

# Specification

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

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

Model: LF-GSD030YEVersion: V1.0

## Customer Approval

Examined by	Reviewed by	Approved by

## LIFUD Approval

Drafted by	Reviewed by	Approved by
Huang Benliang	Li Long	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	Huang Benliang	2019-06-18



## Product Description

LF-GSD030YE series is a 30W constant current LED power supply. Input voltage limit is 200-264VAC. Output current can be selected from 550mA to 750mA via a DIP switch, 50mA every step. Owing to the unique circuit structure, the efficiency of this series reaches up to 87%. Equipped with DALI & PUSH dimming functions, this product can be a good solution for various LED lighting system designs.

## Product Feature

- 1. Constant current output. The current value can be selected via a DIP switch, 50mA every step.
- 2. Metal housing. Compatible with the Class I and Class II light fixtures
- 3. Built-in active power factor correction function
- 4. Stand-by power consumption <0.5W
- 5. DALI dimming (Logarithmic dimming curve, linear dimming curve and push dimming functions are optional.)
- 6. Warranty: 5 years (Please refer to the warranty condition.)

## Application

- warm house lighting
- flood-light lighting
- indoor office lighting
- decorative lighting
- commercial lighting
- residential lighting

## Technical Data

Full Model Number		LF-GSD030YE				
Output	Output Voltage	25-42V				
	Output Current	The output current is selectable via a DIP switch. Refer to the DIP switch table.				
		550mA	600mA	650mA	700mA	750mA
	Ripple Voltage	<2V @ 50Hz				
	Percent Flicker	<0.5% @ 50Hz, 230Vac				
	Current Tolerance	±5%				
	Temperature Drift	±10%				
	Line Regulation	±5%				
Start-up Time	<1s @ 230VAC					

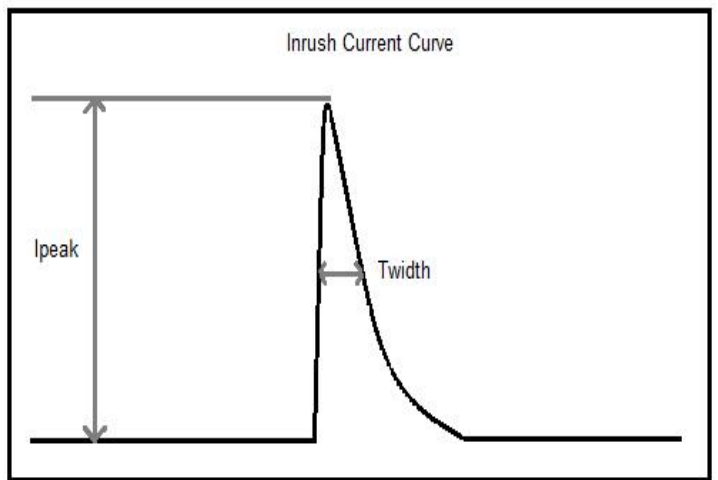
<b>Input</b>	Line Regulation	±5%
	Input Voltage	220-240VAC (voltage limit: 200-264VAC)
	Input Frequency	50 / 60Hz
	Input Current	0.20A Max.
	Power Factor	≥0.9/230VAC, 750mA, LED load, DC42V
	THD	≤15%
	Efficiency	≥87%/230VAC, 750mA, LED load, DC42V
	Inrush Current	≤80A @ 350uS @ 230VAC (Max.)
	Stand-by Power	≤0.5W (when DALI's OFF signal takes into effect)
<b>Protective Feature</b>	Open Circuit Protection	<55V
	Short Circuit Protection	Hiccup mode (auto-recovery)
<b>Environment Condition</b>	Working Temperature	-30°C ~ +50°C
	Working Humidity	20-90%RH (no condensation)
	Storage Temperature/Humidity	-30°C ~ 80°C (six months under class I environment); 10-90%RH (no condensation)
	Atmospheric Pressure	86-106KPa
<b>Safety &amp; Norm</b>	Certificate	CB.CE.ENEC.RCM.CCC.DALI 2.0
	Withstand Voltage	I/P-O/P: 3.75KV, 5mA, 60s
	Insulation Resistance	I/P-O/P: 500VDC, >100MΩ
	Surge Rating	IEC61000-4-5 (L-N: 1KV; L-PE:2KV; N-PE: 2KV )
	Safety Standard	EN61347, GB19510
	Electromagnetic Interference	EN55015, EN61000-3-2
	Electromagnetic Susceptibility	EN61000-4-2, 3, 4, 5, 6, 8, 11; EN61547
<b>Others</b>	IP Rating	IP20
	Warranty Condition	5 years (Tc≤68 °C)
	DALI Executive Standard	IEC 62386-101, 102, 207: DALI2.0
<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, stroboscope (percent flicker tester) 60N-01, 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 over &amp; under voltage to ensure safety before connecting to electricity.</li> <li>2. Make sure the AC power is disconnected and there's no electricity before using the DIP switch to adjust output current.</li> <li>3. 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>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 re-confirms the EMC of the whole LED light fixture.</li> </ol>	

