

Product Description

LF-AAT020-0500-42 is a 20W constant current LED driver with Triac dimming function. It is compatible with leading edge and trailing edge dimmers and it is flicker-free during the whole process of dimming. Its dimming range is 0-100% and its maximum dimming depth is 0.1%. Its input voltage range is 198-253Vac. The output current can be adjusted via a 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 a DIP switch
- Built-in active PFC function
- 0.1% dimming depth
- Triac dimming
- Compact size
- Smooth dimming effect within 0.1% dimming depth
- 5-year warranty (Please refer to the warranty condition.)

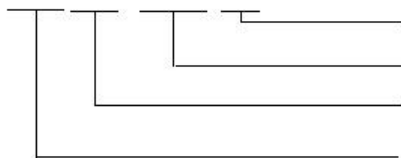


Applications

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

Product Naming

LF- AAT 020 - 0500- 42



42: maximum output voltage of 42V
 0500: maximum output current of 500mA
 020: rated power of 20W
 AAT: CC Triac dimming LED driver series

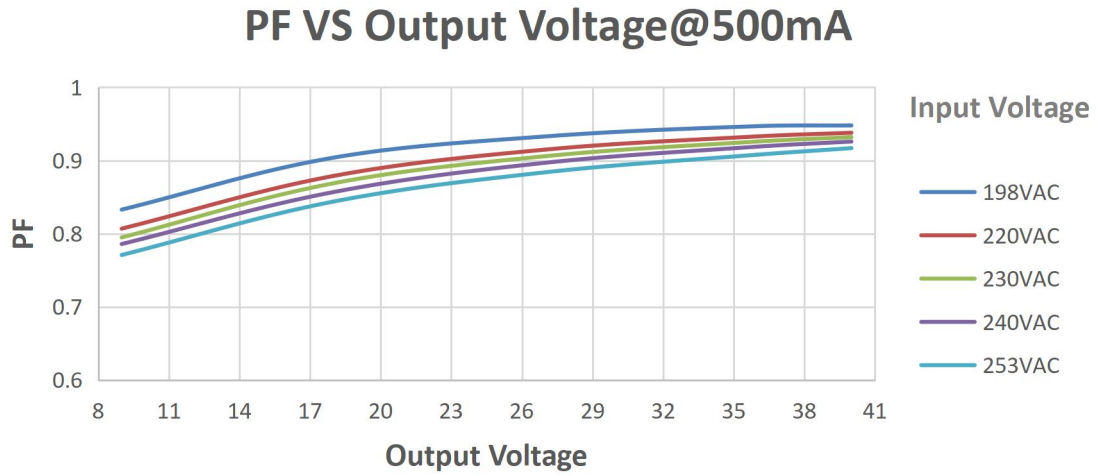
Electrical Characteristics

Model		LF-AAT020-0500-42					
Output	Output Voltage	9-42V	9-42V	9-42V	9-42V	9-42V	9-40V
	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 ≤1% Conforms to the flicker free standard (IEEE Std 1789-2015)					
	Current Tolerance	±8%			±5%		
	Temperature Drift	±10%					
Input	Input Voltage	220-240Vac (voltage limit: 198-253Vac)					
	DC Input Voltage	176-280Vdc					
	Input Frequency	47Hz-63Hz					
	Input Current	0.2A Max					
	Power Factor	≥0.82	≥0.85	≥0.87	≥0.88	≥0.90	≥0.90
	Efficiency	≥76%	≥78%	≥80%	≥81%	≥82%	≥82%
	Inrush Current	≤60A&2600uS@230Vac					
	Load Quantity Carried by the Circuit Breaker	Circuit Breaker Model		B10	C10	B16	C16
		Quantity (pcs)		60	60	96	96
	Surge Protection	L-N: 1kV					
	Leakage Current	≤0.5mA					
Protections	Open Circuit	<59V					
	Short Circuit	Hiccup Mode (auto-recovery)					
Environment Descriptions	Working Temperature	-20℃~+45℃					
	Working Humidity	20-90%RH (no condensation)					
	Storage Temperature/Humidity	-30℃~+60℃ (six months under class I environment);					
		10-90%RH (no condensation)					
	Atmospheric Pressure	86kPa~106kPa					

