

Product Description

LF-GSD020YE series is a 20W constant current LED driver. It has DALI dimming and push dimming functions. It works under the input voltage of 198-264VAC. The output current can be adjusted via the DIP switch from 250mA to 500mA, in steps of 50mA.

Features

- IP20
- Metal casing, suitable for Class I & II light fixtures
- Constant current output. The output current can be adjusted via the DIP switch
- Built-in active PFC function
- Standby power consumption: <0.5W
- Dimming depth: 0.1%
- DALI dimming function. The logarithmic dimming curve or the linear dimming curve can be selected via the software
- Push dimming function
- 5-year warranty (Please refer to the warranty condition.)

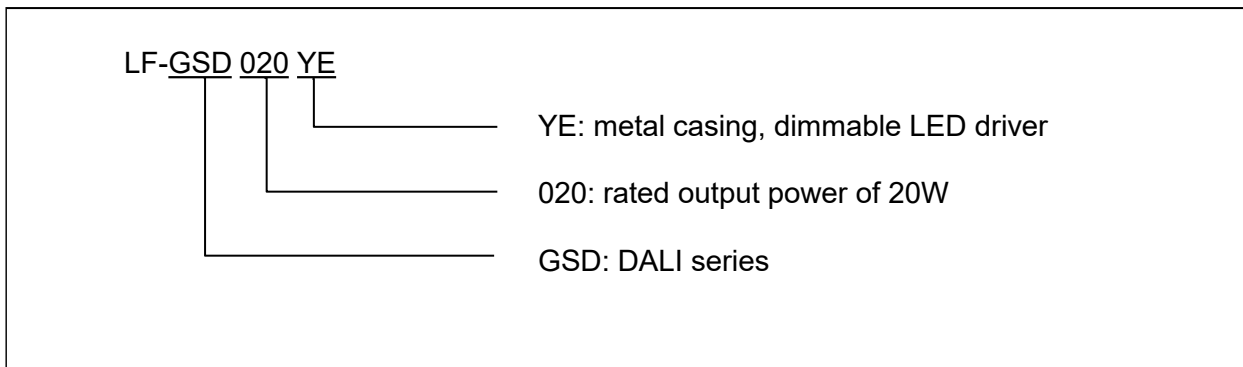


Applications

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



Product Naming



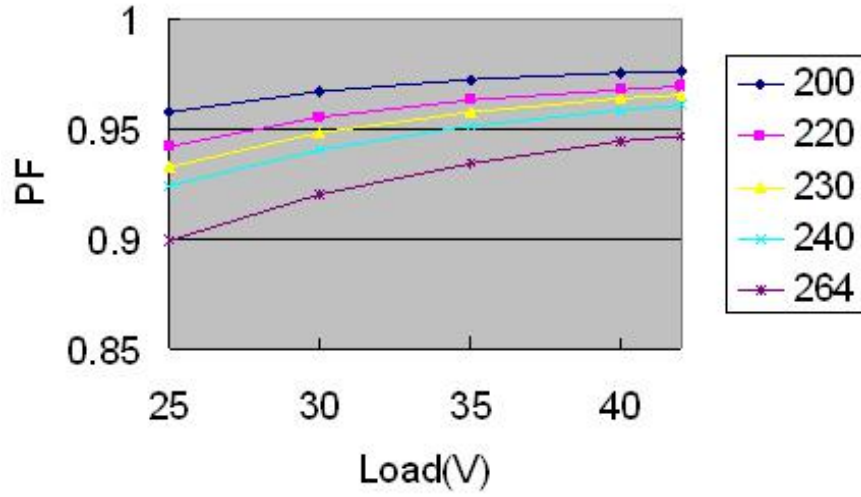
Electrical Characteristics

Model		LF-GSD020YE					
Output	Output Voltage	25-42V					
	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
	Flicker Index	IEC-Pst \leq 1, CIE SVM \leq 0.4, Modulation Depth \leq 1% (Meet with flicker free standard: IEEE Std 1789-2015)					
	Ripple Current	<10% (rated current)			<5% (rated current)		
	Current Tolerance	\pm 5%					
	Temperature Drift	\pm 10%					
	Start-up Time	<1.4s @230VAC					
Input	Input Voltage	220-240VAC (voltage limit : 198-264VAC)					
	DC Input Voltage	310-340VDC (voltage limit : 280-374VDC)					
	Input Frequency	47-63Hz					
	Input Current	0.15A Maximum					
	Power Factor	\geq 0.9	\geq 0.91	\geq 0.92	\geq 0.93	\geq 0.94	\geq 0.95
	THD	\leq 15% @230Vac (DC42V full load)					
	Efficiency	\geq 82%	\geq 83%	\geq 84%	\geq 85%	\geq 85%	\geq 86%
	Inrush Current	\leq 80A/350uS@230VAC (Maximum)					
	Load Quantity Carried by the Circuit Breaker	Circuit Breaker Model	B10	C10	B16	C16	
		Quantity (pcs)	44	44	71	71	
	Surge Protection	L-N: 1KV; L-N-GND: 1.5KV					
	Leakage Current	\leq 0.7mA					
	Stand-by Power Consumption	\leq 0.5W (when the DALI signal is OFF)					
Protective Feature	Open-Circuit Protection	<55V					
	Short-Circuit Protection	Hiccup mode (auto-recovery)					
Environment Condition	Operating Temperature	-30 $^{\circ}$ C ~ +50 $^{\circ}$ 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	86-106KPa					

