

# Specification

Customer's Name: \_\_\_\_\_

Product Material No. : \_\_\_\_\_

Model:                     LF-FMR040YS                    

Version:                                     V1.0                                    

## Customer Approval

Examined by	Reviewed by	Approved by

## LIFUD Approval

Drafted by	Reviewed by	Approved by
Zhang Yuanyun		Zhong Chunlin

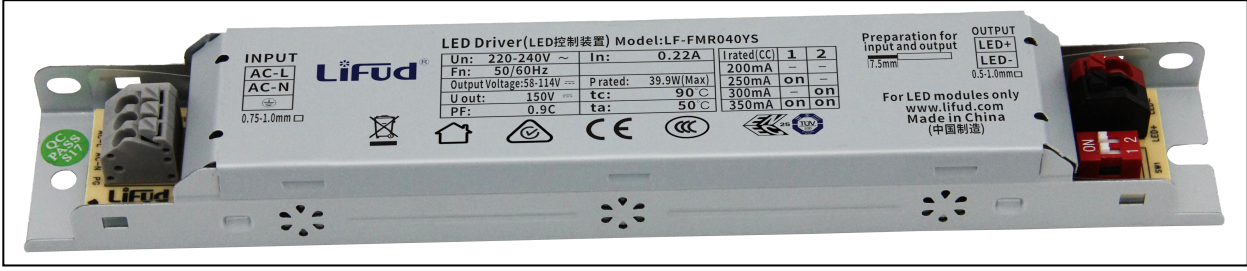
## Models Chosen by the Customer

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-FMR040YS			
Output	Output Voltage	58-114V			
	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	0.22A Maximum			
	Power Factor	≥0.95 / 198VAC			
≥0.93 / 230VAC					
≥0.90 / 264VAC					

	Total Harmonic Distortion	≤20%			
	Efficiency	≥87% / 198VAC	≥87% / 198VAC	≥87% / 198VAC	≥86% / 198VAC
		≥88% / 230VAC	≥88% / 230VAC	≥88% / 230VAC	≥87% / 230VAC
		≥87% / 264VAC	≥87% / 264VAC	≥87% / 264VAC	≥86% / 264VAC
	Inrush Current	≤34A & 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 12 pieces.			
	Standby Power Consumption	≤1W			
	Single Harmonic Distortion	/			
<b>Protective Feature</b>	Input Overvoltage Protection	/			
	Input Undervoltage Protection	/			
	Output Short-Circuit Protection	Hiccup mode (auto-recovery)			
	Output Open-Circuit Protection	<150V			
	Output Overvoltage Protection	/			
	Output Undervoltage Protection	/			
	Output Overcurrent Protection	/			
	Over-Temperature Protection	/			
<b>Environment Condition</b>	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.			
<b>Safety &amp; Norm</b>	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

<b>Others</b>	IP Rating	/
	RoHS	RoHS 2.0 (EU) 2015/863
	Warranty Condition	5 years (Tc≤58 °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	/
<b>Testing Equipment</b>	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.	
<b>Testing Condition</b>	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.	
<b>Additional Remark</b>	<ol style="list-style-type: none"> <li>1. It is recommended that customer should install protection devices for surge and for overvoltage &amp; undervoltage to ensure safety before connecting to electricity.</li> <li>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.</li> <li>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.</li> </ol>	

