

### Features

- Bluetooth dimmable
- Low THD
- Output current adjustable via a DIP switch
- Standby power consumption  $\leq 0.5W$
- Flicker free
- IP20
- Suitable for Class II light fixtures (down light, spot light, etc.)
- 5-year warranty (please refer to the warranty condition.)



### Applications

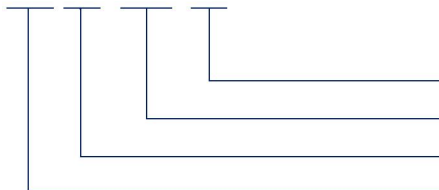
· Classroom lighting · indoor office lighting · decorative lighting · commercial lighting · residential lighting

### Descriptions

LF-AAB020-0500-42 is a constant current Bluetooth dimmable LED driver with the maximum output power of 21W. Its rated input voltage ranges from 198 to 264Vac and output current can be adjusted via a DIP switch from 250 to 500mA with every 50mA as a step. Besides, it has all-round protections, including over voltage protection and short circuit protection.

### Product Model

LF - AAB 020 - 0500 - 42



- 42: maximum output voltage: 42V
- 0500: maximum output current: 500mA
- 020: rated power: 20W
- AAB: Bluetooth dimmable series

### Lifud Technology Co., Ltd.

Production Base I (HQ): Building B, Kutto Industrial Park, No.26, Xinhe Road, Bao'an District, Shenzhen City, China.  
 Production Base II: No.4, Block 2, Tengfei Road, Shigao Economic Development Area, Meishan City, Sichuan, China.  
 Website: [www.lifud.com](http://www.lifud.com) Telephone: +86(0)755 8373 9299 Email: [sales@lifud.com](mailto:sales@lifud.com)

### ■ Electrical Characteristics

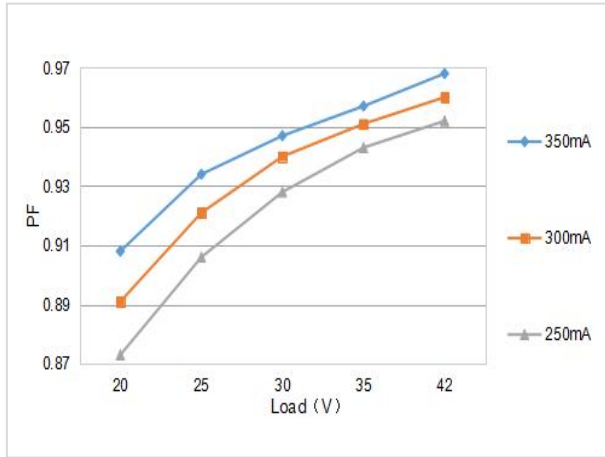
Model		LF-AAB020-0500-42					
Output	Output Voltage	20-42V					
	Output Current	250mA	300mA	350mA	400mA	450mA	500mA
	Flicker Index	IEC-Pst $\leq$ 1, CIE SVM $\leq$ 0.4 (complies with IEEE Std 1789-2015)					
	Current Tolerance	$\pm$ 5%					
	Temperature Drift	$\pm$ 5%					
	Startup Time	<1S@230Vac					
Input	Input Voltage	220-240Vac (voltage limit: 198-264Vac)					
	DC Input Voltage	180-280Vdc					
	Input Frequency	47-63Hz					
	Input Current	0.2A max.					
	PF	$\geq$ 0.88	$\geq$ 0.9	$\geq$ 0.92	$\geq$ 0.93	$\geq$ 0.94	$\geq$ 0.94
	THD	<15%					
	Efficiency	$\geq$ 81%	$\geq$ 82.5%	$\geq$ 83.5%	$\geq$ 84%	$\geq$ 84.5%	$\geq$ 85%
	Inrush Current	<20A&100uS @230Vac					
	Loading Quantities of Circuit Breaker	Model	B10	C10	B16	C16	
		Quantity (pcs)	33	33	53	53	
	Leakage Current	<0.7mA					
Standby Power Consumption	$\leq$ 0.5W (when the dim-to-off signal of APP is effective)						
Protections	Open Circuit	<59V					
	Short Circuit	Hiccup mode (auto-recovery)					
Environment Descriptions	Operating Temperature	-20°C~+45°C					
	Operating Humidity	20-90%RH (without condensation)					
	Storage Temperature/ Humidity	-40°C~+80°C (6 months in Class I environment); 10-90%RH (without condensation)					
	Atmospheric Pressure	86-106kPa					