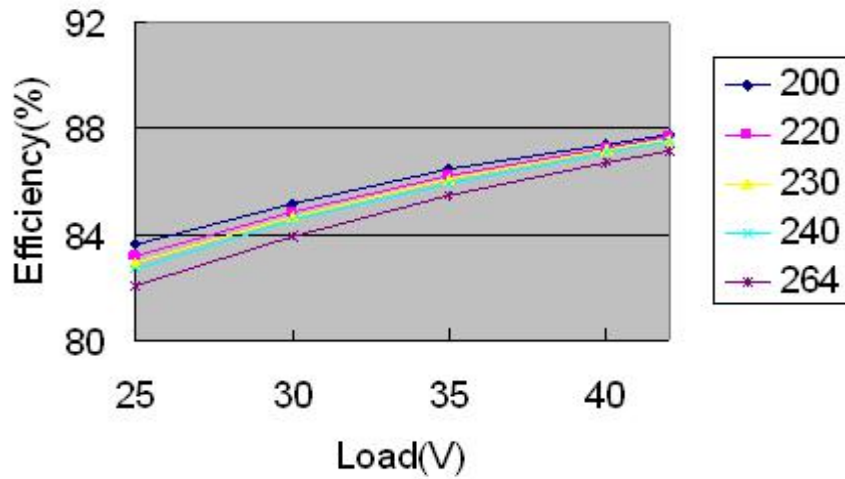
Safety & Electromagnetic Compatibility	Certifications	TUV-ENEC, CE, CB, RCM, CCC
	Withstanding Voltage	I/P-O/P: 3.75KV, 5mA, 60S
	Insulation Resistance	I/P-O/P: >100MΩ @ 500Vdc
	Safety Standards	ENEC: EN61347-1: 2015, EN 61347-2-13: 2014/A1: 2017, EN 62384: 2016/A1: 2009; CE-LVD: EN 61347-2-13: 2014/A1: 2017, EN 61347-1: 2015, EN 62493: 2015; SAA: 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≤73℃)
	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. Please disconnect the AC input before adjusting the output current via the DIP switch.</p> <p>3. 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>4. 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>5. Unless otherwise stated, the parameters above are test results under these conditions: ambient temperature 25℃, humidity 50%, input voltage 230Vac and 100% load.</p>	