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

ITHD: Current total harmonic distortion

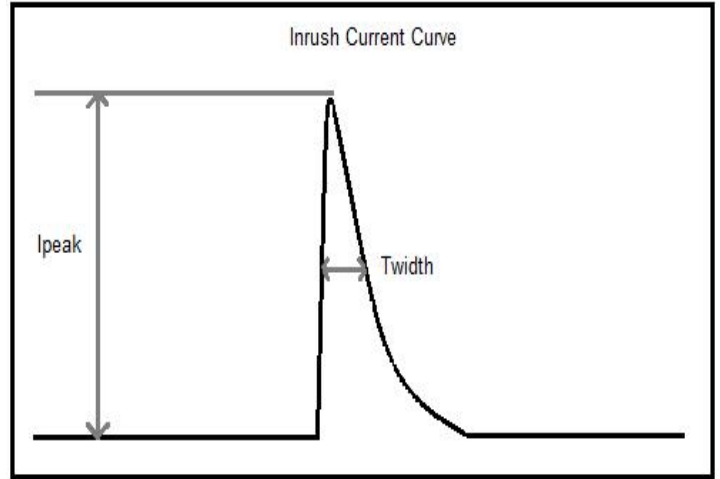
MTBF: Mean time between failure

### Circuit Breaker & Relevant Parameters

Name	Value	Remark
Surge peak current (Ipeak)	34A	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.	12 pcs (max.)	

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

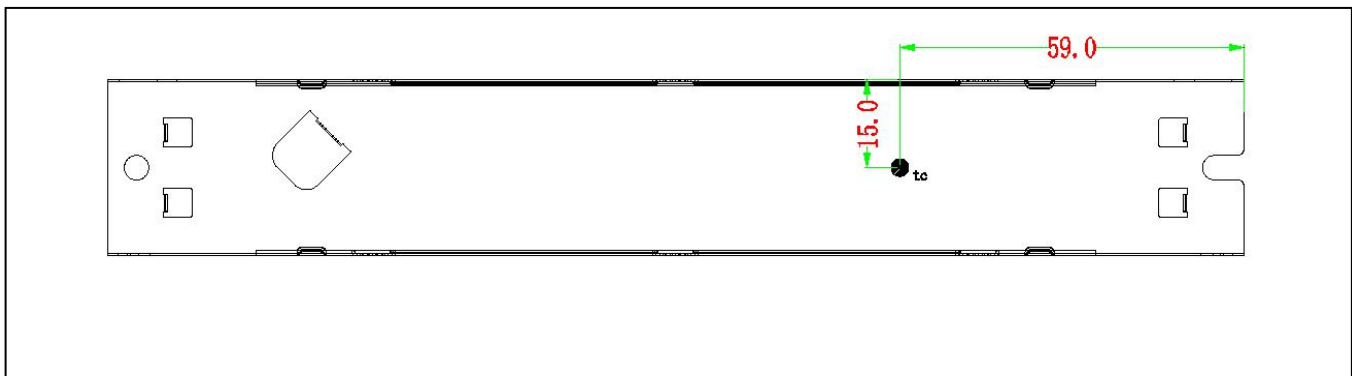
Type	Rank	Qty of accommodated drivers	Relative conversion ratio
B	10A	7 pcs	63%
	13A	9 pcs	81%
	16A	12 pcs	100% (benchmark)
	20A	15 pcs	125%
	25A	18 pcs	156%
C	10A	12 pcs	104%
	13A	16 pcs	135%
	16A	20 pcs	170%
	20A	25 pcs	208%
	25A	31 pcs	260%



### DIP Switch Table

Ta	Vo DC	Current	1	2
50°C	58V-114V	350mA	ON	ON
		300mA	—	ON
		250mA	ON	—
		200mA	—	—

### TC Spot (on the bottom cover)



### Label

**INPUT**

AC-L  
AC-N

0.75-1.0mm □

**LIFUD**

**LED Driver (LED控制装置) Model: LF-FMR040YS**

Un: 220-240V ~	In: 0.22A	I rated(CC)	1	2
Fn: 50/60Hz		200mA	—	—
Output Voltage: 58-114V =	Prated: 39.9W(Max)	250mA	on	—
U out: 150V =	tc: 90°C	300mA	—	on
PF: 0.9C	ta: 50°C	350mA	on	on

