Features

- Supports 6-step time dimming
- Output current and parameters adjustable via NFC
- Supports CLO function
- Driver temperature guard via internal OTP protection
- All-round protection: input overvoltage, input undervoltage, open circuit, overload, over-temperature and short circuit protection
- Surge protection: L-N: 6kV; L/N-PE: 10kV
- According to Zhaga Book 13, 24, 25
- IP20; suitable for Class I/II light fixtures (IP>54)

Applications

· Street lighting · tunnel lighting · indoor lighting

Descriptions

LF-ACD075D-1050-115 is a 75W (max.) NFC programmable constant current LED driver. Its rated input voltage ranges from 220 to 240Vac. Its output current is adjustable from 200 to 1050mA. It has protective features of input overvoltage, input undervoltage, output open circuit, short circuit protection and over-temperature protection.

Product Model

LF - ACD 075D -1050 - 115

- 115: max. output voltage: 115Vdc
- 1050: max. output current: 1050mA
- 075: max. output power: 75W; D: ON/OFF NFC series
- ACD: LED driver series

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■ Electrical Characteristics

Model		LF-ACD075D-1050-115				
Output	Output Voltage	35-115V				
	Output Current	200-1050mA① (default: 700mA②)				
	Ripple Current (≤100Hz)	±3.3%				
	Flicker Index	IEC-Pst≤1, CIE SVM≤0.4, according to IEEE Std 1789-2015				
	Current Tolerance	±5%				
	Temperature Drift	±10%				
	Start-up time	<1.5s				
Input	Rated Input Voltage	220-240Vac				
	Input Voltage Range	180-264Vac				
	DC Input Voltage	180-264Vdc③				
	Input Frequency	0/50/60Hz				
	Input Current	0.5A max. @AC input 0.1-0.43A@DC input				
	PF	≥0.95				
	THD	<10%				
	Efficiency	≥91%				
	Inrush Current	<45A&200uS				
	Loading Quantities of Circuit Breaker	Model	B10	C10	B16	C16
		Quantity (pcs)	11	14	19	23
	Leakage Current	≤3.5mA				
Environment Descriptions	Operating Temperature	-40℃~+55℃				
	Operating Humidity	20-90%RH (no condensation)				
	Storage Temperature/ Humidity	-40℃~+80℃ (6 months in Class I environment); 10-90%RH (no condensation)				
	Atmospheric Pressure	86-106kPa				
Surge	L-N	6kV				
	L/N-PE	10kV				

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■ Electrical Characteristics

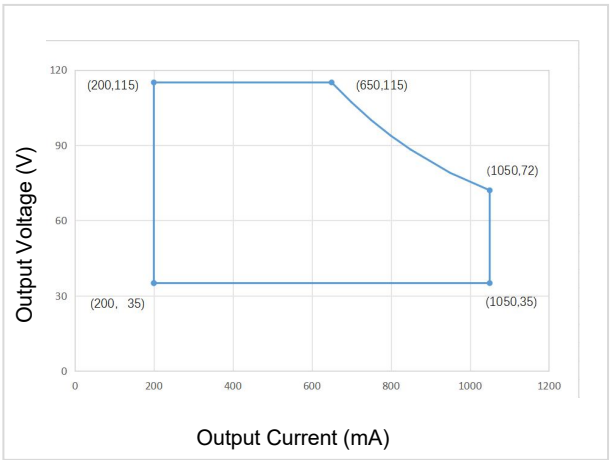
Safety and EMC	Certifications	CB, CE, ENEC, RCM, SAA, UKCA
	Withstanding Voltage	I/P-O/P: 3.75kV&5mA&60S; I/P-PE: 1.5kV&5mA&60S; O/P-PE: 1.5kV&5mA&60S
	Insulation Resistance	I/P-O/P: >100MΩ@500VDC; I/P-PE: >100MΩ@500VDC; O/P-PE: >100MΩ@500VDC
	Safety Standards	CB: IEC61347-1:2015, IEC61347-1:2015/AMD1:2017,IEC61347-2-13:2014,IEC61347-2-13:2014/AMD1:2016 CE-LVD: EN 61347-2-13:2014/A1:2017, EN 61347-1:2015, EN 62493:2015 ENEC: EN61347-1:2015, EN 61347-2-13:2014/A1:2017, EN 62384：2020 RCM: AS 61347.2-13:2018 SAA:AS 61347.1:2016+A1:2018 AS 61347.2.13:2018 UKCA-LVD: EN 61347-1:2015/A1:2021, EN 61347-2-13:2014/A1:2017 SAA:AS61347.2-13:2018
	EMI	CE-EMC/RCM: EN55015, EN61000-3-2, EN61000-3-3 UKCA-EMC: EN IEC 55015:2019/A11:2020, EN 61547:2009, EN IEC 61000-3-2:2019/A1:2021, EN 61000-3-3:2013/A2:2021
	EMS	CE-EMC/RCM: EN61000-4-2,3,4,5,6,11
Other Parameters	IP Rating	IP20
	RoHS	RoHS 2.0 (EU) 2015/863
	Tc Max	90℃
	Warranty Condition	8 years (Tc≤88℃)
	Noise Level	≤25dB (The noise collector should be placed at 10cm away from the LED driver during the test in a quiet room)
Testing Equipment	AC power source: CHROMA6530, digital power meter: CHROMA66202, oscilloscope: Tektronix DPO3014, DC electronic load: M9712B, LED board, constant temperature and humidity chamber; Everfine EMS61000-5B, fast transient generator: Everfine EMS61000-4A, spectroanalyzer: KH3935, hi-pot tester: EEC SE7440, flicker tester (flicker-free coefficient test): Everfine LFA-3000, etc.	
Testing Remark	If there are no special remarks, the above parameters are tested at the ambient temperature of 25℃, humidity of 50%, maximum output power and input voltage of 230Vac/50Hz.	