### Circuit Breaker & Relevant Parameters

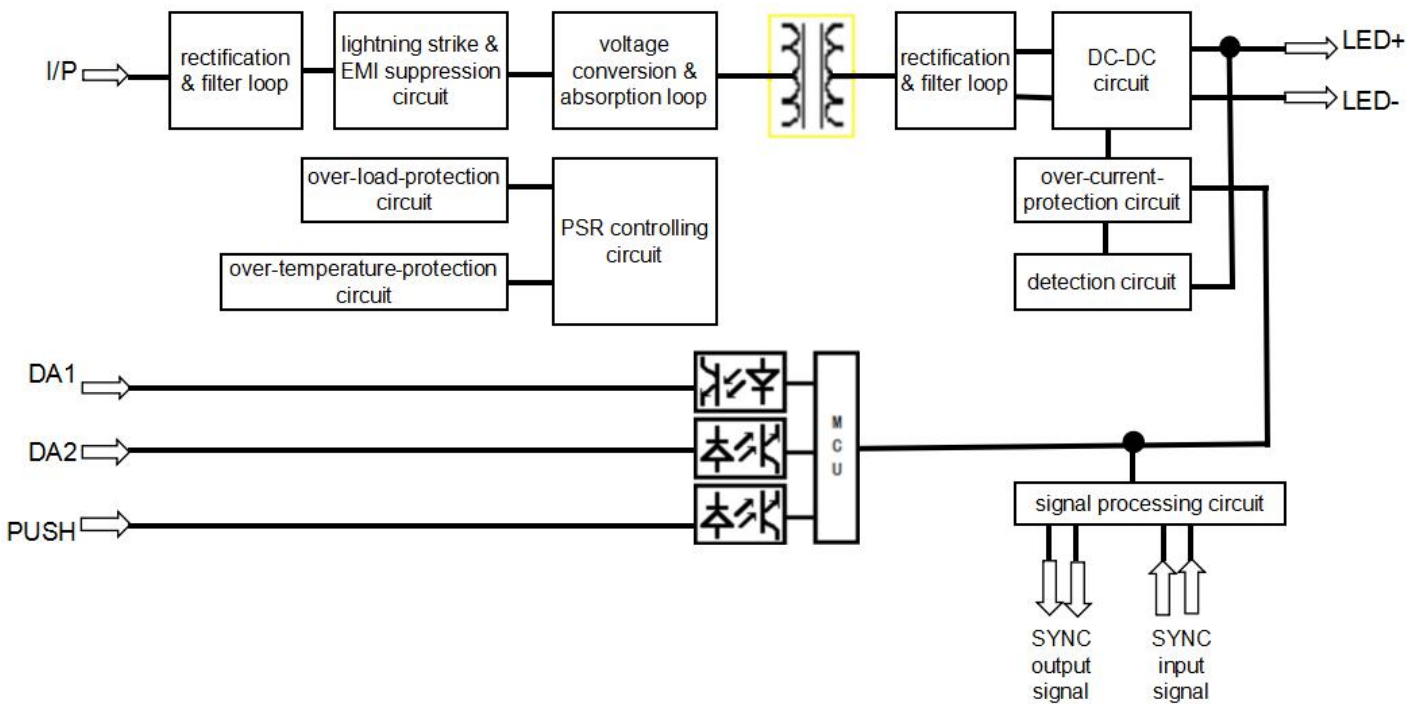
Name	Value	Remark
Surge peak current (I <sub>peak</sub> )	16A	Input voltage 230Vac
Surge half-peak time (T <sub>width</sub> )	80μs	Input voltage 230Vac. Measure the time for I <sub>peak</sub> to drop to its half value.
Quantity of the same model driver that type-B 16A circuit breaker can configure.	64 pcs (max.)	

