

Product Description

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

Features

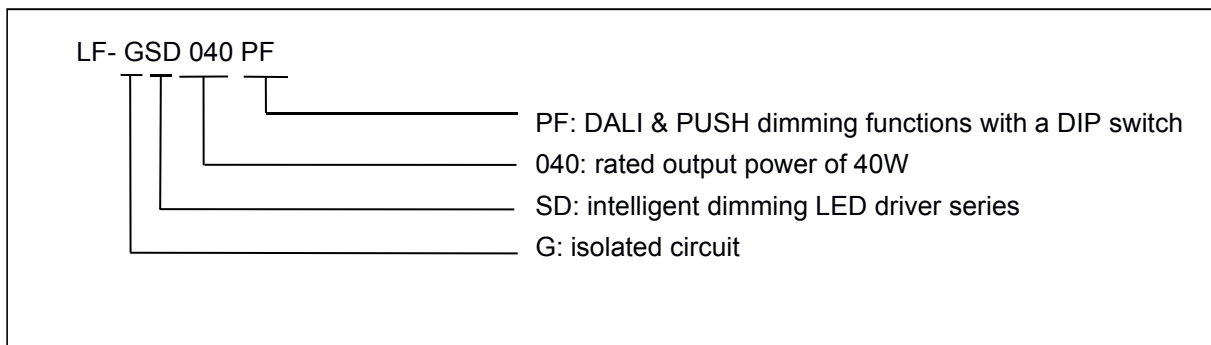
- IP20
- Suitable for Class II light fixtures
- Constant current output and the output current can be adjusted via the DIP switch
- Built-in active PFC function
- Standby power consumption <0.5W
- Supports DALI dimming and the logarithmic or the linear dimming curves can be selected via the software
- Supports PUSH dimming
- 5-year warranty (Please refer to the warranty condition.)

Applications

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



Product Naming



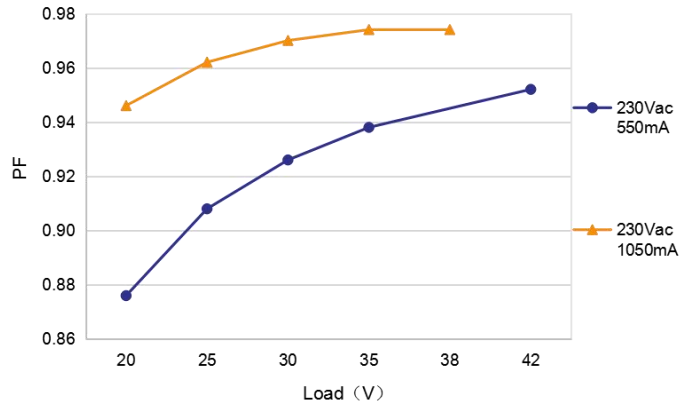
Electrical Characteristics

Model		LF-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.										
		550mA	600mA	650mA	700mA	750mA	800mA	850mA	900mA	950mA	1000mA	1050mA
	Percent Flicker	<0.5%										
	Ripple Current	<10% (rated current)										
	Current Tolerance	±5%										
	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	≥0.9	≥0.92					≥0.95				
	THD	≤15%										
	Efficiency	≥84%	≥85%	≥85.5%	≥86.5%				≥86%			
	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 OFF signal is effective)										
Protection Characteristics	Open Circuit Protection	<59V										
	Short Circuit Protection	Hiccup mode (auto-recovery)										
Environment Descriptions	Working Temperature	-30℃~+45℃										
	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											

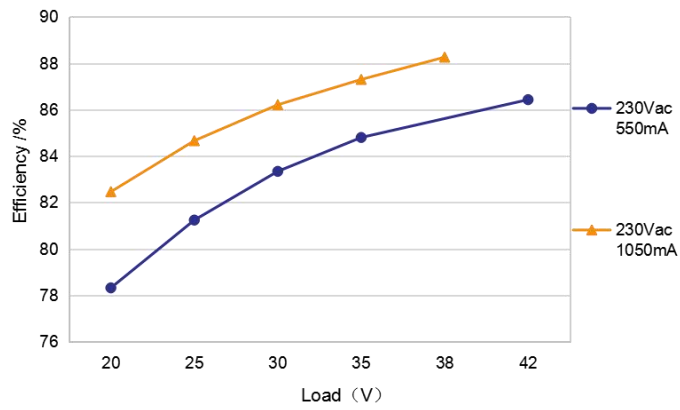
Safety & Electromagnetic Compatibility	Certifications	ENEC, CCC, RCM, CE, CB
	Withstanding Voltage	I/P-O/P (LED): 3.75KVac, O/P(LED)-O/P(DA): 500Vac, I/P-O/P(DA): 500Vac
	Insulation Resistance	I/P-O/P: >100MΩ @ 500Vdc
	Safety Standards	ENEC: EN61347-1: 2015, EN 61347-2-13: 2014/A1: 2017, EN 62384: 2016/A1: 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°C)
	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°C, humidity 50%, DALI signal, 100% load, maximum output current and input voltage 230Vac.</p>	