Preparation for input and output

17.5mm

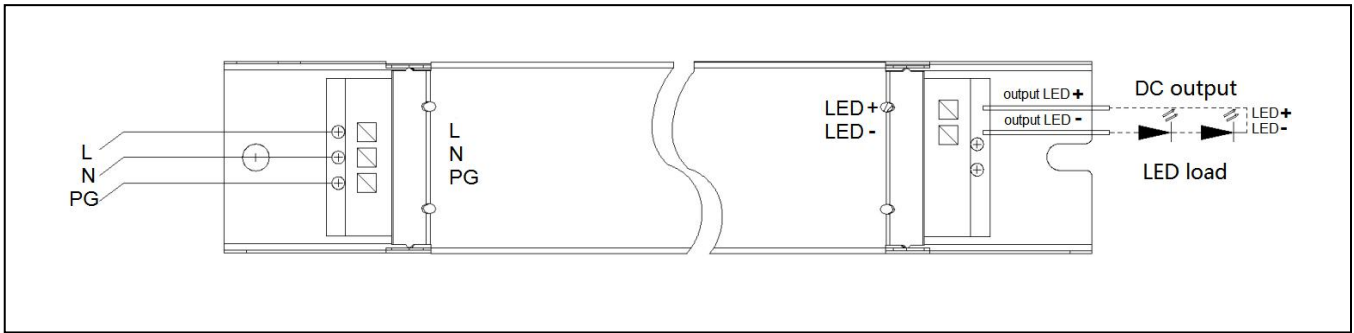
**OUTPUT**

LED+  
LED-

0.5-1.0mm □

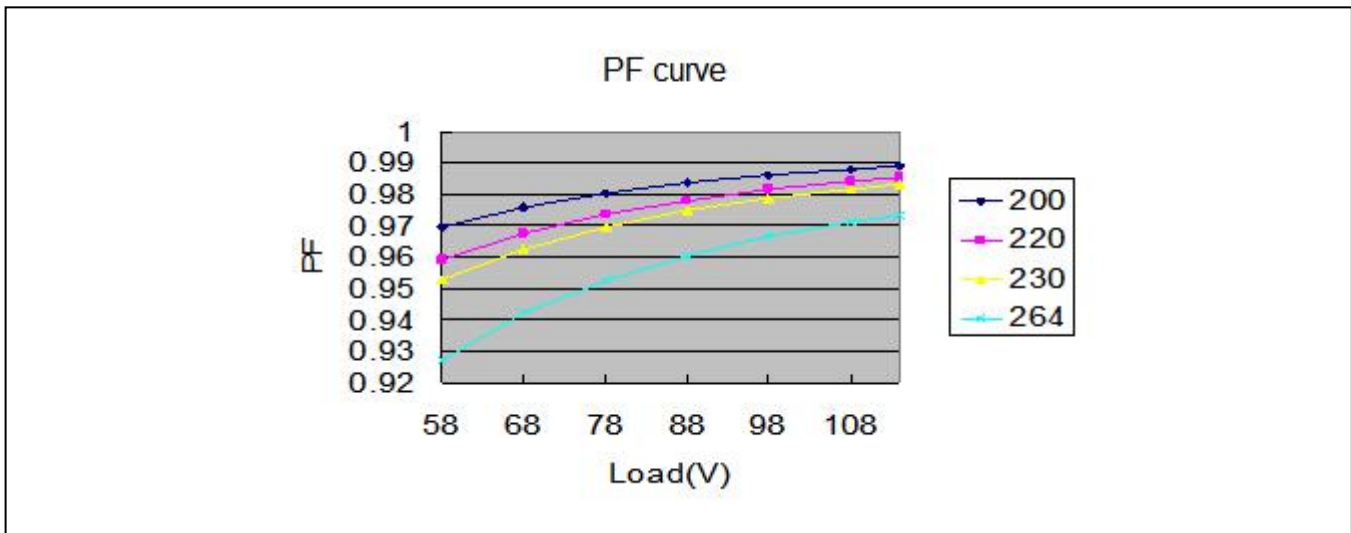
For LED modules only  
www.lifud.com  
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### Wiring Diagram