### ■ Electrical Characteristics

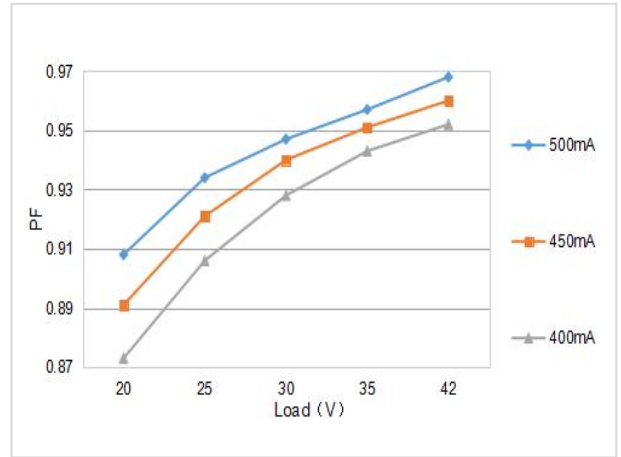
<b>Safety and EMC</b>	Certifications	CE, CCC
	Withstanding Voltage	I/P-O/P: 3.75kV 5mA 60S
	Insulation Resistance	I/P-O/P: >100MΩ@500Vdc
	Safety Standards	CE-LVD: EN 61347-2-13: 2014/A1: 2017, EN 61347-1: 2015, EN 62493: 2015 CCC: GB19510.1-2009, GB19510.14-2009
	EMI	CE-EMC: EN55015, EN61000-3-2, EN61000-3-3 CCC: GB/T17743, GB17625.1, GB17625.2
	EMS	CE-EMC: EN61000-4-2, 3, 4, 5 (lightning strike L-N: 1kV), 6, 11 CCC: GB/T17626.2, 3, 4, 5 (lightning strike L-N: 1kV), 6, 11
<b>Other Parameters</b>	IP Rating	IP20
	RoHS	RoHS 2.0 (EU) 2015/863
	Warranty Condition	5 years (Tc ≤81°C)
	Noise Level	≤25dB (this data is measured in a soundproof room and the noise collector should be 10CM away from LED driver)
<b>Testing Equipment</b>	Digital power meter: CHROMA66202, oscilloscope: Tektronix DPO3014, DC electronic load: M9712B, LED board, constant temperature and humidity chamber; Everfine EMS61000-5B: Everfine EMS61000-4A, spectroanalyzer: KH3935, Hi-pot tester: TH9201B, flicker tester (flicker-free coefficient test) 60N-01, etc.	
<b>Testing Remark</b>	The above parameters are tested at the ambient temperature of 25°C, humidity of 50%, full load, maximum output current and input voltage of 230Vac without any special remarks.	
<b>Additional Remarks</b>	<ol style="list-style-type: none"> <li>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.</li> <li>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..</li> <li>3. The test conditions of the circuit breaker configuration quantity are the same as those of the inrush current.</li> <li>4. Lifud reserves the right to interpret any of the above parameters.</li> </ol>	