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

Type	Rank	Qty of accommodated drivers	Relative conversion ratio
B	10A	40 pcs	63%
	13A	51 pcs	81%
	16A	64 pcs	100% (benchmark)
	20A	80 pcs	125%
	25A	100 pcs	156%
C	10A	66 pcs	104%
	13A	86 pcs	135%
	16A	108 pcs	170%
	20A	133 pcs	208%
	25A	166 pcs	260%



### Function Diagram

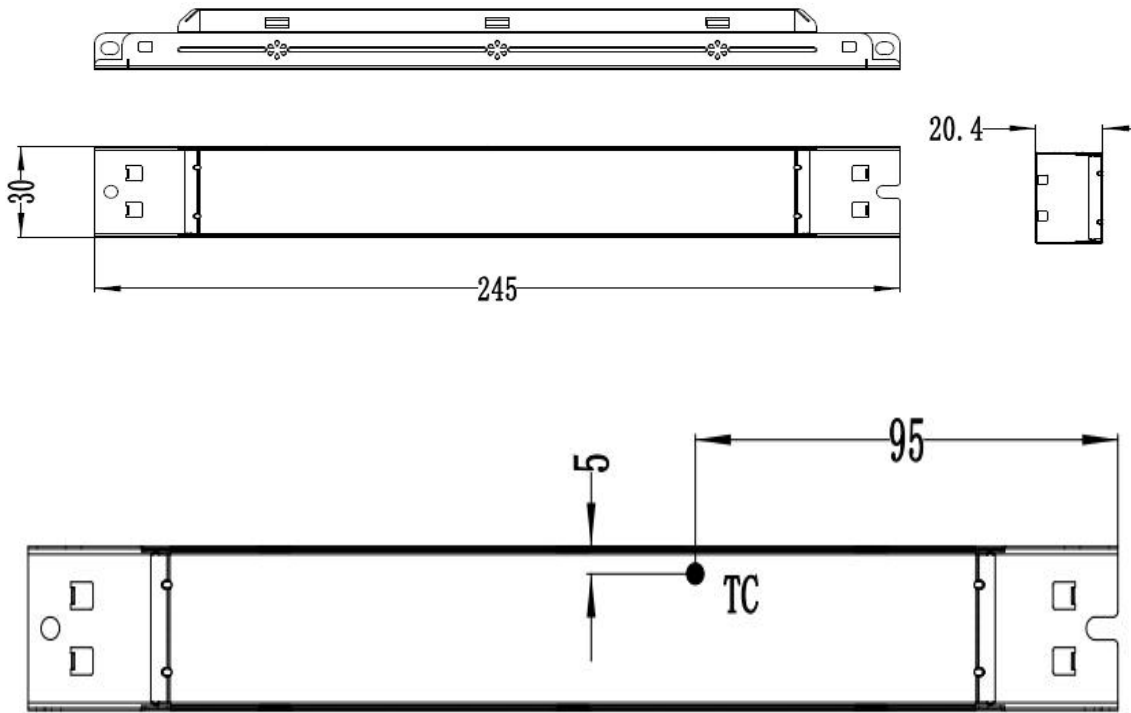


### DIP Switch Table

Ta	Vo DC	Current	1	2	3
50°C	25-42V	750mA	—	—	—
		700mA	—	—	ON
		650mA	—	ON	—
		600mA	—	ON	ON
		550mA	ON	—	—

Remark: Apart from the noted ways of dial codes, the others are default 750mA, the maximum current.