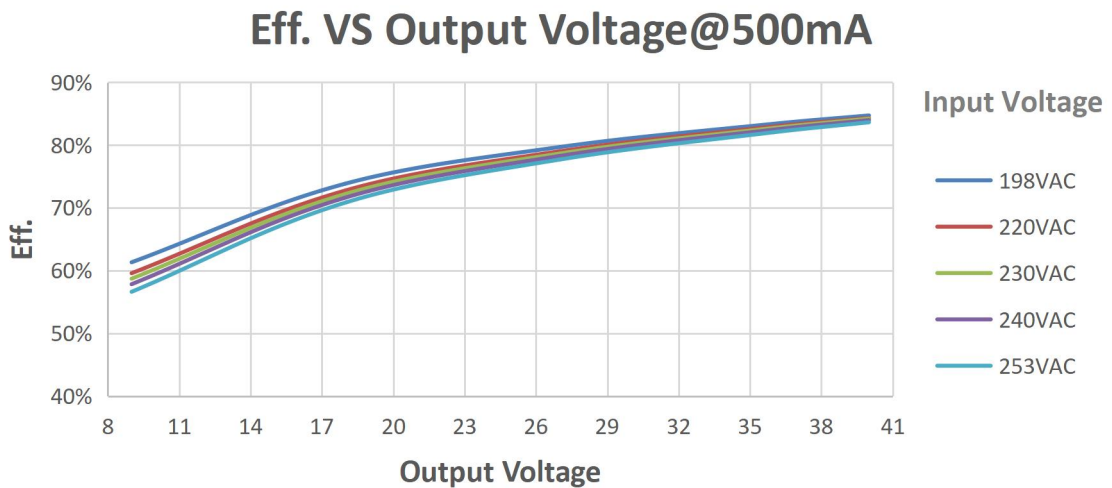
Safety & Electromagnetic Compatibility	Certifications	CE
	Withstanding Voltage	I/P-O/P: 3.75kV 5mA 60S
	Insulation Resistance	I/P-O/P: >100MΩ@500Vdc
	Safety Standards	CE-LVD: EN 61347-2-13: 2014/A1: 2017, EN 61347-1: 2015, EN 62493: 2015
	EMI	CE-EMC: EN55015, EN61000-3-2, EN61000-3-3
	EMS	CE-EMC: EN61000-4-2, 3, 4, 5, 6, 11
Others	IP Rating	IP20
	RoHS	RoHS 2.0 (EU) 2015/863
	Warranty Condition	5 yrs (Tc≤90℃)
Remarks	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

