

Product Description

LF-AAA020B0500-42 is a 20W constant current flicker free LED driver. It has 0-10V/PWM/Rx dimming functions. The input voltage range is 220-240Vac. The output current can be adjusted via the DIP switch from 250mA to 500mA, in steps of 50mA.

Features

- IP20
- Suitable for Class II light fixtures
- Constant current output and the output current can be adjusted via the DIP switch
- Built-in active PFC function
- Standby power consumption <0.5W
- 0-10//PWM/Rx dimming
- 5-year warranty (Please refer to the warranty condition.)

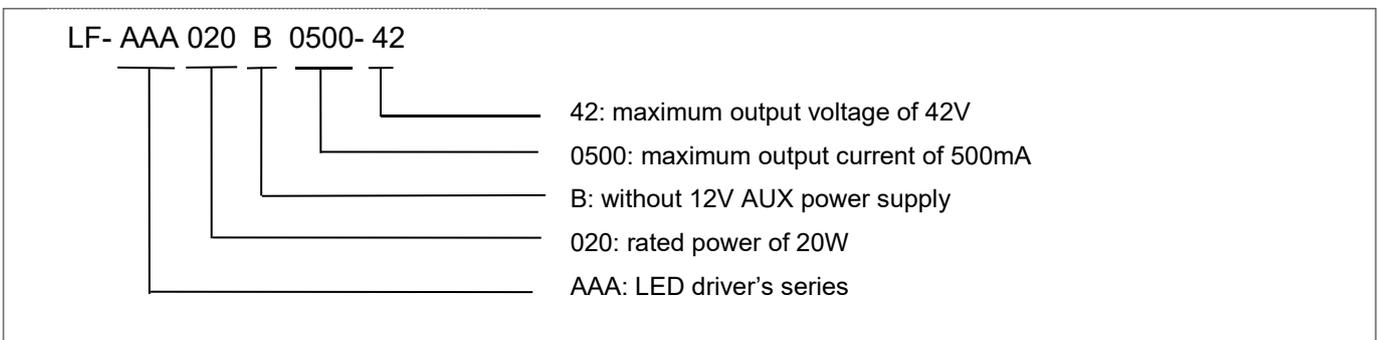


Applications

- Indoor office lighting
- Decorative lighting
- Commercial lighting
- Residential lighting



