

Specification

Customer's Name: _____

Product Material No. : _____

Model: LF-FMR020YS

Version: V1.0

Customer Approval

Examined by	Reviewed by	Approved by

LIFUD Approval

Drafted by	Reviewed by	Approved by
Zhang Yuanyun		Zhong Chunlin

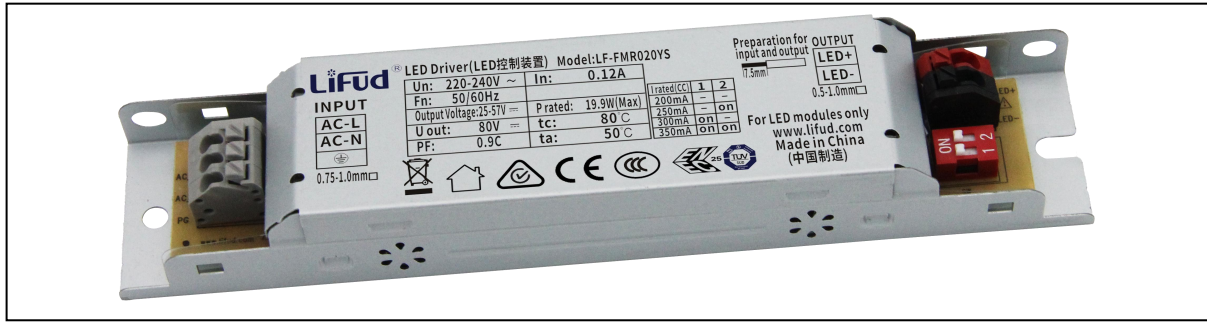
Models Chosen by the Customer

Full model name		Full model name	
Full model name		Full model name	

E.C. List

Version	Description of Change	R&D	Date
1.0	Formal version	Liao Xinggao	2019-07-31





Product Description

With a linear metal casing; two-stage circuit design; flicker free; adjustable output current (DIP switch); high efficiency.

Product Feature

- Main feature: metal casing; cost effective; adjustable output current (DIP switch)

Application

- Linear light

Technical Data

Full Model Number		LF-FMR020YS			
Output	Output Voltage	25-57V			
	Output Current	The output current is selectable via a DIP switch. Refer to the DIP switch table.			
		350mA	300mA	250mA	200mA
	Ripple Voltage	<1V @ 20MHz			
	Percent Flicker	<1%			
	Current Tolerance	±5%			
	Temperature Drift	±10%			
	Line Regulation	±5%			
Start-up Time	<0.5s @ 230VAC				
Input	Line Regulation	±5%			
	Rated Input Voltage	220-240VAC (voltage limit: 198-264VAC)			
	Rated DC Input Voltage	/			
	Input Frequency Range	47-63Hz			
	Input Current	0.12A Maximum			
	Power Factor		≥0.95 / 198VAC		≥0.94 / 198VAC
		≥0.93 / 230VAC		≥0.92 / 230VAC	
		≥0.90 / 264VAC		≥0.90 / 264VAC	