Product Characteristic Curve

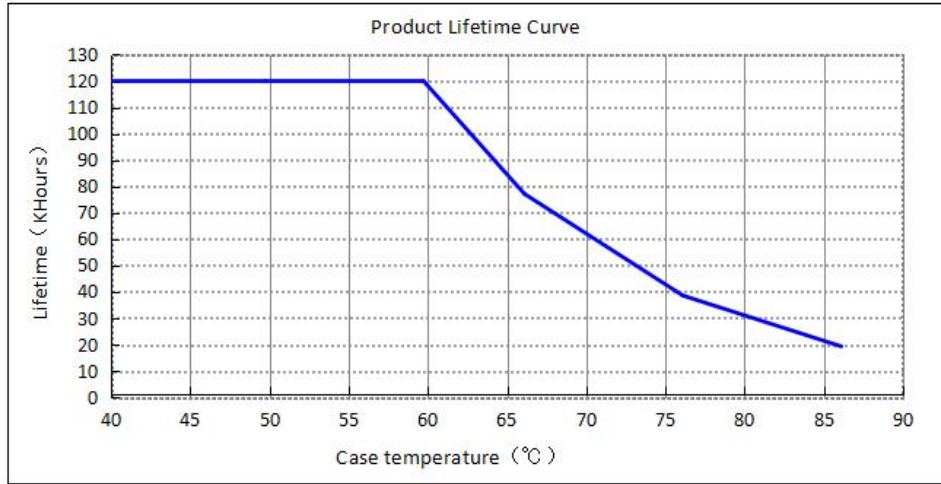
■ PF Curve



■ Efficiency Curve



■ **Lifetime Curve**



Instruction of Dimming Operation

■ **Definition of the Driver's Terminals**

INPUT

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

OUTPUT

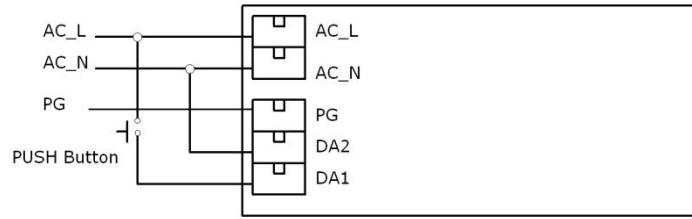
LED+	Positive electrode output of the driver
LED-	Negative electrode output of the driver

■ **DIP Switch Table**

I rated (CC)	1	2	3
500mA	—	—	—
450mA	—	—	ON
400mA	—	ON	—
350mA	—	ON	ON
300mA	ON	—	—
250mA	ON	—	ON

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

■ **Wiring Diagram of Push Dimming**



■ **Instruction of Push dimming**

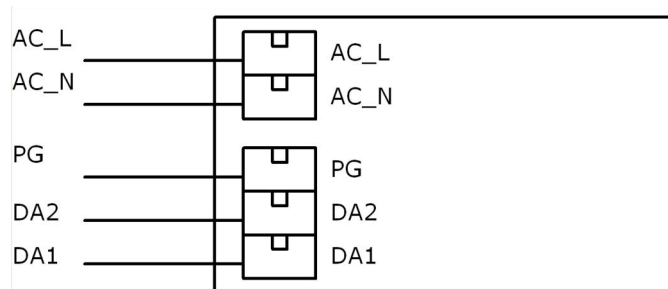
Operation	Operation Time	Function
Instant Push	0.1 ~ 0.5 seconds	Light on / off
Long Push	0.6 ~ 10 seconds	Dim up / down
Reset Push	> 11 seconds	Reset to the 100% brightness

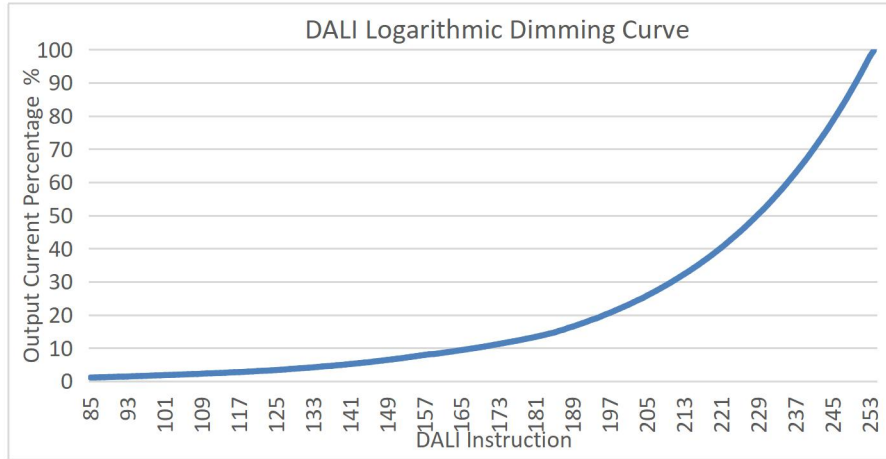
The push operation won't cause any variation if it's less than 0.05 sec.

- Connect the push button in series between the AC-L and the DA1 terminals. Connect the AC-N and DA2 terminals directly.
- 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.
- The maximum wire length between the push button and the farthest LED driver is 135 meters. 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.

■ **Instruction 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 0.1% (lout).