### Dimension (unit: mm, tolerance: +0.5mm ) & TC Spot



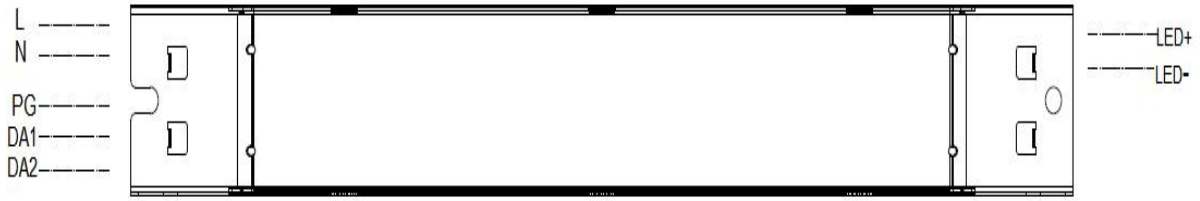
### Product Label

<b>INPUT</b> AC-L AC-N NC DALI PUSH 0.75-1.5□		<table border="1"> <tr> <td>Un: 220-240V ~</td> <td>In: 0.2A</td> </tr> <tr> <td>Fn: 50/60Hz</td> <td></td> </tr> <tr> <td>Output Voltage: 25-42V =</td> <td>Prated: 31.5W (Max)</td> </tr> <tr> <td>Uout: 55V =</td> <td>tc: 90°C</td> </tr> <tr> <td>PF: 0.9C</td> <td>ta: 50°C</td> </tr> </table>	Un: 220-240V ~	In: 0.2A	Fn: 50/60Hz		Output Voltage: 25-42V =	Prated: 31.5W (Max)	Uout: 55V =	tc: 90°C	PF: 0.9C	ta: 50°C		<b>LED Driver</b> Model: LF-GSD030YE For LED modules only	<table border="1"> <thead> <tr> <th>I rated (CC)</th> <th>1</th> <th>2</th> <th>3</th> </tr> </thead> <tbody> <tr> <td>550mA</td> <td>ON</td> <td>—</td> <td>—</td> </tr> <tr> <td>600mA</td> <td>—</td> <td>ON</td> <td>ON</td> </tr> <tr> <td>650mA</td> <td>—</td> <td>ON</td> <td>—</td> </tr> <tr> <td>700mA</td> <td>—</td> <td>—</td> <td>ON</td> </tr> <tr> <td>750mA</td> <td>—</td> <td>—</td> <td>—</td> </tr> </tbody> </table>	I rated (CC)	1	2	3	550mA	ON	—	—	600mA	—	ON	ON	650mA	—	ON	—	700mA	—	—	ON	750mA	—	—	—	Preparation for input and output 17.5mm www.lifud.com Made in China	<b>OUTPUT</b> LED+ LED- 0.5-1.0□
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ON OFF 

1	2	3

## Wiring Diagram



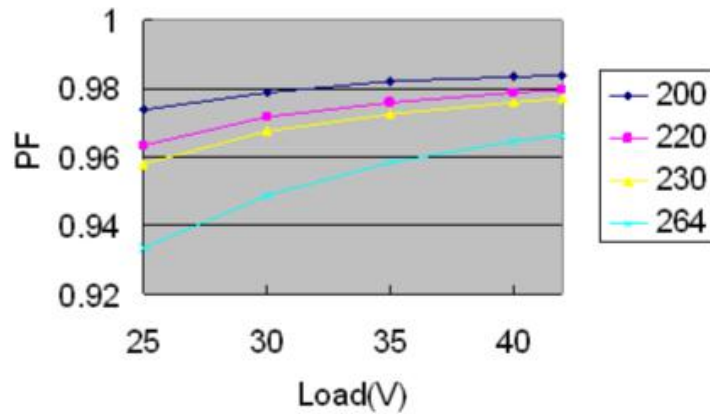
## Packaging Specification

Model	LF-GSD030YE
Carton dimension	375*275*28mm(L*W*H)
Quantity	8 pcs/layer; 7 layers/ctn; 56 pcs/ctn
Weight	180g±5%/pc; 10.18Kg±5%/ctn