	Total Harmonic Distortion	≤20%			
	Efficiency	≥85% / 198VAC	≥84% / 198VAC	≥83% / 198VAC	≥82% / 198VAC
		≥86% / 230VAC	≥85% / 230VAC	≥84% / 230VAC	≥82% / 230VAC
		≥85% / 264VAC	≥84% / 264VAC	≥84% / 264VAC	≥82% / 264VAC
	Inrush Current	≤40A & 260uS @ 230VAC (Maximum)			
	Quantity of the same model of power supply that can be configured by a circuit breaker.	Under the condition of 230VAC, the total quantity of the same model of power supply that can be configured by a type-B 16A circuit breaker is 10 pieces.			
	Standby Power Consumption	≤1W			
	Single Harmonic Distortion	/			
Protective Feature	Input Overvoltage Protection	/			
	Input Undervoltage Protection	/			
	Output Short-Circuit Protection	Hiccup mode (auto-recovery)			
	Output Open-Circuit Protection	<80V			
	Output Overvoltage Protection	/			
	Output Undervoltage Protection	/			
	Output Overcurrent Protection	/			
	Over-Temperature Protection	/			
Environment Condition	Working Temperature	-30°C ~ +50°C			
	Working Humidity	20-90%RH (no condensation)			
	Storage Temperature/Humidity	-50°C ~ 85°C (six months under class I environment); 10-95%RH (no condensation)			
	Atmospheric Pressure	86KPa-106KPa			
	Vibration	Displacement amplitude: 5Hz ~ 9Hz 1.2mm; acceleration amplitude: 9Hz ~ 200Hz 1G; sweep-frequency: 1.0oct/min; test time: XYZ, 30 min each; The driver was in operating state and was tested according to system setting.			
Safety & Norm	Certificate	TUV, CE, RCM, ENEC, CCC			
	Withstand Voltage	I/P-O/P: 3.75KV, 5mA, 60s; I/P-PG: 1.5kV 5mA 60S			
	Insulation Resistance	I/P-O/P: 500VDC, >100MΩ			
	Grounding Resistance				
	Surge Rating	IEC61000-4-5 (L-N: 1KV; L/N-PG:2KV) ; The withstanding voltage between the LEDs and the aluminum substrate should exceed 3KV.			
	Electrical Fast Transient/Burst	2.2KV (Class B)			
	Ring wave	/			
	Safety Standard	EN 61347-2-13:2014/A1:2017, EN 61347-1:2015, EN 62384:2016 IEC 61347-1:2015, IEC61347-2-3:2014, IEC 61347-2-13:2014 GB19510.1-2009, GB19510.14-2009			
	Electromagnetic Interference	EN55015, EN61000-3-2			
	Electromagnetic Susceptibility	EN61000-4-2, 3, 4, 5, 6, 8, 11; EN61547, IEC61000-4-13			
	EMI Lighting Type	Connect to a linear light and connect to the earth wire			
	Electrostatic Discharge (ESD)	Air: 8KV; touch: 4KV (Class B)			

Other Statements

Others	IP Rating	/
	RoHS	RoHS 2.0 (EU) 2015/863
	Warranty Condition	5 years (Tc≤67 °C)
	MTBF	/
	DALI Executive Standard	/
	Noise Rating	≤20db (Tested in a soundproof room and the noise collector was 10cm away from the driver.)
	Triac Dimmer	/
Testing Equipment	AC power source: CHROMA6530, digital power meter: CHROMA66202, Oscilloscope: Tektronix DPO3014, DC electronic load: M9712B, LED board, constant temperature and humidity chamber, lightning surge generator: Everfine EMS61000-5B, rapid group pulse generator: Everfine EMS61000-4A, spectrum analyzer: KH3935, hi-pot tester: TH9201B, light flicker analyzer: LFA-3000, etc.	
Testing Condition	Unless otherwise stated, the parameters of the power factor, THD and efficiency are the test results under the ambient temperature of 25°C and humidity of 50%, AC input of 230V and 100% load.	
Additional Remark	<ol style="list-style-type: none"> 1. It is recommended that customer should install protection devices for surge and for overvoltage & undervoltage to ensure safety before connecting to electricity. 2. The PC cover, housing, end caps and other parts of the LED driver inside the LED light fixture must conform to UL94-V0 flammability standard or above. 3. 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. 	