**Product Characteristic Curves**

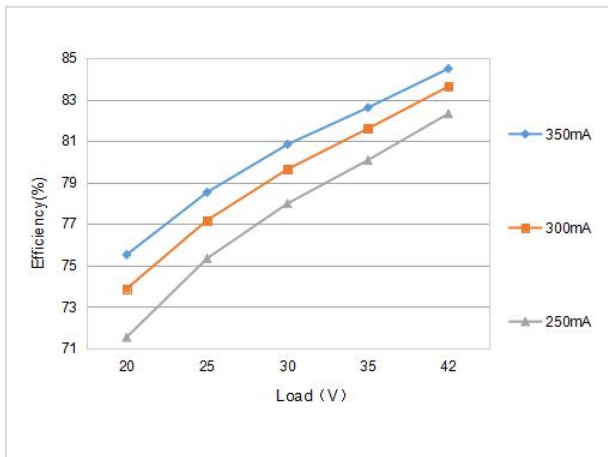
PF Curve 1



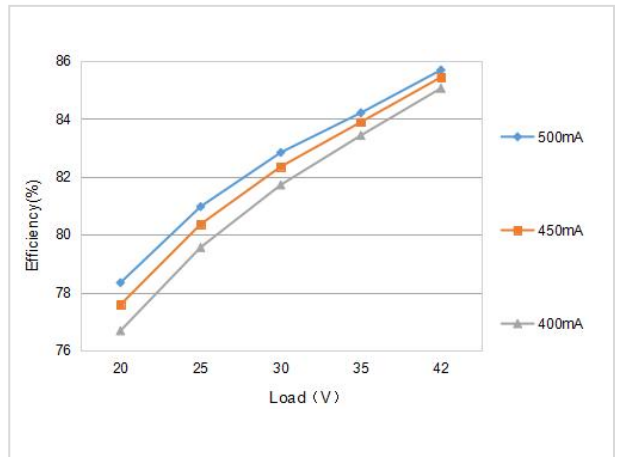
PF Curve 2



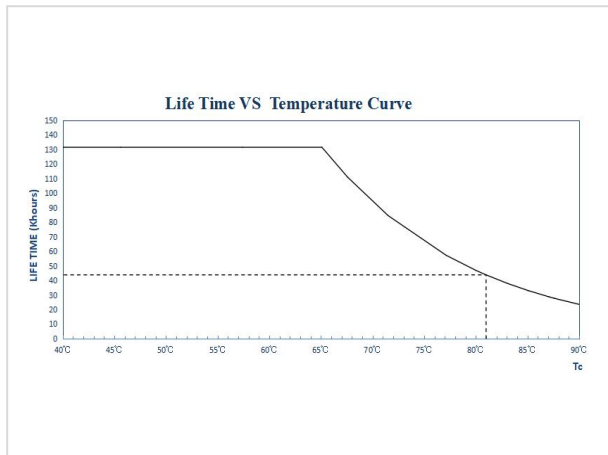
Efficiency Curve 1



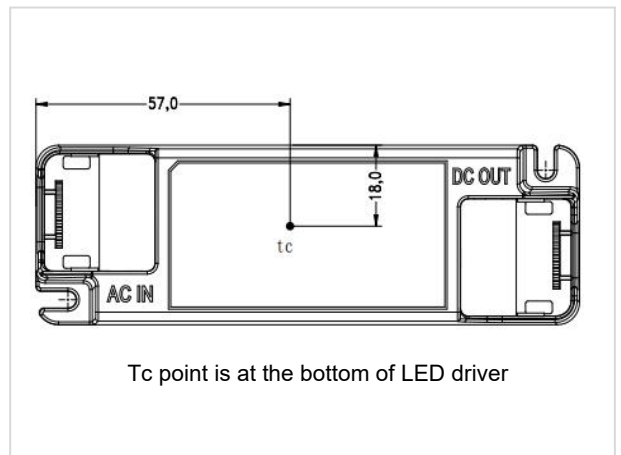
Efficiency Curve 2



Lifetime Curve



Tc Point Testing Diagram



Tc point is at the bottom of LED driver

■ **Definitions of Product Terminals**

INPUT		OUTPUT	
AC-L	Input terminal of AC live wire	/	/
NC		LED+	Positive electrode output of LED driver
AC-N	Input terminal of AC neutral wire	LED-	Negative electrode output of LED driver

■ **Definitions of DIP Switch**

Vo DC	I rated (CC)	1	2	3
20-42V	500mA	OFF	OFF	OFF
20-42V	450mA	OFF	OFF	ON
20-42V	400mA	OFF	ON	OFF
20-42V	350mA	OFF	ON	ON
20-42V	300mA	ON	OFF	OFF
20-42V	250mA	ON	OFF	ON

Remarks: ① Please disconnect input AC power supply before using the DIP switch function.

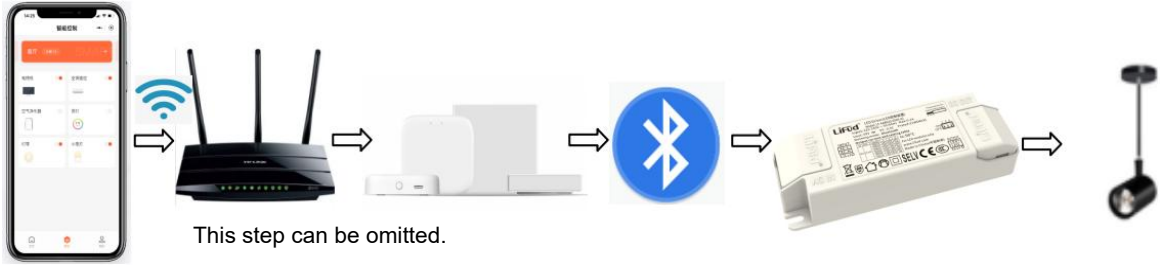
② Except the known DIP switch modes, the default value of other DIP switch modes is 500mA (max).

■ **Bluetooth Net-in & Net-out Operation Instructions**

- The standard of Bluetooth LE 5.0 protocol is used in the design.
- Net-in effective distance: about 10m (measured in a barrier-free condition).
- Maximum quantity of LED drivers that a gateway can match for: 20 (with Tuya wireless gateway and measured in a barrier-free condition)
- Net-in operation:
  - turn the Bluetooth and location services of your phone on -- open the "Tuya Smart" APP.
  - gateway adding operation: click "Add Devices" after entering the APP interface -- click "Gateway Central Control" -- select "Wireless Gateway" -- select "Wi-Fi Network" -- the gateway light flashes quickly -- the APP shows "Gateway Central Control" -- click "Successfully Add Gateway" (e.g. wireless gateway adding operation)
  - LED driver adding operation: click "Add Devices" at the APP interface -- click "Lighting" -- select "Light Source" -- the luminaire turns on and off alternately 3 times after the AC input terminal of LED driver is continuously on/off 5 times -- the APP shows Bluetooth light -- click "Add Drivers".