## Product Feature Curve

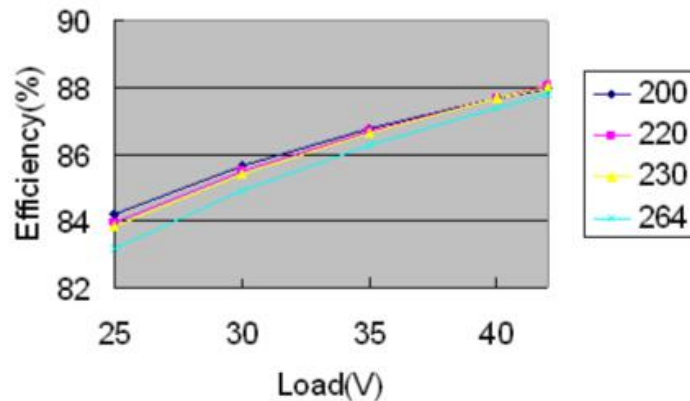
### 1. PF curve

The diagram below is about 750mA load voltage and PF.



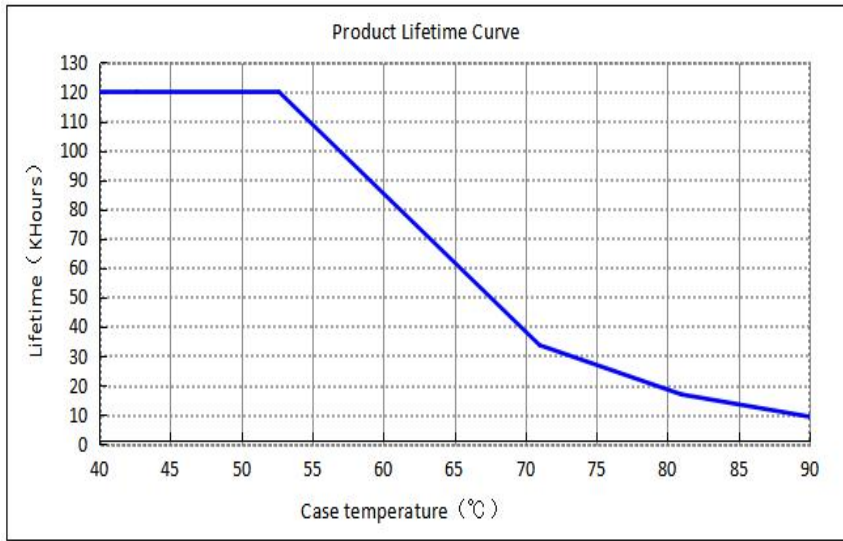
### 2. Efficiency curve

The diagram below is about 750mA load voltage and efficiency value.



### 3. Lifetime curve

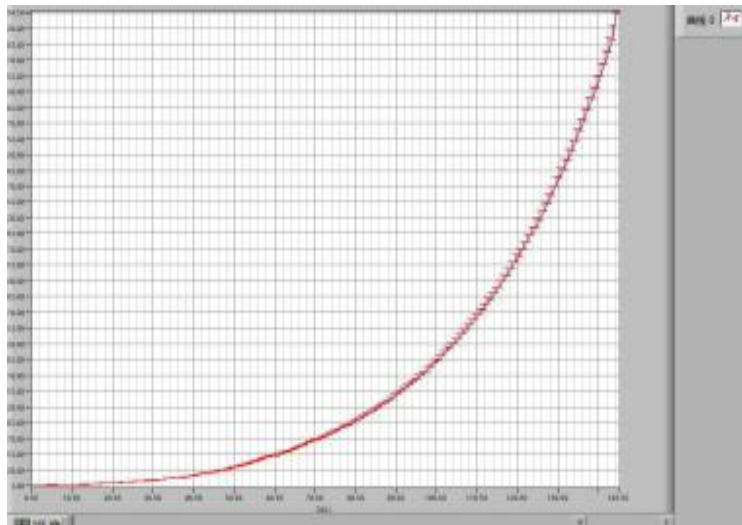
The curve below illustrates the driver's lifetime data when its case temperature in an airtight space reaches 40°C, 50°C, 60°C, 70°C, 80°C and 90°C.