Product Naming



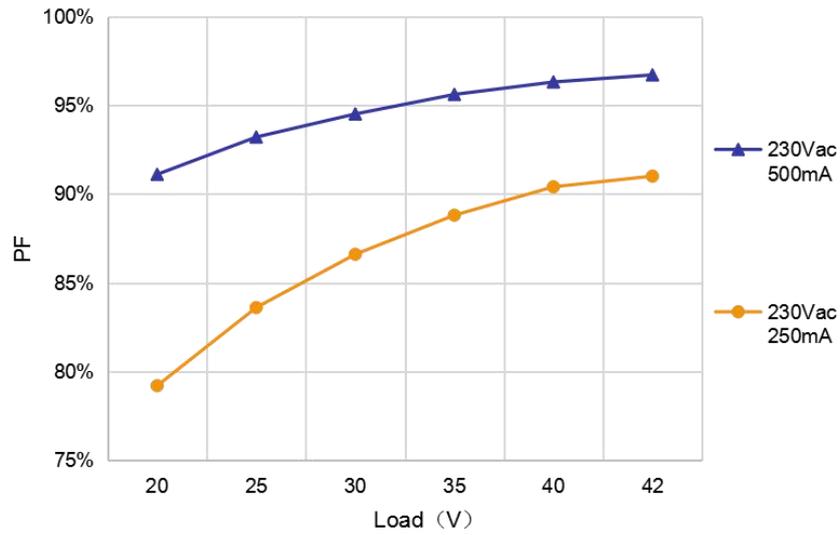
Electrical Characteristics

Model		LF-AAA020B0500-42						
Output	Output Voltage (DC)	9-42V						
	Output Current	Adjustable current via the DIP switch, please refer to the DIP Switch Table						
		250mA	300mA	350mA	400mA	450mA	500mA	
	Flicker Index	IEC-Pst ≤ 1 , CIE SVM ≤ 0.9 , Modulation Depth $\leq 1\%$ Conforms to the flicker free standard (IEEE Std 1789-2015)						
	Ripple Current	$< 10\%$ (rated current)			$< 5\%$ (rated current)			
	Current Tolerance	$\pm 10\%$		$\pm 5\%$ (20-42V); $\pm 10\%$ (9-20V)				
	Temperature Drift	$\pm 10\%$						
	Start-up Time	$< 0.5S @ 230Vac$						
Input	Input Voltage	220-240Vac (voltage limit: 198-264Vac)						
	DC Input Voltage	180-280Vdc						
	Input Frequency	47Hz-63Hz						
	Input Current	0.2A Max						
	Power Factor	≥ 0.88	≥ 0.9	≥ 0.92	≥ 0.93	≥ 0.94		
	THD	$\leq 15\% @ 230Vac$ (full load)						
	Efficiency	$\geq 80\%$	$\geq 81.5\%$	$\geq 82.5\%$	$\geq 83.5\%$	$\geq 84\%$		
	Inrush Current	$\leq 60A \& 120\mu S @ 230Vac$						
	Load Quantity Carried by the Circuit Breaker	Circuit Breaker Model	B10		C10		B16 C16	
		Quantity (pcs)	13		21		20 34	
	Leakage Current	$\leq 0.7mA$						
	Standby Power Consumption	$\leq 0.5W$ (When the DIM OFF signal is effective)						
Protections	Open Circuit	$< 55V$						
	Short Circuit	Constant current mode						
Environment Descriptions	Working Temperature	$-20^{\circ}C \sim +45^{\circ}C$						
	Working Humidity	20-90%RH (no condensation)						
	Storage Temperature/Humidity	$-40^{\circ}C \sim + 80^{\circ}C$ (six months under class I environment);						
		10-90%RH (no condensation)						
Atmospheric Pressure	86KPa~106KPa							

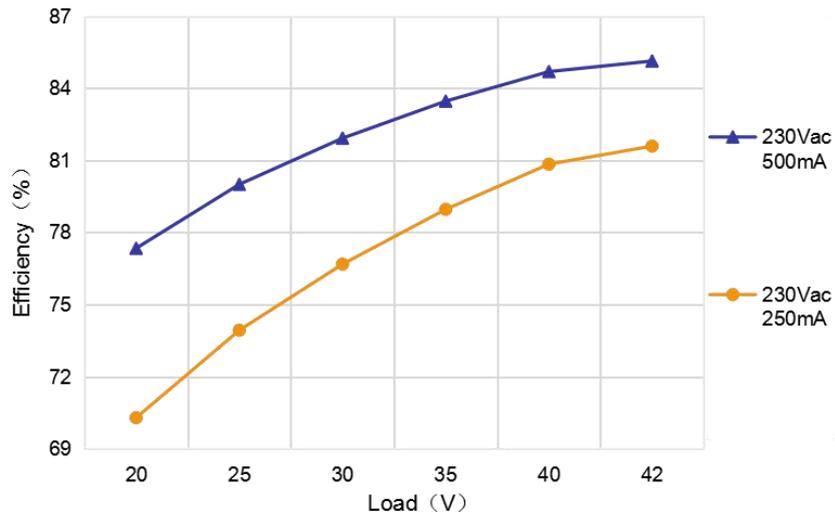
Safety & Electromagnetic Compatibility	Certifications	TUV-ENEC, CCC, RCM, CE, CB
	Withstanding Voltage	I/P-O/P (LED): 3.75KVac, O/P(LED)-O/P(DIM): 500Vac, I/P-O/P(DIM): 500Vac
	Insulation Resistance	I/P-O/P: >100MΩ@500Vdc
	Safety Standards	ENEC: EN61347-1: 2015, EN 61347-2-13: 2014/A1: 2017, EN 62384: 2016/A1: 2009 CE-LVD: EN 61347-2-13: 2014/A1: 2017, EN 61347-1: 2015, EN 62493: 2015 RCM: AS 61347.2-13: 2018 CB: IEC 61347-1: 2015, IEC61347-2-3: 2014, IEC 61347-2-13: 2014/AMD1: 2016 CCC: GB19510.1-2009, GB19510.14-2009
	EMI	CE-EMC/RCM: EN55015, EN61000-3-2, EN61000-3-3 CCC:GB/T17743, GB17625.1, GB17625.2
	EMS	CE-EMC/RCM: EN61000-4-2, 3, 4, 5 (lightning strike 1KV), 6, 11 CCC: GB/T17626.2, 3, 4, 5 (lightning strike 1KV), 6, 11
Others	IP Rating	IP20
	RoHS	RoHS 2.0 (EU) 2015/863
	Warranty Condition	5 yrs (Tc≤80.5℃)
Remarks	<ol style="list-style-type: none"> 1. It is recommended that customer should install over voltage, under voltage and surge protection devices in the power supply circuits of the light fixtures to ensure safety before connecting to electricity. 2. Please disconnect AC input before switching output current via the DIP switch. 3. The PC cover, casing, end caps and other parts of the LED driver inside the LED light fixture must conform to UL94-V0 flammability standard or above. 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 should re-confirm the EMC of the whole LED light fixture. 5. Unless otherwise stated, the parameters above are test results under these conditions: ambient temperature 25℃, humidity 50%, 100% load, maximum output current and input voltage 230Vac. 	

