Specification

Customer's Name: _____

Product Material No. : _____

Model: LF-FMR060YS

Version: V1.0

Customer Approval

Examined by	Reviewed by	Approved by

LIFUD Approval

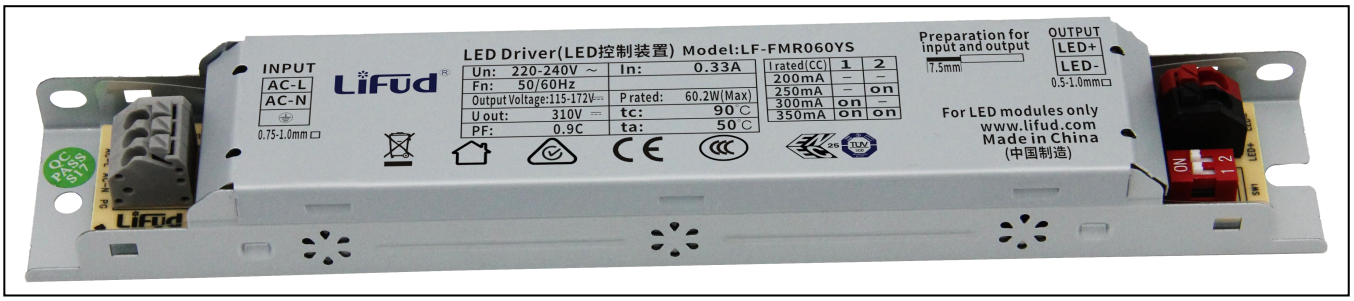
Drafted by	Reviewed by	Approved by
Liao Xinggao		Zhu Jungao

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	Li Long	2019-07-24



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-FMR060YS			
Output	Output Voltage	115-172V			
	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	0.33A Max.			
	Power Factor	≥0.95 / 198VAC			
		≥0.93 / 230VAC			
		≥0.90 / 264VAC			

	Total Harmonic Distortion	≤20%			
	Efficiency	≥91% / 198VAC	≥91% / 198VAC	≥90% / 198VAC	≥90% / 198VAC
		≥92% / 230VAC	≥92% / 230VAC	≥91% / 230VAC	≥90% / 230VAC
		≥92% / 264VAC	≥92% / 264VAC	≥91% / 264VAC	≥90% / 264VAC
	Inrush Current	≤29A & 260uS @ 230VAC (Max.)			
	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 14 pcs.			
	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	<310V			
	Output Overvoltage Protection	/			
	Output Undervoltage Protection	/			
	Output Overcurrent Protection	/			
	Over-Temperature Protection	/			
Environment Condition	Working Temperature	-30℃ ~ +50℃			
	Working Humidity	20-90%RH (no condensation)			
	Storage Temperature/Humidity	-50℃ ~ 85℃ (six months under class I environment); 10-95%RH (no condensation)			
	Atmospheric Pressure	86-106KPa			
	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 exceeds 3KV.			
	Electrical Fast Transient/Burst	2.2KV (Class B)			
	Ringing wave	/			
	Safety Standard	EN 61347-2-13:2014/A1:2017,EN 61347-1:2015,EN 62384:2016 IEC 61347-1:2015,IE61347-2-3:2014,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	Connect to a linear light and connect to the earth wire			
	Electrostatic Discharge (ESD)	Air: 8KV; touch: 4KV (Class B)			

Other Statement

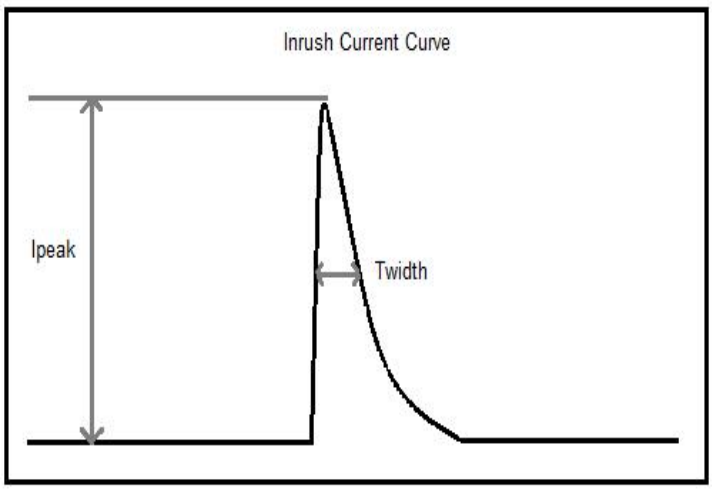
Others	IP Rating	/
	RoHS	RoHS 2.0 (EU) 2015/863
	Warranty Condition	5 years (Tc≤75 ℃)
	MTBF	/
	DALI Executive Standard	/
	Noise Rating	≤20db (Tested in a soundproof room and the noise collector was 10cm away from the driver.)
	Triac Dimmer	/
Testing Equipment	AC power source: CHROMA6530, digital power 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℃ and humidity of 50%, AC input of 230V and 100% load.	
Additional Remark	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.	