### 4. Dimming curve

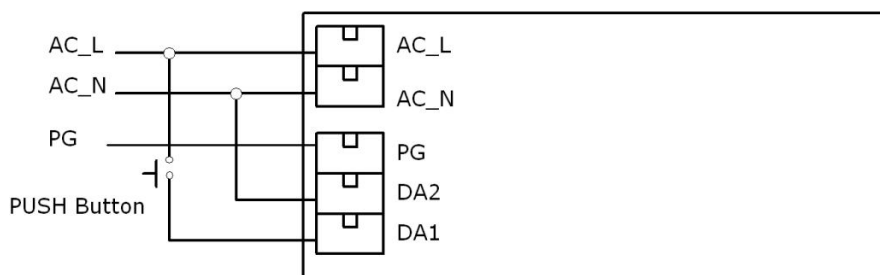
The diagram below is about 500mA full load DC42V.

Output Current & Standard Error



## Statement of Dimming Operation

### 1. Wiring diagram for PUSH dimming



(1) PUSH dimming


Operation	Operation Time	Function
Instant Push	0.1 sec ~ 0.5 sec	Light On / Off
Long Push	0.5 sec ~ 10 sec	Brighter / Dimmer
Reset Push	> 11 sec	Back to the Brightest

(2) Factory default setting is of 100% brightness.

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

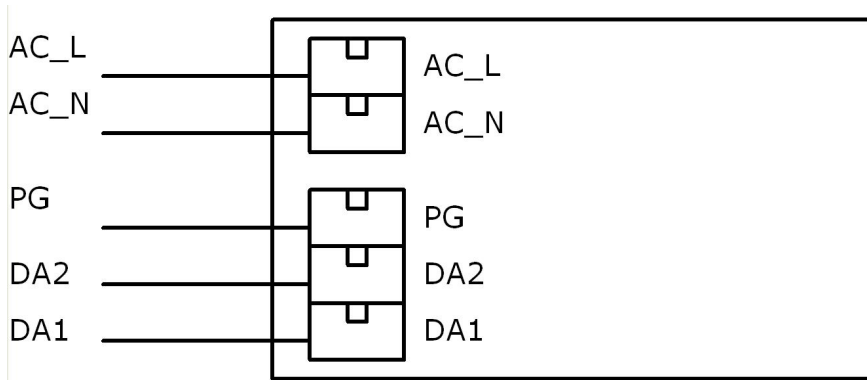
(4) In DALI & PUSH mode, up to 64 pcs of power supplies can be connected in parallel.

(5) The max. length of the wire from the button to the furthest LED power supply is 135m. Wire diameter: 16-22AWG.

(6) The button can only be connected to the AC-L and DA1 terminals of LF-GSD030YE. Connecting to AC-N will cause short circuit. 

(7) The minimum dimming depth of PUSH is 3%\*Iout.

2. DALI dimming



(1) Connect DALI signal to DA1 and DA2 terminals.

(2) DALI protocol includes 16 group and 64 IPs.

(3) The minimum dimming depth of DALI is 3%\*Iout.

3. Dimming mode option

(1) DALI dimming function and push dimming function cannot be executed at the same time, otherwise the DALI dimmer will be damaged.

(2) After choosing push dimming function, connect the parts according to the relative wiring diagram. Disconnect DALI wires otherwise high voltage will go through DALI dimming system and burn DALI devices.

(3) After choosing DALI dimming function, connect the parts according to the relative wiring diagram. Disconnect push dimming wires otherwise high voltage will go through DALI dimming system and burn DALI devices.

**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 contents of this data sheet belongs to Lifud Technology Co., Ltd.