■ Electrical Characteristics

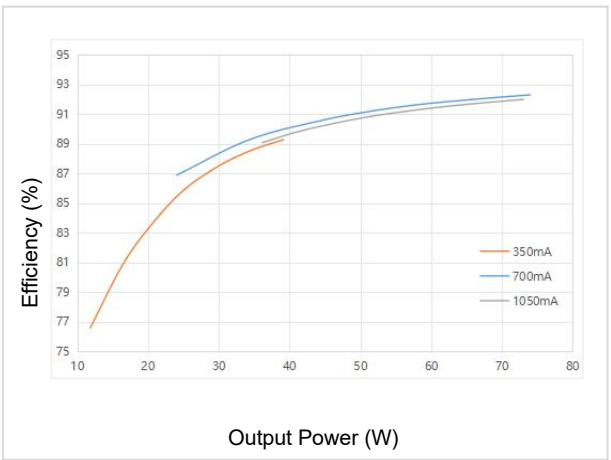
Additional Remarks	1. It is recommended that user install the over voltage protection, under voltage protection and surge protection devices in the power supply circuits of light fixtures to ensure electricity safety. 2. The LED driver used in combination with the end device is one of the accessories of the whole light fixture, and the EMC of the whole light fixture is not only susceptible to the driver itself, but to the LED light fixture and the whole light fixture's wiring. Thus, the manufacturer of LED light fixture should re-confirm the EMC of the whole light fixture before the whole light fixture is finished. 3. The PC cover, casing and end cap for assembling the LED driver in the light fixture must meet the fire rating of UL94-V0 or above. 4. The total output power of the driver can not exceed the rated maximum power during use, otherwise it can not be guaranteed. 5. The test conditions of the circuit breaker configuration quantity are the same as those of the inrush current. 6. Lifud reserves the right to interpret any of the above parameters. Remark: ① When the output current is 1050mA, the load voltage of LED driver ranges from 35 to 72Vdc; when the load voltage >72Vdc, the LED driver outputs with the maximum power of 75W. Please see the chart. ② The default current of LED driver is 700mA and its output current can be set by FEIG NFC reader. ③ DC input is only for emergency.