Product Characteristic Curves

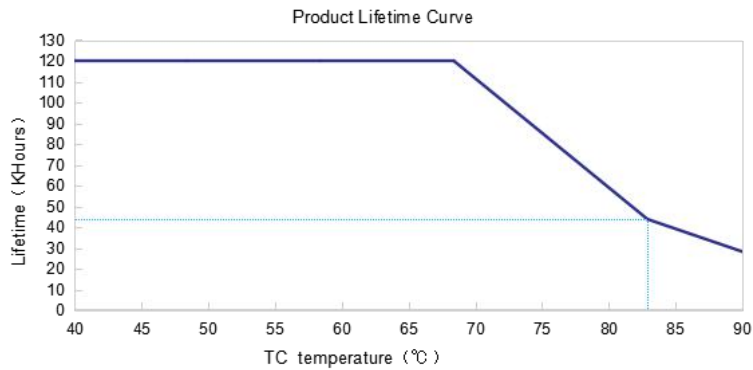
■ **PF Curve**



■ **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

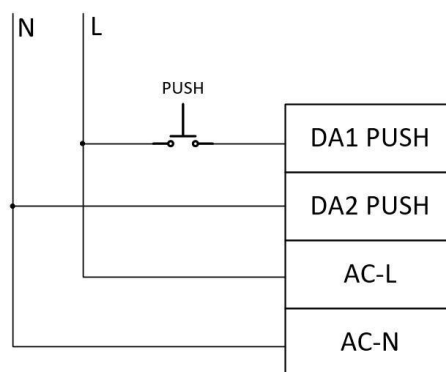
LED+	Positive electrode output of the driver
LED-	Negative electrode output of the driver

■ DIP Switch Table

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

■ Wiring Instruction of PUSH Dimming



Remarks:

1. The PUSH switch shall be connected between AC-L and DA1 PUSH terminals and DA2 PUSH terminal shall be connected to AC-N.
2. AC-L and AC-N cannot be directly connected to DA1 PUSH and DA2 PUSH terminals.
3. Before AC is powered on, please ensure that the PUSH switch is disconnected. After AC is powered on, PUSH operation can be performed.
4. Before AC is powered off, please ensure that the PUSH switch is disconnected, and then disconnect AC.
5. If you have any questions about the above wiring and the operation methods, please confirm with FAE of our company.



Wrong wiring method or wrong operation method may cause the damage of LED driver.

■ Operation Instructions of PUSH Dimming

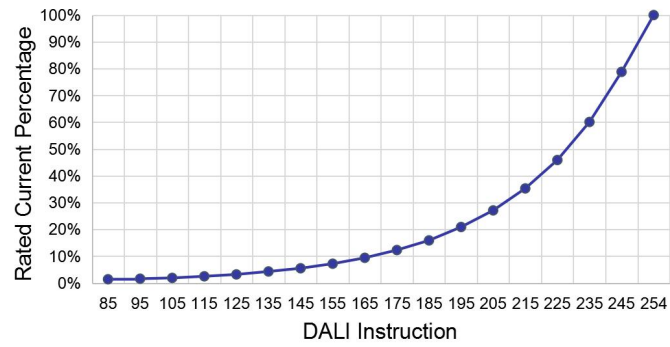
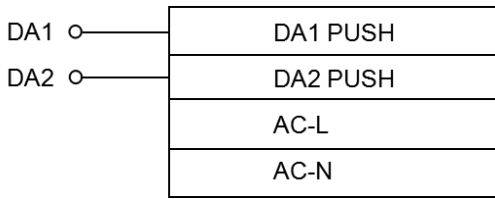
Operation	Operation Time	Function
Instant Push	0.1 - 0.5S	Light on / off
Long Push	0.6 - 9S	Dim up / down
Reset Push	> 9S	Reset to the 50% brightness

- The PUSH operation won't cause any variations if it's less than 0.1 sec.
- The minimum dimming depth of PUSH dimming is 1% (lout).
- The PUSH dimming mode has the memory function in case of any 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 length of the leading wire from the PUSH switch to the farthest LED driver is 135m. The wire diameter range is 16-22AWG.
- The maximum number of parallel LED drivers in DALI&PUSH mode is 64.

■ Operation Instructions of DALI Dimming

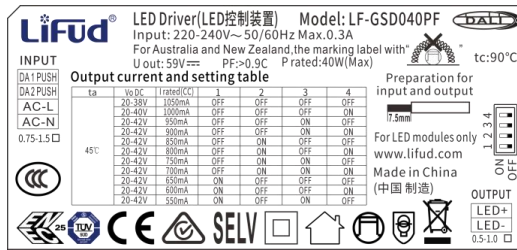
- Factory default setting is of 100% brightness.
- DALI signals are connected to DA1 PUSH and DA2 PUSH terminals.
- DALI protocol includes 16 groups and 64 IP addresses.
- In DALI dimming mode, the maximum number of the LED drivers connected in parallel is 64 pcs.
- The minimum dimming depth of DALI dimming is 1% (lout).

DALI Logarithmic Dimming Curve

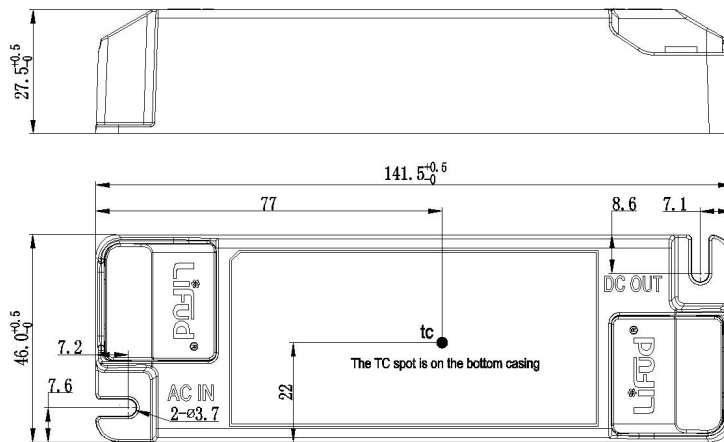


⚠ The DALI dimming function and the PUSH dimming function cannot be used at the same time, otherwise the DALI dimmer will be damaged.

Label



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.