Circuit Breaker & Relevant Parameters

Name	Value	Remark
Surge peak current (Ipeak)	29A	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 type-B 16A circuit breaker can configure.	14 pcs (max.)	

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

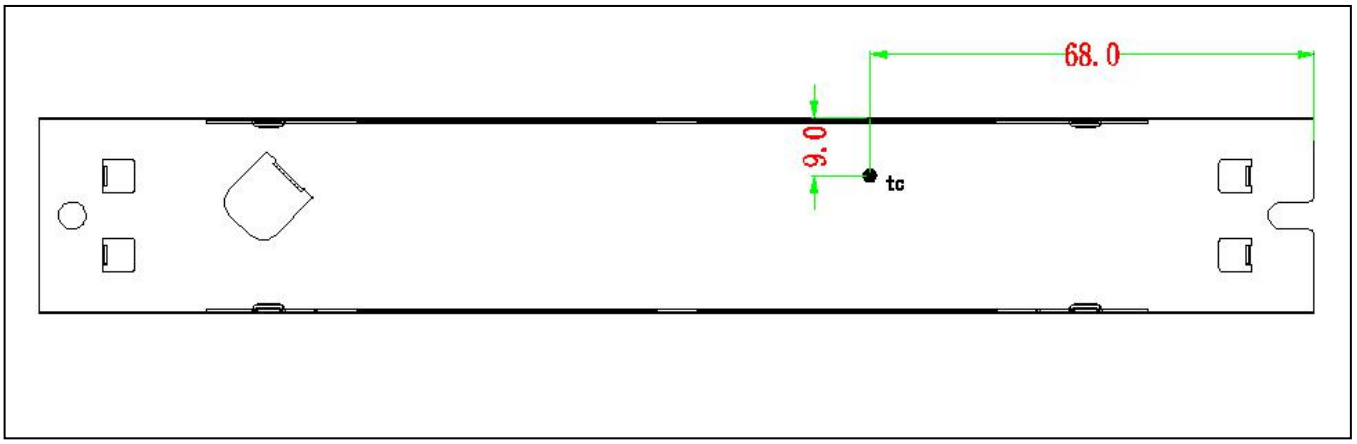
Type	Rank	Qty of accommodated drivers	Relative conversion ratio
B	10A	8 pcs	63%
	13A	11 pcs	81%
	16A	14 pcs	100% (benchmark)
	20A	17 pcs	125%
	25A	21 pcs	156%
C	10A	14 pcs	104%
	13A	18 pcs	135%
	16A	23 pcs	170%
	20A	29 pcs	208%
	25A	36 pcs	260%



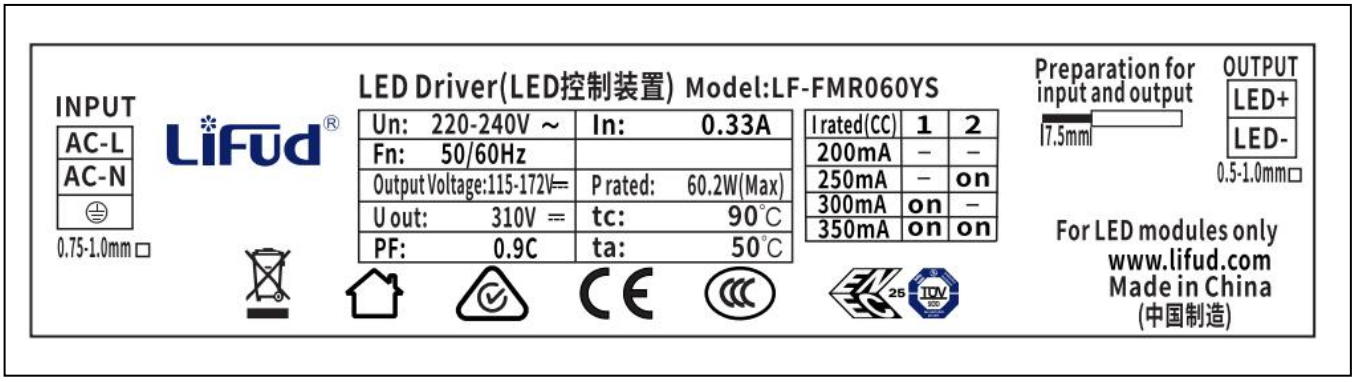
DIP Switch Table

Ta	Vo DC	Current	1	2
50℃	115V-172V	350mA	ON	ON
		300mA	ON	—
		250mA	—	ON
		200mA	—	—