RoHS: Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment

ITHD: Current total harmonic distortion

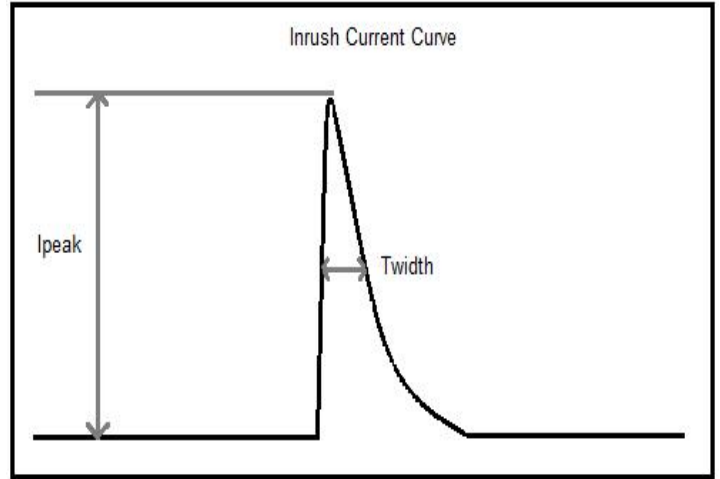
MTBF: Mean time between failure

Circuit Breaker & Relevant Parameters

Name	Value	Remark
Surge peak current (Ipeak)	40A	Input voltage 230Vac
Surge half-peak time (Twidth)	260µs	Input voltage 230Vac. Measure the time for Ipeak to drop to its half value.
Quantity of the same model of driver that can be configured by a type-B 16A circuit breaker.	10 pcs (max.)	

Driver quantities are below if use another type of circuit breaker.

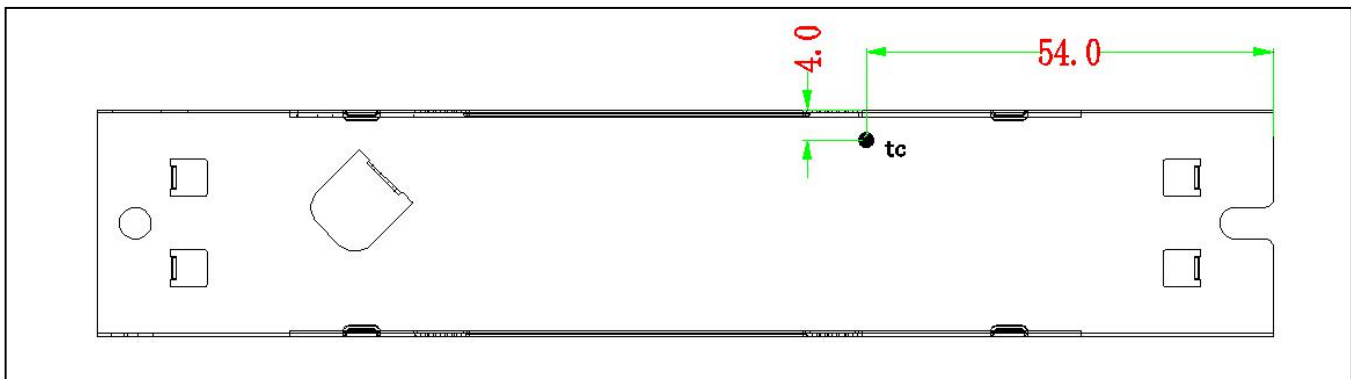
Type	Rank	Qty of accommodated drivers	Relative conversion ratio
B	10A	6 pcs	63%
	13A	8 pcs	81%
	16A	10 pcs	100% (benchmark)
	20A	12 pcs	125%
	25A	15 pcs	156%
C	10A	10 pcs	104%
	13A	13 pcs	135%
	16A	17 pcs	170%
	20A	20 pcs	208%
	25A	36 pcs	260%



DIP Switch Table

Ta	Vo DC	Current	1	2
50°C	25V-57V	350mA	ON	ON
		300mA	ON	—
		250mA	—	ON
		200mA	—	—

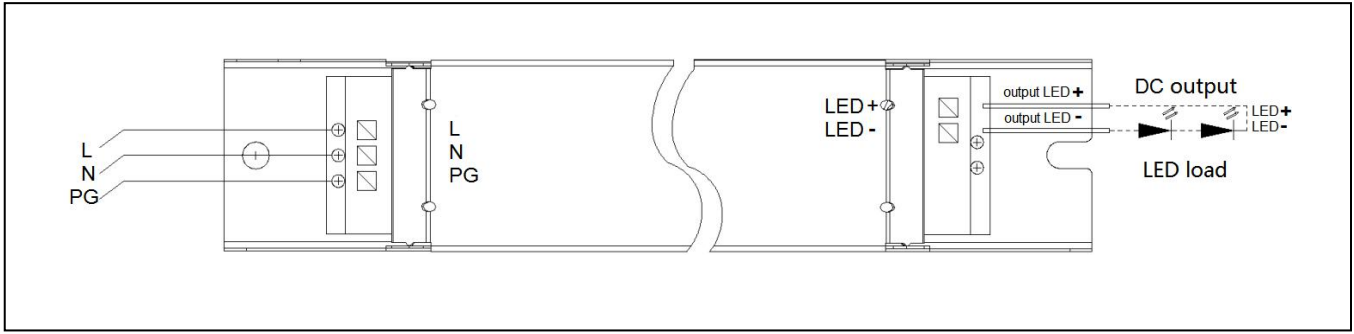
TC Spot (on the bottom cover)



