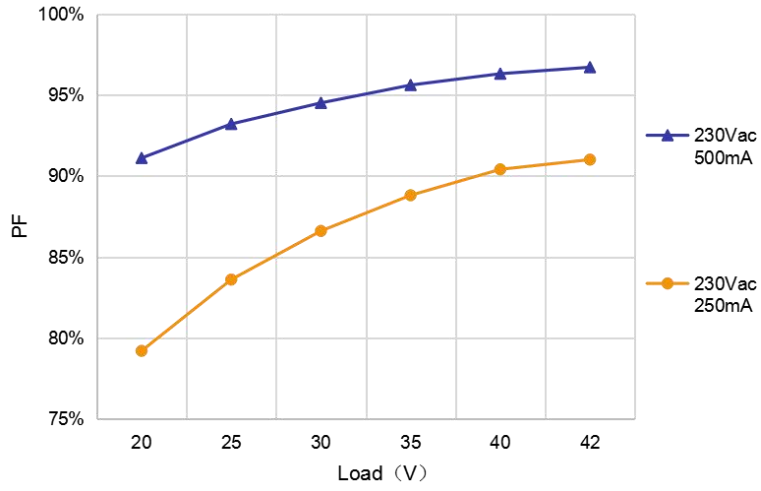
Electrical Characteristics

Model		LF-GSD020PF					
Output	Output Voltage	20-42V					
	Output Current	The output current can be adjusted via the DIP switch. Please refer to the DIP switch table.					
		250mA	300mA	350mA	400mA	450mA	500mA
	Percent Flicker (Fluctuation Depth)	<1%					
	Ripple Current	<10% (rated current)			<5% (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	176-280Vdc					
	Input Frequency	47Hz-63Hz					
	Input Current	0.2A Max.					
	Power Factor	≥0.88	≥0.90	≥0.92	≥0.93	≥0.94	≥0.94
	THD	≤15%					
	Efficiency	≥81.5%	≥83%	≥84%	≥84.5%	≥85%	≥85.5%
	Inrush Current	≤60A & 120uS @230Vac					
	Load Quantity Carried by the Circuit Breaker	Circuit Breaker Model	B10	C10	B16	C16	
		Quantity (pcs)	13	21	20	34	
	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)					

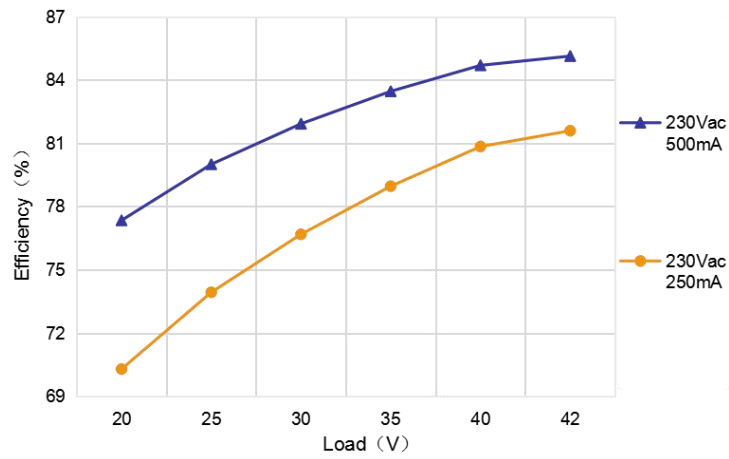
Environment Description	Working Temperature	-30°C~+45°C
	Working Humidity	20-90%RH (no condensation)
	Storage Temperature/Humidity	-40°C~+ 80°C (six months under class I environment); 10-90%RH (no condensation)
	Atmospheric Pressure	86KPa~106KPa
Safety & Electromagnetic Compatibility	Certifications	ENEC, 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 CE-LVD: EN 61347-2-13: 2014/A1: 2017, EN 61347-1: 2015, EN 62493: 2015 RCM: AS 61347.2-13: 2018 CB: IEC 61347-1: 2015, IEC61347-2-3: 2014, IEC 61347-2-13: 2014/AMD1: 2016 CCC: GB19510.1-2009, GB19510.14-2009
	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≤86°C)
	DALI Standard	IEC 62386-101 102 207: DALI 2.0
Remarks	<ol style="list-style-type: none"> 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. 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 should re-confirm the EMC of the whole LED light fixture. 3. The test conditions of the circuit breaker configuration quantity are the same as those of the inrush current test. 4. Unless otherwise stated, the parameters above are test results under these conditions: ambient temperature 25°C, humidity 50%, DALI signal, 100% load, maximum output current and input voltage 230Vac. 	