Product Characteristic Curves

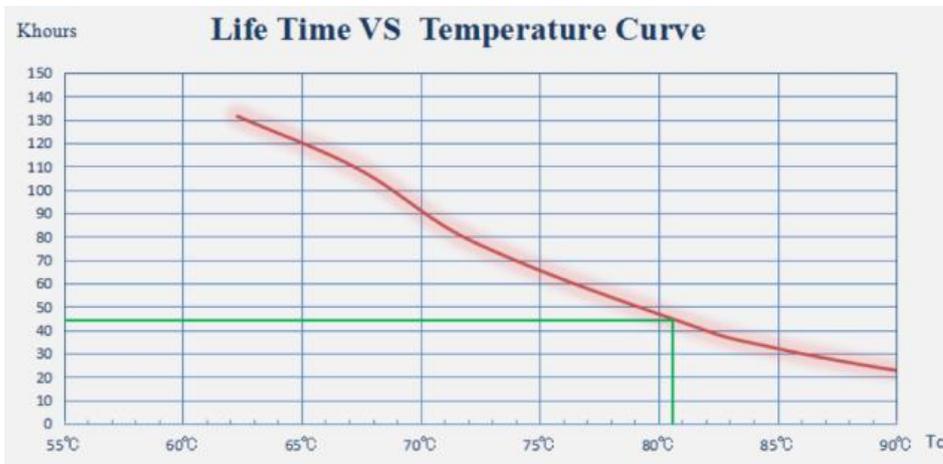
■ PF Curve



■ Efficiency Curve



■ Lifetime Curve



Instructions of Dimming Operation

■ Terminals

INPUT

DIM+	Positive electrode input of 0-10V/PWM/Rx dimming
DIM-	Negative electrode input of 0-10V/PWM/Rx dimming
AC-L	Input terminal of AC live wire
AC-N	Input terminal of AC neutral wire

OUTPUT

LED+	Positive electrode output of the driver
LED-	Negative electrode output of the driver

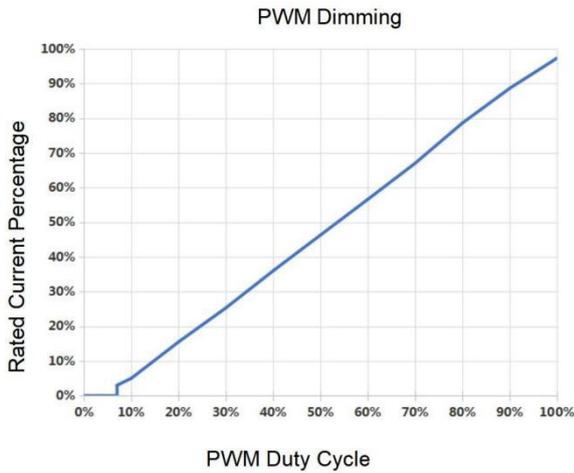
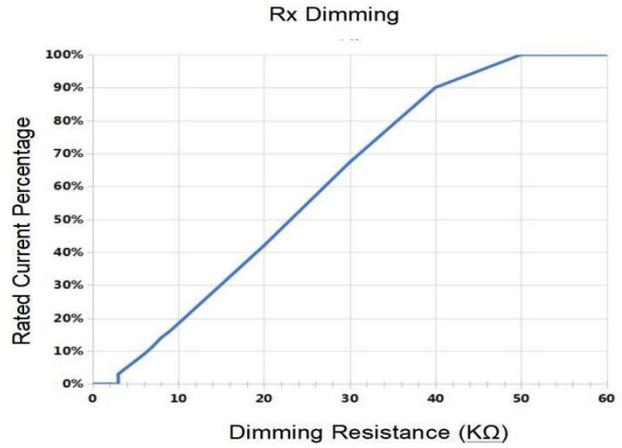
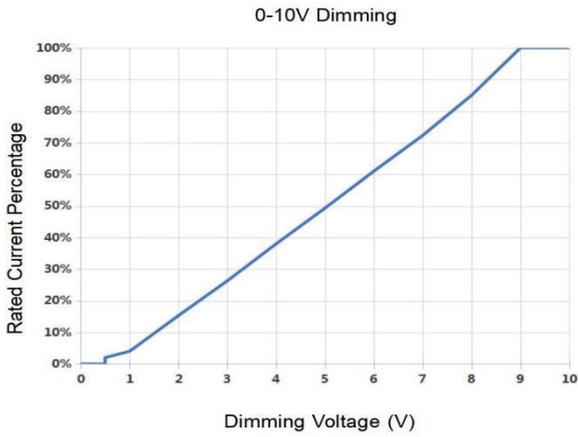
■ DIP Switch Table