Label

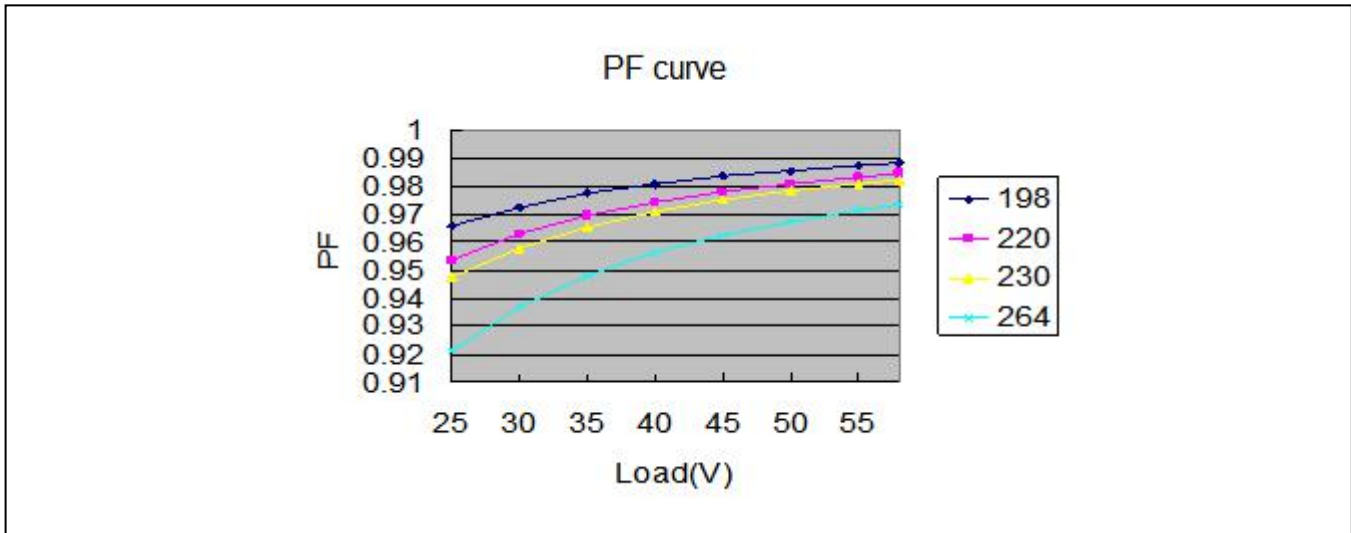
	LED Driver(LED控制装置) Model:LF-FMR020YS		Preparation for input and output 17.5mm OUTPUT LED+ LED- 0.5-1.0mm															
	INPUT AC-L AC-N 0.75-1.0mm	Un: 220-240V ~ Fn: 50/60Hz Output Voltage:25-57V = U out: 80V = PF: 0.9C		In: 0.12A Prated: 19.9W(Max) tc: 80°C ta: 50°C														
<table border="1"> <thead> <tr> <th>I rated(CC)</th> <th>1</th> <th>2</th> </tr> </thead> <tbody> <tr> <td>200mA</td> <td>-</td> <td>-</td> </tr> <tr> <td>250mA</td> <td>-</td> <td>on</td> </tr> <tr> <td>300mA</td> <td>on</td> <td>-</td> </tr> <tr> <td>350mA</td> <td>on</td> <td>on</td> </tr> </tbody> </table>		I rated(CC)	1	2	200mA	-	-	250mA	-	on	300mA	on	-	350mA	on	on	For LED modules only www.lifud.com Made in China (中国制造)	
I rated(CC)	1	2																
200mA	-	-																
250mA	-	on																
300mA	on	-																
350mA	on	on																