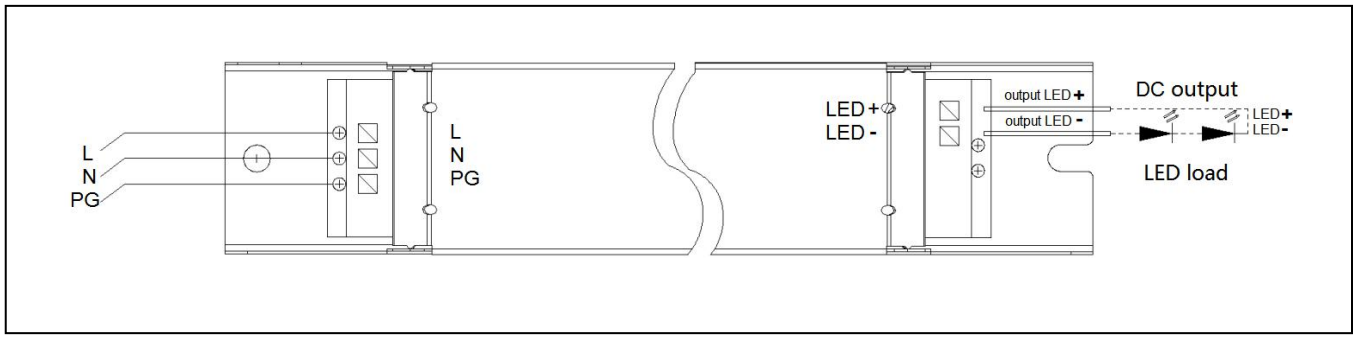
TC Spot (on the bottom cover)