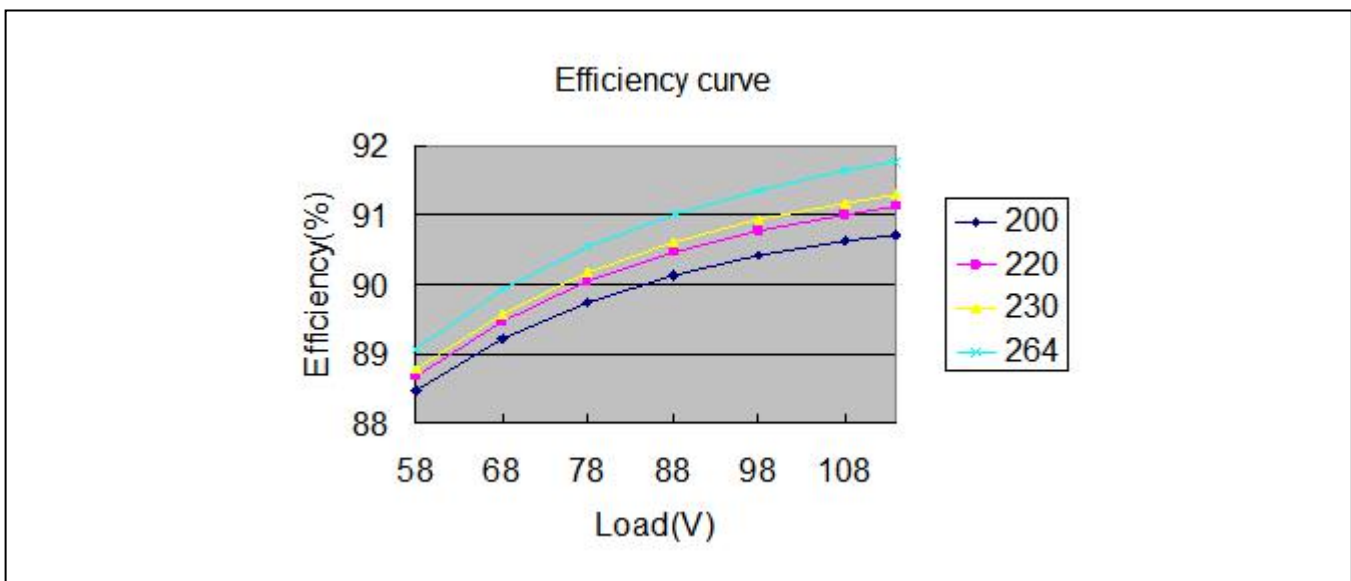


### Product Feature Curve

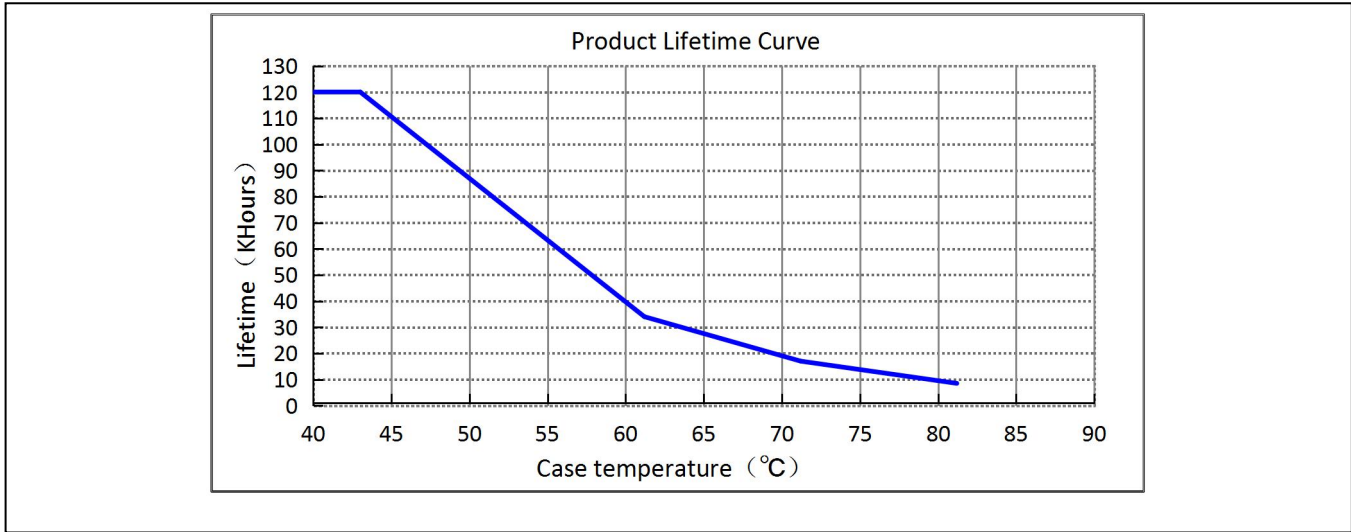
#### 1. PF curve



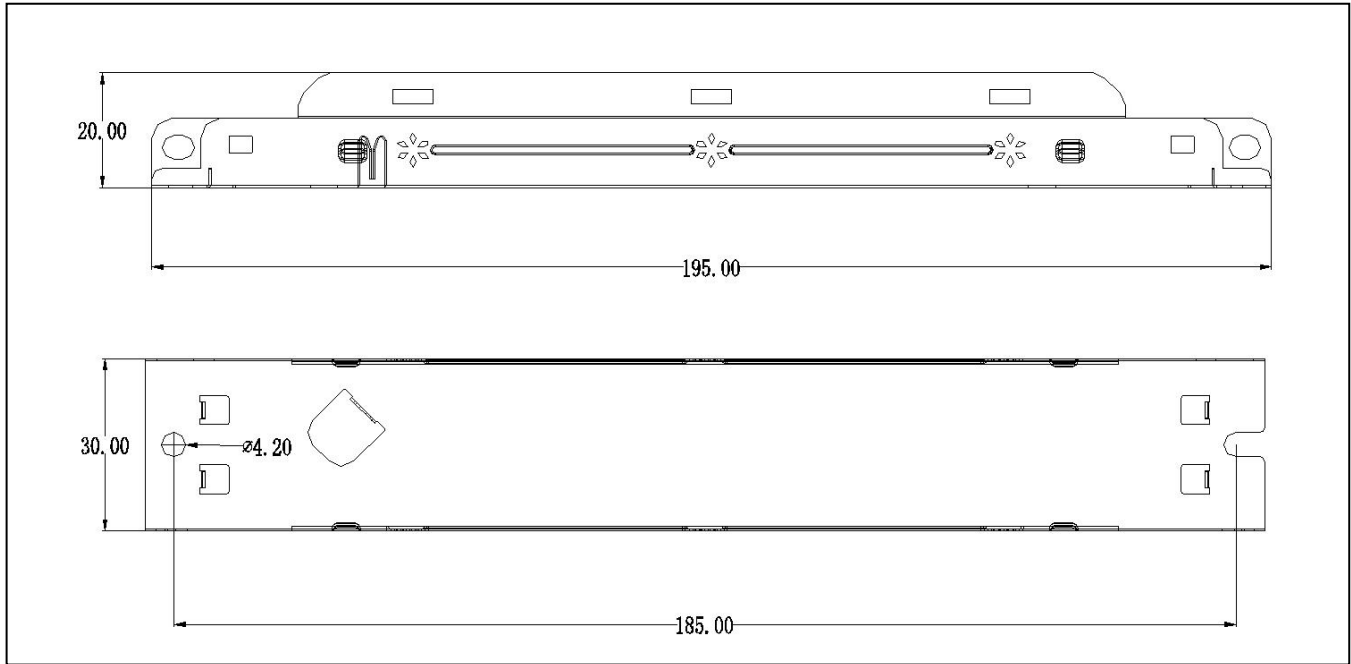
#### 2. Efficiency curve



### 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; 7.0Kg±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.