Wiring Diagram

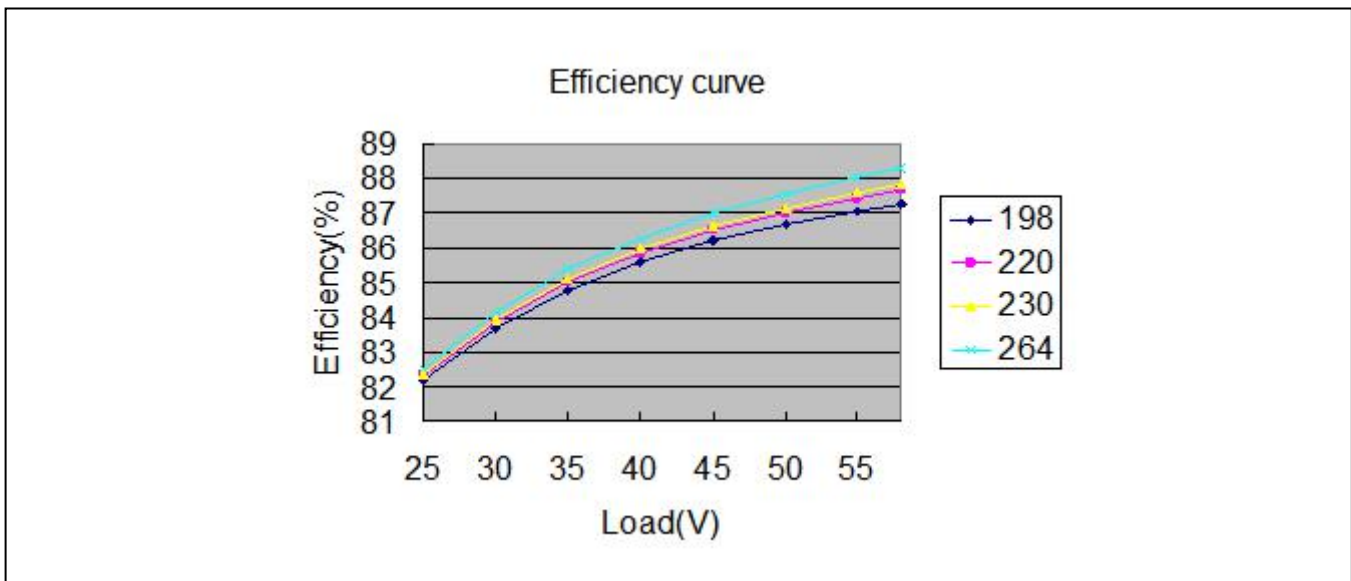


Product Feature Curve

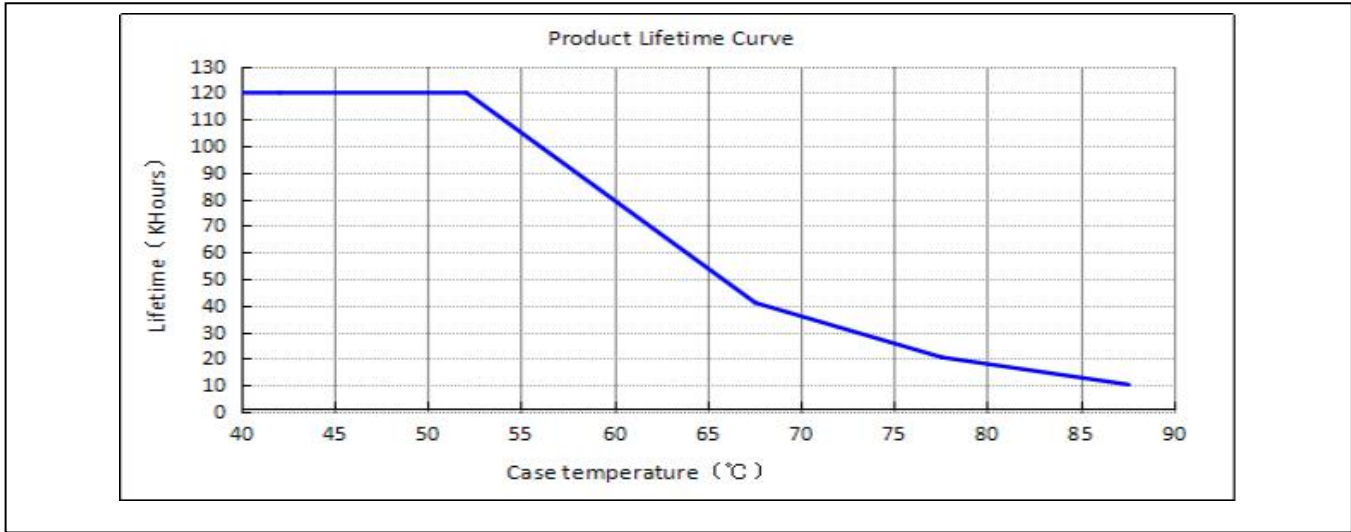
1. PF curve



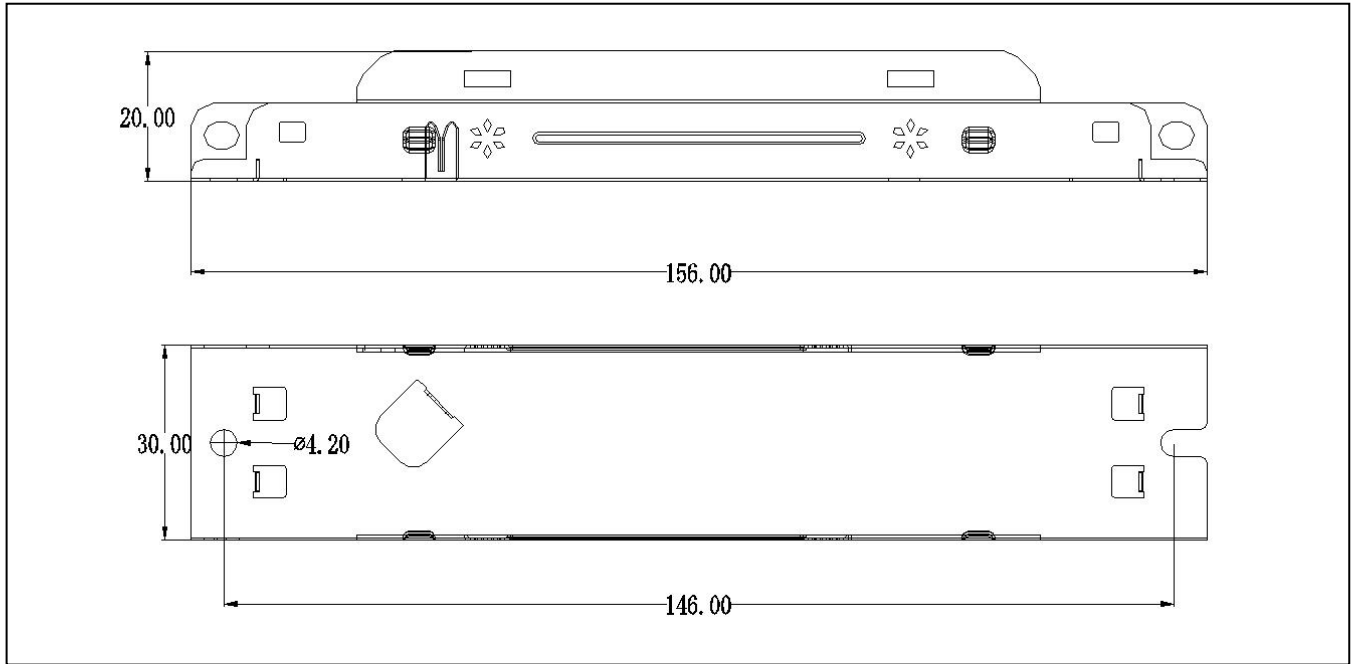
2. Efficiency curve



3. Lifetime curve



Dimension (unit: mm, tolerance: +0.5mm)



Packaging Specification

Carton dimension	385*285*210mm (L*W*H)
Quantity	72 pcs/ctn
Weight	84g±5%/pc; 6Kg±5%/ctn

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.
4. The withstanding voltage between the LEDs and the aluminum substrate should exceed 3KV.

Remark: The final interpretation right of contents of this data sheet belongs to Lifud Technology Co., Ltd.