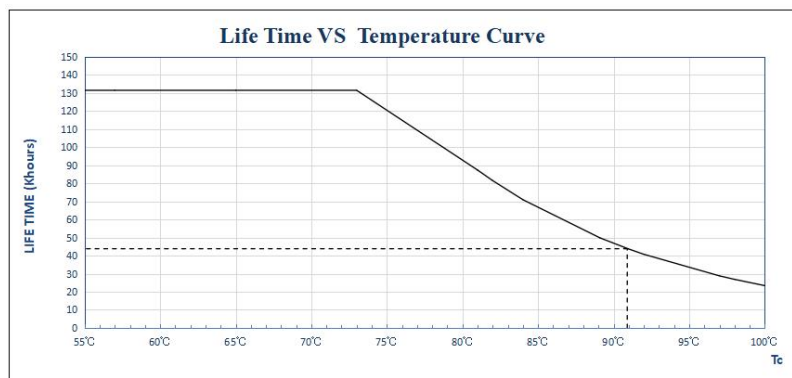
■ PF Curve



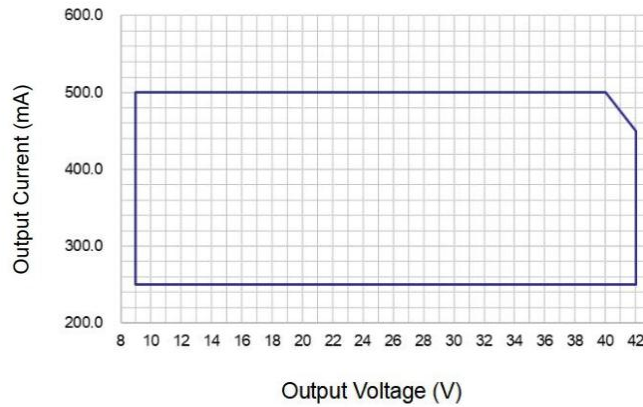
■ Efficiency Curve



■ Lifetime Curve



Power Curve



Instructions of Dimming Operation

Terminals

INPUT

AC-L	Input terminal of AC live wire
AC-N	Input terminal of AC neutral wire

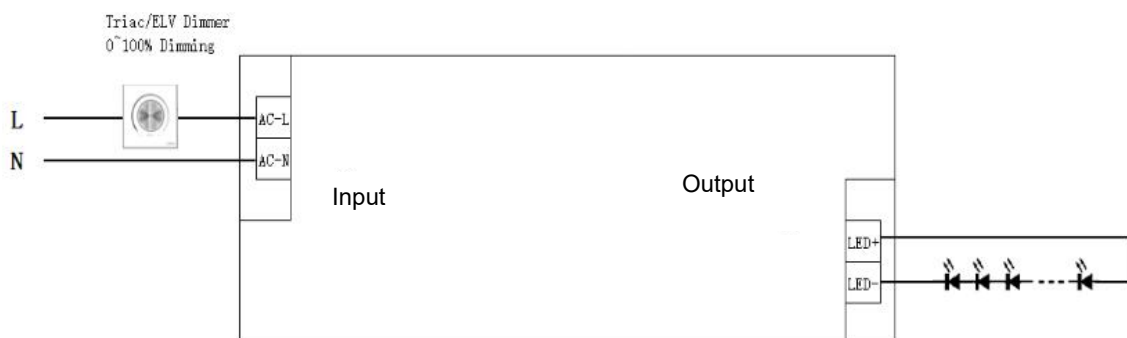
OUTPUT

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

DIP Switch

I rated (CC)	1	2	3	4	DIP Switch Diagram
500mA	/	ON	ON	ON	
450mA	/	ON	ON	OFF	
400mA	/	OFF	ON	ON	
350mA	/	OFF	ON	OFF	
300mA	/	OFF	OFF	ON	
250mA	/	OFF	OFF	OFF	

Triac Dimming Wiring Diagram



Label

Lifud® TRIAC Constant Current Dimming Driver
LED Driver Model: LF-AAT020-0500-42

INPUT Input: 220-240V ~ 50/60Hz Max. 0.2A
AC-L U out: 59V = P rated: 20W (Max) PF: > 0.9C
AC-N ta: 45°C tc: 90°C For LED modules only
0.75-1.5

Output current and setting table

Vo DC	I rated (C)	1	2	3	4
9-40V	500mA	ON	ON	ON	ON
9-42V	450mA	ON	ON	OFF	OFF
9-42V	400mA	OFF	ON	ON	ON
9-42V	350mA	OFF	ON	OFF	OFF
9-42V	300mA	OFF	OFF	ON	ON
9-42V	250mA	OFF	OFF	OFF	OFF

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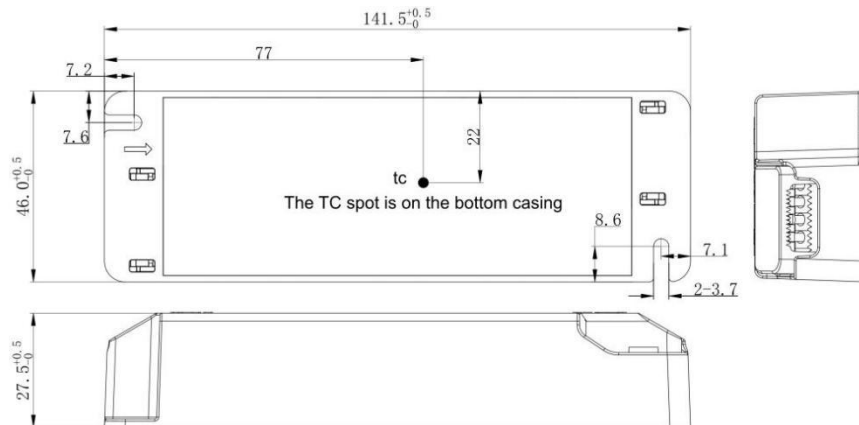
Dimmable 0.1%-100%

ON 1234

OUTPUT LED+ LED- 0.5-1.0

Preparation for input and output 17.5mm

Structure & Dimensions (unit: mm)



Packaging Specifications

Model	LF-AAT020-0500-42
Packaging Dimensions	385*285*210 mm (L*W*H)
Quantities	10 pcs/layer; 7 layers/ctn; 70 pcs/ctn
Weights	0.133 kg/pc; 9.8 kg/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.