■ Product Characteristic Curves

Working Window Curve



Efficiency Curve



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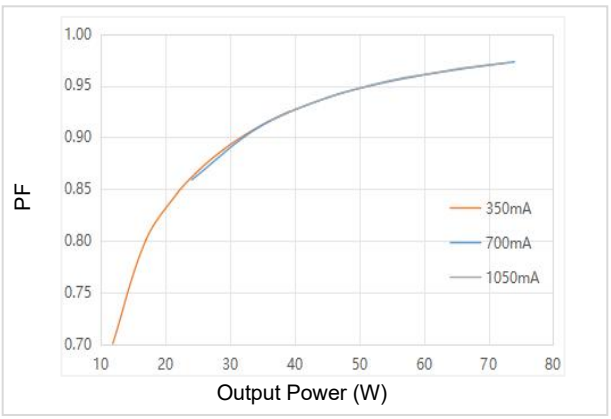
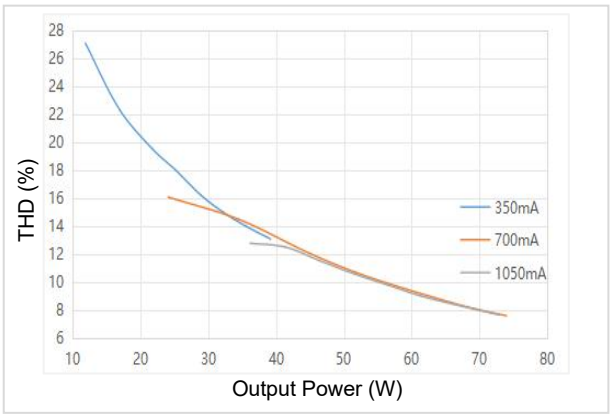
■ Product Characteristic Curves

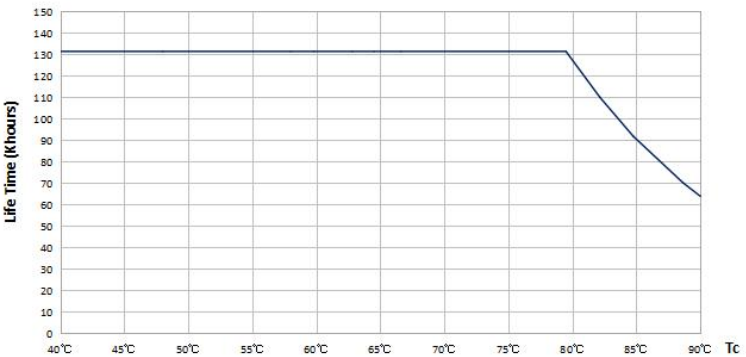
PF Curve



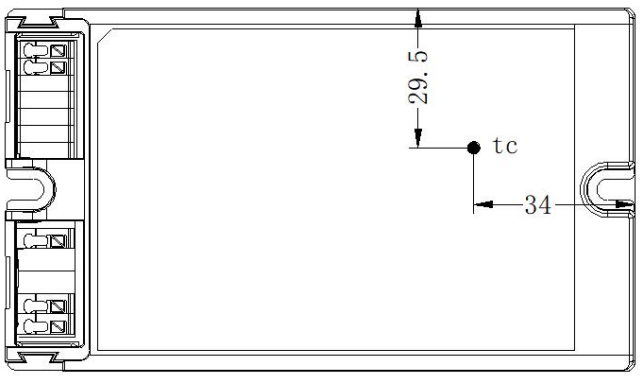
THD Curve



Lifetime Curve



Tc Point (unit: mm)



The Tc point is on the top of the LED driver

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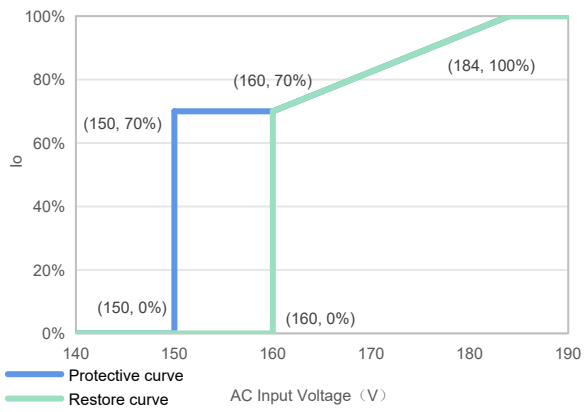
■ Protective Characteristics