Label

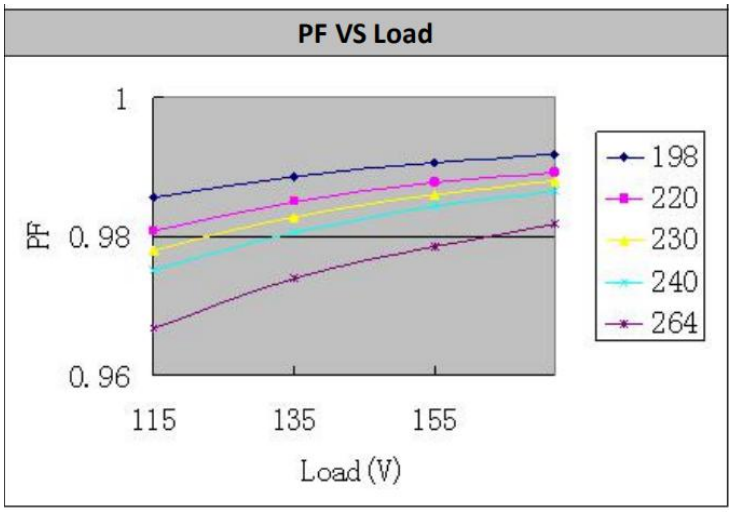


Wiring Diagram

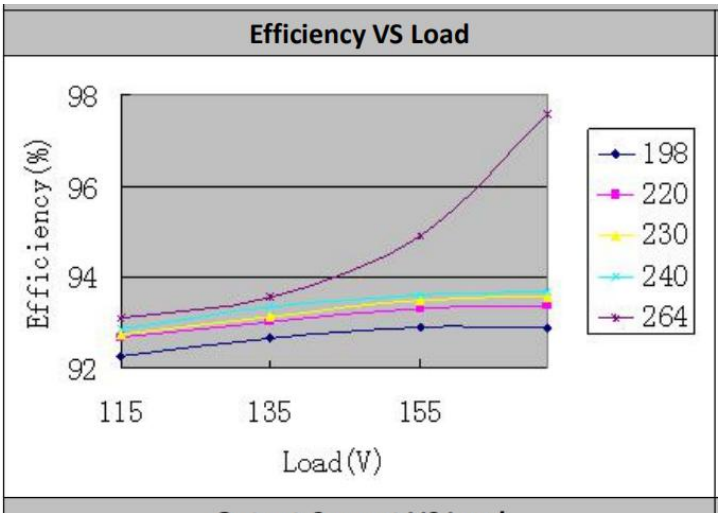


Product Feature Curve

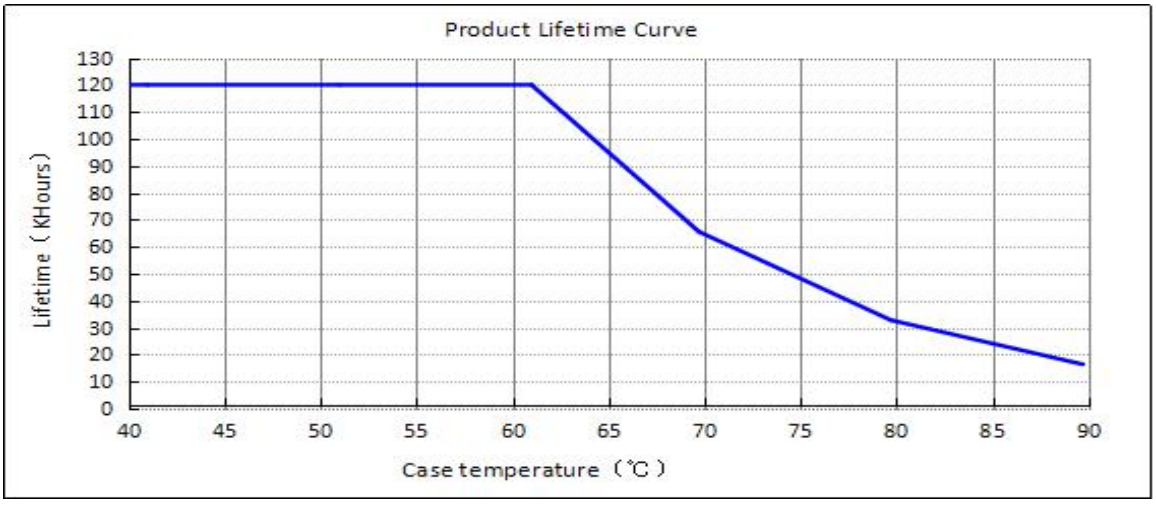
1. PF curve



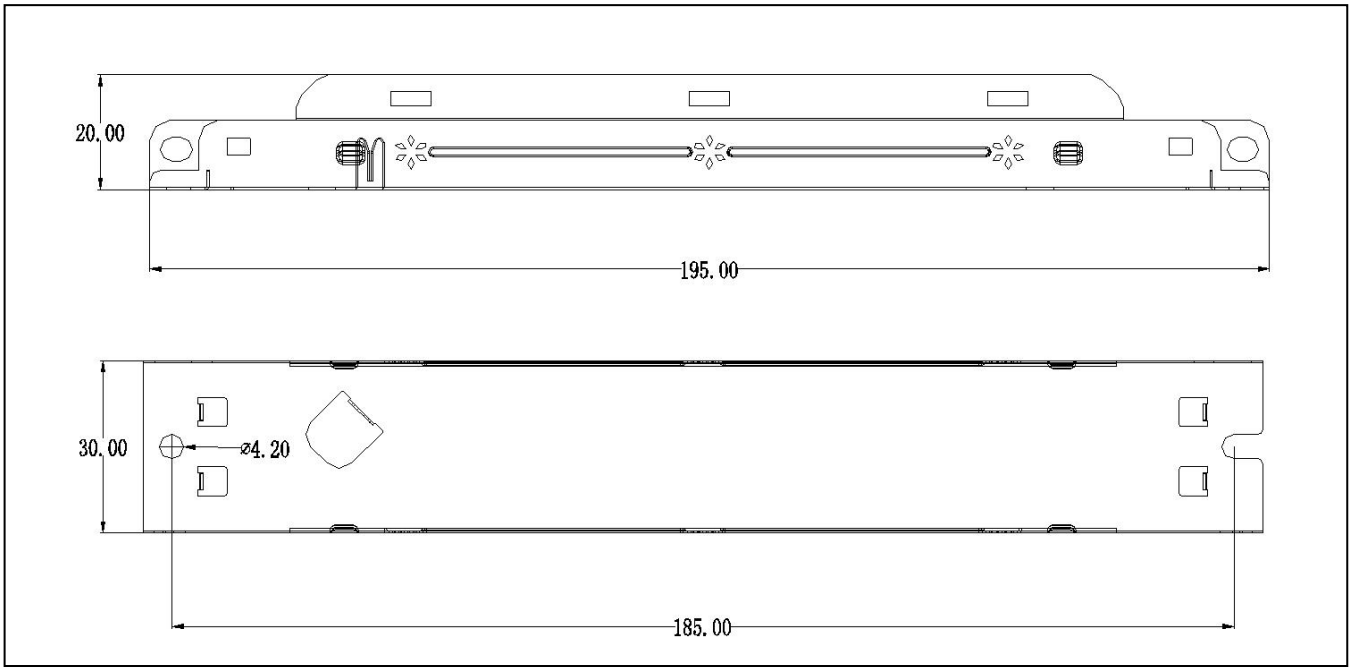
2. Efficiency curve



3. Lifetime curve



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



Packaging Specification

Carton dimension	385*285*210mm (L*W*H)
Quantity	48 pcs/ctn
Weight	140g±5%/pc; 6.7Kg±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 exceeds 3KV.

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