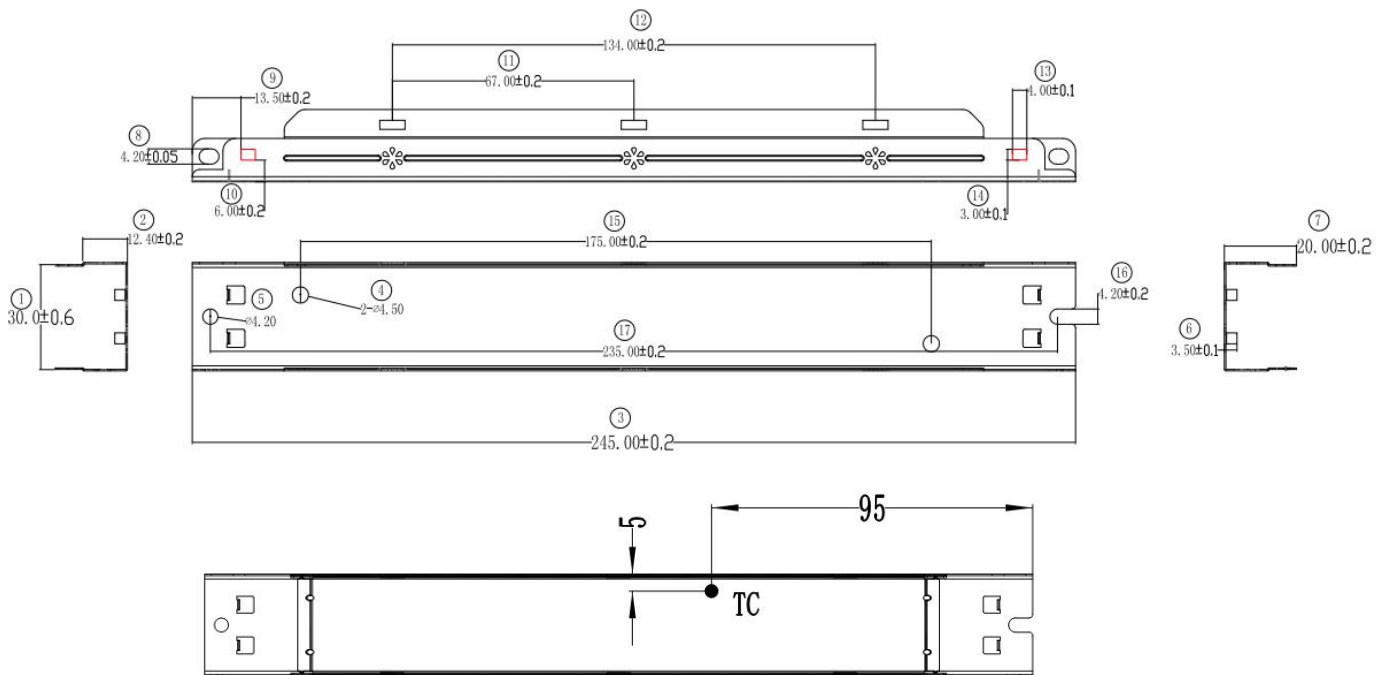
⚠ The DALI dimming function and the push dimming function cannot be used at the same time otherwise the DALI dimmer will be damaged.

Label

INPUT	Un: 220-240V ~	In: 0.15A	DALI 2 • tc	<table border="1"> <tr><th>Irated(CC)</th><th>1</th><th>2</th><th>3</th></tr> <tr><td>250mA</td><td>ON</td><td>—</td><td>ON</td></tr> <tr><td>300mA</td><td>ON</td><td>—</td><td>—</td></tr> <tr><td>350mA</td><td>—</td><td>ON</td><td>ON</td></tr> <tr><td>400mA</td><td>—</td><td>ON</td><td>—</td></tr> <tr><td>450mA</td><td>—</td><td>—</td><td>ON</td></tr> <tr><td>500mA</td><td>—</td><td>—</td><td>—</td></tr> </table>	Irated(CC)	1	2	3	250mA	ON	—	ON	300mA	ON	—	—	350mA	—	ON	ON	400mA	—	ON	—	450mA	—	—	ON	500mA	—	—	—	Preparation for input and output www.lifud.com Made in China	OUTPUT
Irated(CC)	1	2			3																													
250mA	ON	—	ON																															
300mA	ON	—	—																															
350mA	—	ON	ON																															
400mA	—	ON	—																															
450mA	—	—	ON																															
500mA	—	—	—																															
AC-L	Fn: 50/60Hz	Output Voltage: 25-42V=	Prated: 21W(Max)	LED+																														
AC-N	Uout: 55V =	tc: 90°C	ta: 50°C	LED-																														
NC	PF: 0.9C			0.5-1.0 □																														

LIFUD LED Driver Model: LF-GSD020YE For LED modules only
 CE SELV 0.1%~100% Dimmable

Dimensions (unit: mm)



Packaging Specification

Model	LF-GSD020YE
Packaging Dimension	375×275×280mm (L×W×H)
Quantity	8 pcs/layer; 7 layers/ctn; 56 pcs/ctn
Weight	175 g/pc; 9.9 kg/ctn

Transportation & Storage

1. Transportation: by means of vehicles, boats and aircraft.
2. In 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.
3. Storage in accordance with the provisions of the Class I environment.
4. Products which have been stored for more than six months must be re-inspected. Use them only if they can pass the re-inspection.

Attention

1. Use this product according to the specifications, please. Otherwise there may be malfunction.
2. Use luminaires that have not been certified or are not compatible with the drivers may cause fire, explosion or other hazards.
3. Man-made damage is 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	29 APR 2021	