Product Characteristic Curves

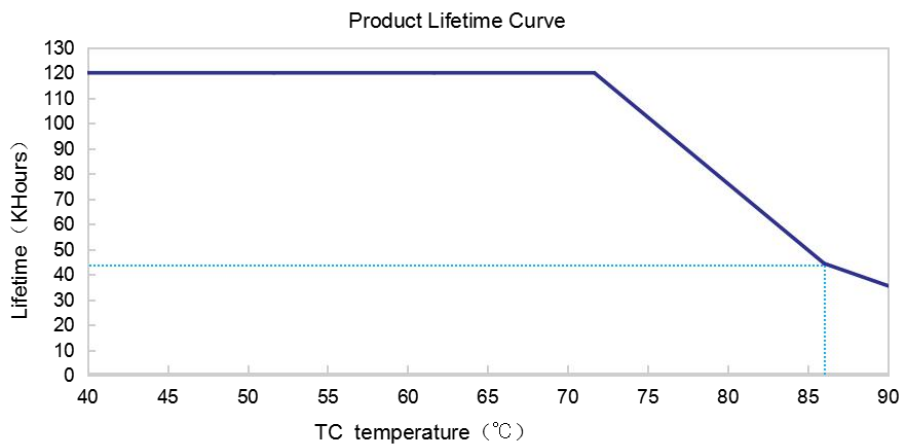
■ **PF Curve**



■ **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

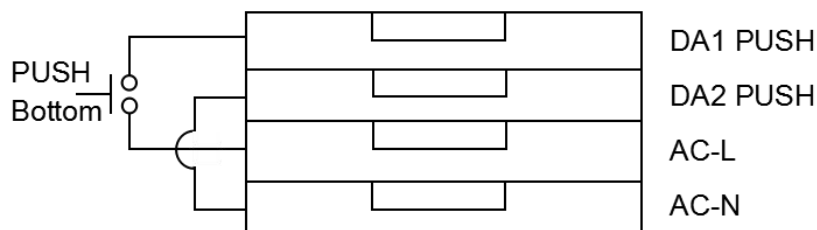
LED+	Positive electrode output of the driver
LED-	Negative electrode output of the driver

■ DIP Switch Table

I rated (C.C.)	1	2	3
500mA	OFF	OFF	OFF
450mA	OFF	OFF	ON
400mA	OFF	ON	OFF
350mA	OFF	ON	ON
300mA	ON	OFF	OFF
250mA	ON	OFF	ON

Remark: Except the settings mentioned in the table above, other DIP switch settings are default to be the maximum current 500mA.

■ Wiring Instruction of the Push Dimming



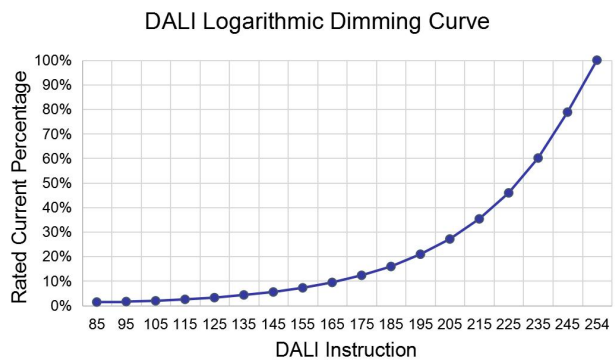
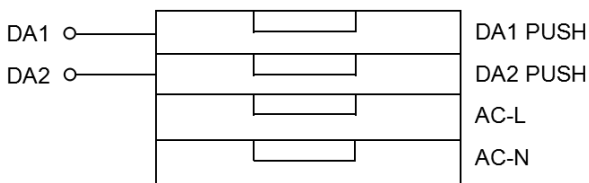
■ Operation Instructions of Push Dimming