Protective Type				Min.	Typ.	Max.	Introduction
Internal over-temperature protection	Mode 1	If the temperature is too high, the current will drop first and then the light will be off.	T1 (Start to decrease the current)	80℃	85℃	90℃	When the internal temperature rises to T1, the internal thermal protection will be triggered and the output current will gradually decrease.
			T2 (Stop decreasing the current)	83℃	88℃	93℃	When the internal temperature rises to T2, the output current will decrease to the programmed protection current value (default is 50%Io).
			T3 (Turn off the light)	86℃	91℃	96℃	When the internal temperature rises above T3, the light will be off, and when the temperature drops below T1, the light can be automatically turned on.
	Mode 2	If the temperature is too high, the light will be off.	T3 (Turn off the light)	86℃	91℃	96℃	When the internal temperature rises above T3, the light will be off, and the AC needs to be restarted to restore the light.
Open Circuit				<150V			
Short Circuit				Hiccup mode (auto-recovery)			

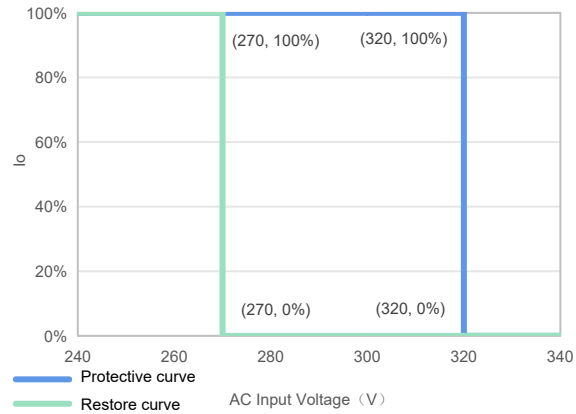
Input undervoltage protection	Protective voltage	145Vac	150Vac	155Vac	When the input voltage is lower than the protective voltage, the light will be off.
	Restore voltage	156Vac	160Vac	165Vac	When the input voltage is higher than the restore voltage, the light can be automatically turned on.
Input overvoltage protection	Protective voltage	310Vac	320Vac	330Vac	When the input voltage is higher than the protective voltage, the light will be off.
	Restore voltage	261Vac	270Vac	278Vac	When the input voltage is lower than the restore voltage, the light can be automatically turned on.

■ Protective Characteristics Schematic

Schematic Diagram of Input Undervoltage Protection



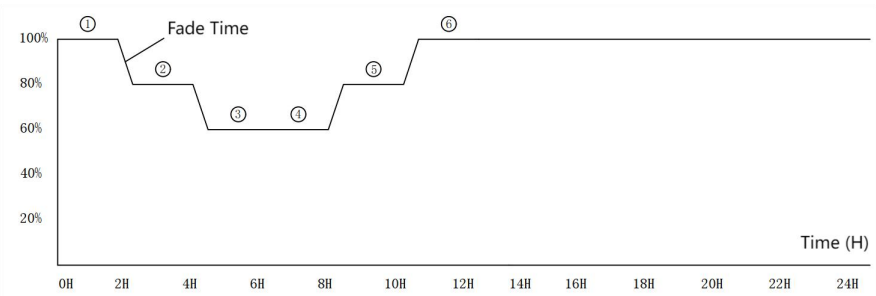
Schematic Diagram of Input Overvoltage Protection



Remark: It is not allowed to operate outside the input voltage range for a long time.

■ Time Dimming Introduction

Time dimming control includes 3 kinds of modes: Traditional Timer, Self Adapting-Midnight and Self Adapting Percentage. When the time dimming control starts, it will enter Traditional Timer mode by default. There are 6 segments in each mode, and you can set the brightness of each segment, the running time of the first to fifth segments, and the fade time for switching between two segments.

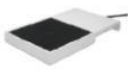


Traditional Timer: Follows the programmed timing curve after power on.

Self Adapting-Midnight: Automatically adjusts the dimming curve based on the on-time of each of the past 3 days (if difference <15 minutes), assuming that the center point of the dimming curve is local midnight time.

Self Adapting-Percentage: Automatically adjusts the on-time of each step by a constant percentage of the initialization time and operational use time according to the actual on-time of the past 3 days (if difference <15 mins).