**Bluetooth Net-in & Net-out Operation Instructions**

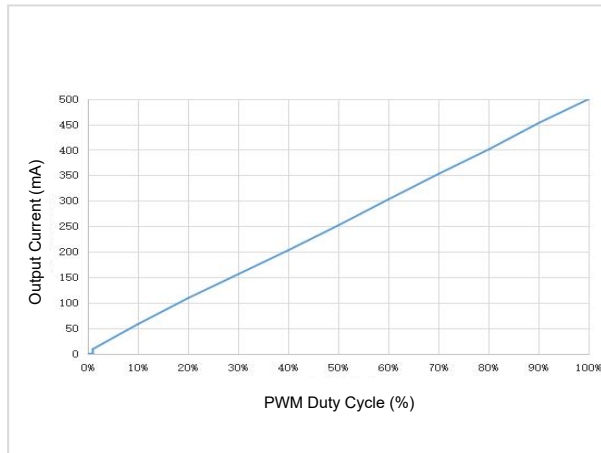
- When a device that has been connected to the network joins a new gateway, the previous network needs to be disconnected.
- Net-in & net-out operation: if the luminaire turns on and off alternately 3 times after the AC input terminal of LED driver is continuously on/off 5 times (within 5 sec), it indicates that net-in or net-out operation is successful, and you can then search for devices again.



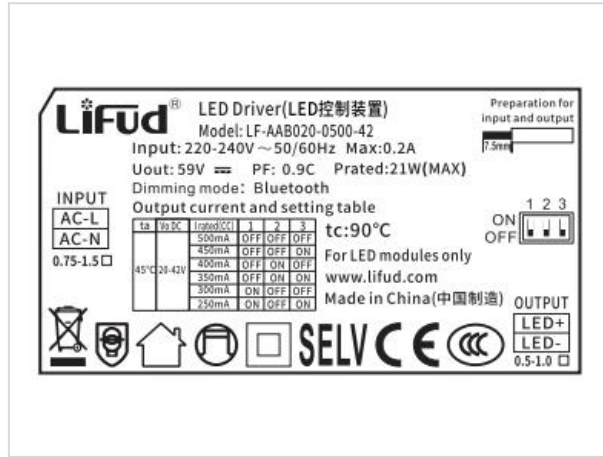
**Bluetooth Dimming Operation Instructions**

- When the dim-to-off signal of APP is effective, the LED light turns off subsequently.
- Dimming range: 2%-100% (@Vo max), dimming frequency: 3.2kHz.
- Output current range: 9-500mA (e.g. 500mA shift)

Dim-to-off Curve

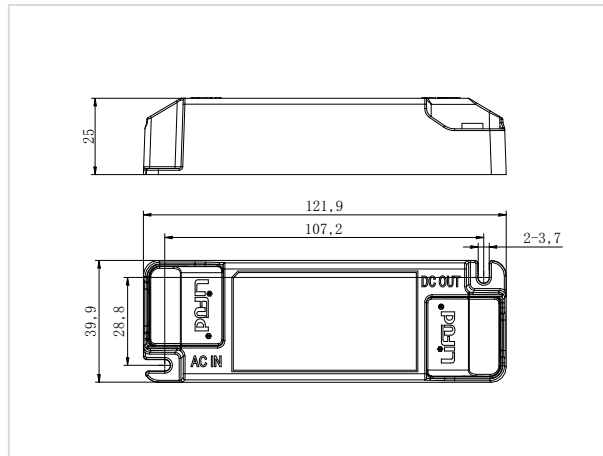


■ Label



■ Structure & Dimensions (unit: mm; tolerance: ±0.5mm)

Model	Overall Appearance Dimension (L*W*H)	Distance Between 2 Positioning Holes	Diameter of Positioning Hole
LF-AAB020-0500-42	121.9*39.9*25 mm	107.2 mm	3.7 mm



■ **Packaging Specifications**

Model	LF-AAB020-0500-42
Carton Size	385*285*210 mm (L*W*H)
Quantity	14 pcs/layer; 7 layers/ctn; 98 pcs/ctn
Weight	0.086 kg/pc; 8.56 kg/ctn

■ **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 Tecnology Co., Ltd. reserves the right to interpret any contents of this specification.