I rated (CC)	1	2	3
500mA	OFF	OFF	OFF
450mA	OFF	OFF	ON
400mA	OFF	ON	OFF
350mA	OFF	ON	ON
300mA	ON	OFF	OFF
250mA	ON	OFF	ON

Remark: Except the settings mentioned in the table above, other DIP switch settings are default to be the maximum current 500mA.

■ Operation Instructions of 0-10V/PWM/Rx Dimming

- Connect the 0-10V, PWM or Rx signals to the DIM terminal and the positive electrode connects to DIM+, and the negative electrode connects to DIM-.
- In 0-10V dimming mode, when the input voltage is less than 0.3V, the light will be turned off. When it's more than 0.5V, the light will be turned on. ($\pm 0.2V$ tolerance is acceptable.)
- The minimum dimming depth of 0-10V dimming is 1%.
- The dimming depth of PMW dimming is 0.1%.
- The dimming depth of Rx dimming is 0.1% (with a 50K Ω potentiometer).
- The pins of the DIM terminal without any signal connected: 100% rated output current.



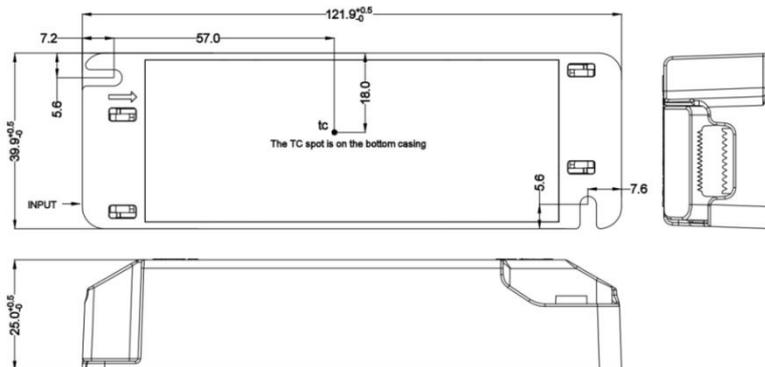
Label

LIFUD® LED Driver (LED控制装置)
 Model: LF-AAA020B0500-42
 Input: 220-240V~50/60Hz Max.0.2A
 U_{out}: 59V--- PF:>0.9C P_{rated}:21W(Max)
 For Australia and New Zealand, the marking label with "X"
 Control Mode: 0-10V&Resistance&PWM
 Output current and setting table

I _{ta}	V _o DC	Instal(CO)	1	2	3
500mA	OFF	OFF	OFF	OFF	OFF
450mA	OFF	OFF	OFF	ON	OFF
400mA	OFF	ON	OFF	OFF	OFF
350mA	OFF	OFF	ON	ON	OFF
300mA	ON	OFF	OFF	OFF	OFF
250mA	ON	OFF	ON	ON	ON

Preparation for input and output
 17.5mm
 tc:90°C
 Dimmable 0.1%-100%
 For LED modules only
 www.lifud.com
 Made in China (中国制造)
 OUTPUT LED+ LED- 0.5-1.0

Structure & Dimensions (unit: mm)



Packaging Specifications

Model	LF-AAA020B0500-42
Packaging Dimensions	385*285*210 mm (L*W*H)
Quantities	14 pcs/layer; 7 layers/ctn; 98 pcs/ctn
Weights	0.085 kg/pc; 8.7 kg±5%/ctn

Transportation & Storage

■ Transportation

- Suitable transportation means: vehicles, boats and aircraft.
- During transportation, there should be awnings for rain protection and sun protection. Civilized loading and unloading are required. There should be no severe vibration or impact.

■ Storage

- Storage in accordance with the provisions of the Class I environment. For products which have been stored for more than six months, they mustn't be used until they pass the re-inspection.

Attention

- Please use this product according to its specifications otherwise there may be malfunction.
- Use light fixtures that have not been certified or are not compatible with the LED drivers may cause fire or other hazards.
- Man-made damage, any use beyond the specification and non-original-factory modification are not covered by warranty.

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