■ Programmer Tools and Software

Product	Name	Brand	Model	Softwares
	NFC desktop programmer	FEIG	ID CPR30+	Lifud SmartSet
	NFC handheld programmer	FEIG	ID ISC.PRH101-USB	Lifud SmartSet
	NFC batch programmer	FEIG	ID ISC.LRM1002-E ID ISC.ANT300/300-A	Lifud SmartSet
	Mobile NFC APP	LIFUD	/	Lifud NFC

■ Programmer Setting Instructions

Read/write and Parameter Configuration

Programming project	Default settings	Parameters settings	Read/Write
Product information	-	No	Read
Output current	700mA (default)	Yes	Read/Write
CLO	Inactivated	Yes	Read/Write
Time dimming	Inactivated	Yes	Read/Write
Over-Temperature Protection	Activated	Yes	Read/Write

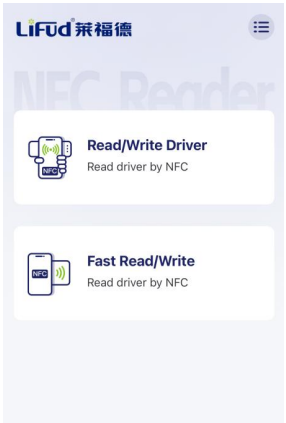
■ Programmer Setting Methods

① NFC

Note: When using the NFC reader, the driver is not allowed to operate while powered on. The driver must be powered off and completely discharged before it can read and write normally.

② Mobile NFC APP

QR Code for NFC APP Download



Note: When using the NFC app, the driver is not allowed to operate while powered on. The driver must be powered off and completely discharged before it can read and write normally.

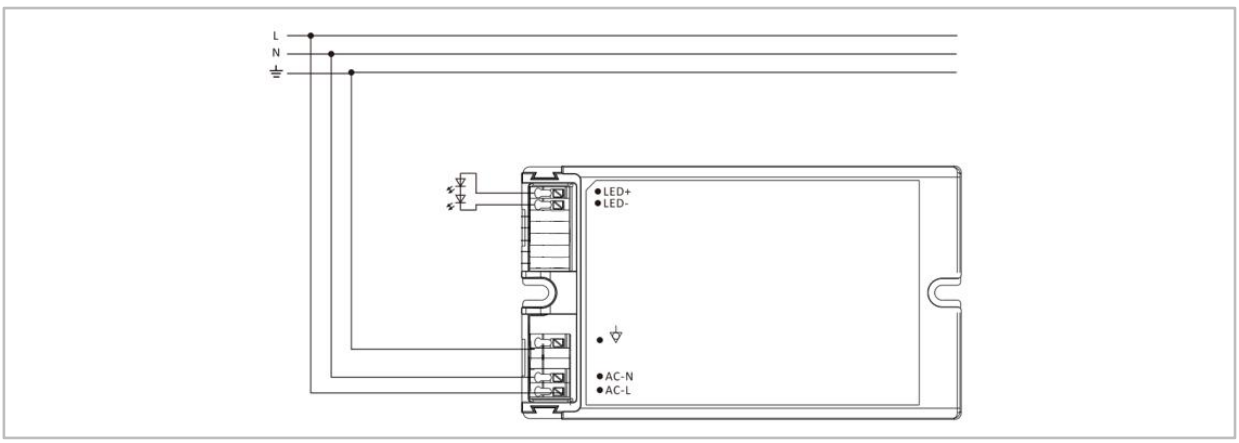
■ Product Terminal Definition

Product Terminals

Input		Output	
⏚	Earth wire	LED+	Positive terminal output of LED driver
NC	/	LED-	Negative terminal output of LED driver
NC	/	NC	/
AC-N	AC neutral wire input	NC	/
AC-L	AC live wire input	NC	/
/	/	NC	/
/	/	NC	/