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-GSD020PF. Connect the AC-N and DA2 terminals in short circuit.
- The minimum dimming depth of push dimming is 1% (lout).
- 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.
- In the DALI dimming and push dimming modes, the maximum quantity of the LED drivers connected in parallel is 64 pieces.

■ **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.
- The minimum dimming depth of the DALI dimming is 1% (lout).



⚠ 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-GSD020PF

Input: 220-240V~50/60Hz Max.0.2A
U out: 59V= PF:>0.9C P rated:21W(Max)
For Australia and New Zealand,the marking label with "3000V"

INPUT
DA1 PUSH
DA2 PUSH
AC-L
AC-N
0.75-1.5

Output current and setting table

ta	Vo DC	I rated(CC)	1	2	3
45°C	20V-42V	500mA	OFF	OFF	OFF
		450mA	OFF	OFF	ON
		400mA	OFF	ON	OFF
		350mA	OFF	ON	ON
		300mA	ON	OFF	OFF
		250mA	ON	OFF	ON

tc:90°C
For LED modules only
www.lifud.com
Made in China
(中国制造)

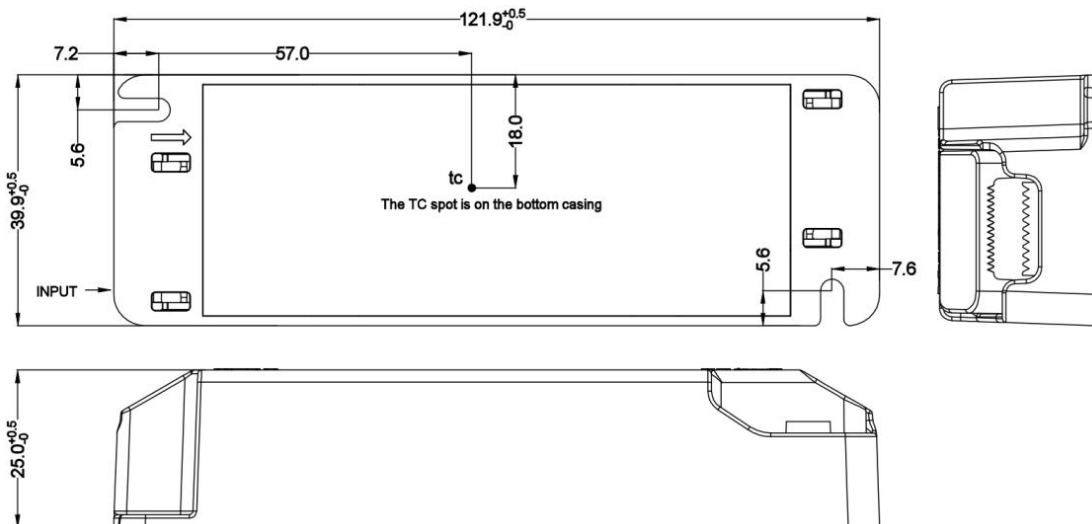
Preparation for input and output
7.5mm

DALI 2

1 2 3
ON OFF

OUTPUT
LED+
LED-
0.5-1.0

Structures & Dimensions (Unit: mm)



Packaging Specifications

Model	LF-GSD020PF
Packaging Dimensions	385*285*210 mm (L*W*H)
Quantities	14 pcs/layer; 6 layers/ctn; 84 pcs/ctn
Weights	0.086 kg/pc; 8.3 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	25 MAY 2020	
V1.1	Revised the current tolerance	11 JUN 2020	
V1.2	Revised the DC input voltage range	29 OCT 2020	