■ Driver Control Instructions

Wiring Diagram



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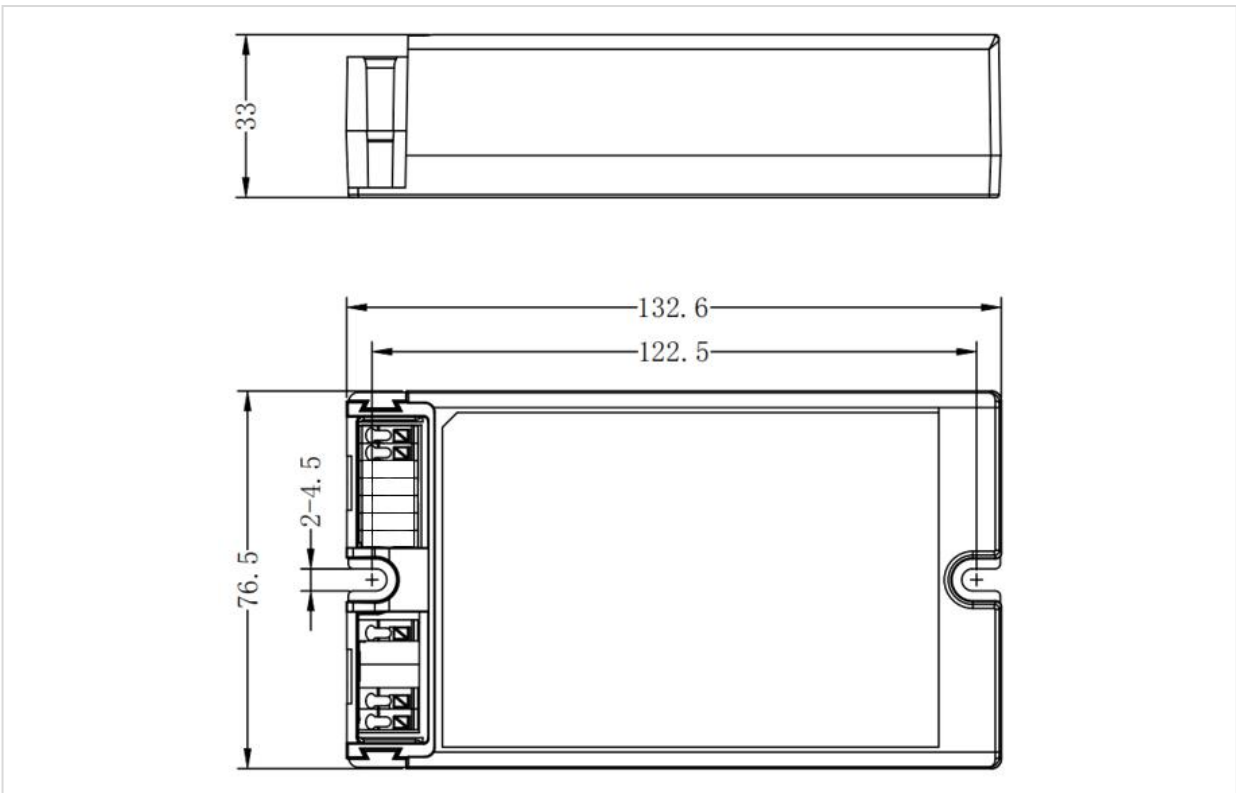
■ Structure & Dimensions (unit: mm)

Model	Overall Appearance (L*W*H)	Distance Between 2 Locating Holes (L)	Diameter of Locating Hole (D)
LF-ACD075D-1050-115	132.6*76.5*33 mm (±0.5mm)	122.5 mm (±0.5mm)	4.5 mm (±0.5mm)



■ Packaging Specifications

Model	LF-ACD075D-1050-115
Carton Size	280*217*95mm (L*W*H)
Quantity	12 pcs/layer; 1 layers/ctn; 12 pcs/ctn
Weight	0.252±5% kg /pc; 3.432±5% kg /ctn

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■ Transportation and Storage

1. Transportation

- Suitable transportation means: vehicles, boats and aeroplanes.
- In transit, it is necessary to prepare awnings for rain or sun protection. Moreover, please keep civilized loading and unloading to prevent the vibration or impact of LED driver as much as possible.

2. Storage

- The storage of LED driver shall conform to the standard of Class I environment. When using LED drivers which have been stored for more than 6 months, please re-test them firstly. Do not use them unless they are tested to be qualified.

Cautions

- Please use Lifud LED driver according to its parameters in the specification, otherwise the LED driver may malfunction.
- Using any incompatible light fixtures or those that have not been certified may cause fire, explosion or other risks.
- Man-made damage is beyond the scope of Lifud warranty service.

Remark: Lifud Technology Co., Ltd. reserves the right to interpret any contents of this specification.