Product Description

LF-AAD012-0400-42 is a 12W constant current LED driver. It has DALI dimming and push dimming functions. Its rated input voltage limit is 198-264Vac. The output current can be adjusted via the DIP switch from 150mA to 400mA, in steps of 50mA.

Features

- IP20
- Suitable for Class II light fixtures
- Constant current output. The output current can be adjusted via the DIP switch
- Built-in active PFC function
- Standby power consumption: ≤0.5W
- Dimming depth: 0.1%
- DALI dimming function. The logarithmic dimming curve or the linear dimming curve can be selected via the software
- Push dimming function
- 5-year warranty (Please refer to the warranty condition.)

Applications

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

Product Naming

LF-AAD 012-0400-42

- 42: maximum output voltage of 42V
- 0400: maximum output current of 400mA
- 012: rated output power of 12W
- AAD: a series

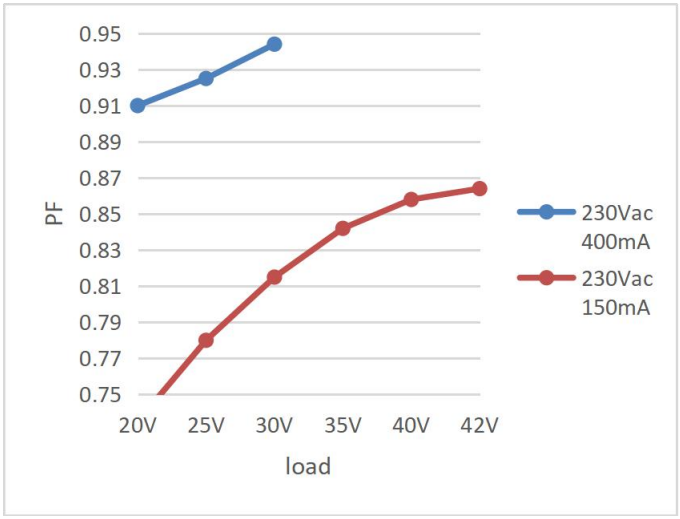
Electrical Characteristics

Model		LF-AAD012-0400-42					
Output	Output Voltage	9-42V	9-42V	9-42V	9-40V	9-34V	9-30V
	Output Current	Output current is adjustable via DIP switch, please refer to DIP switch table					
		150mA	200mA	250mA	300mA	350mA	400mA
	Flicker Index	IEC-Pst≤1, CIE SVM≤0.4, Modulation Depth≤1% (Meet with flicker free standard: IEEE Std 1789-2015)					
	Ripple Current	<10% (rated current)			<5% (rated current)		
	Current Tolerance	±5%					
	Temperature Drift	±5%					
	Start-up Time	<1S@230Vac					
Input	Input Voltage	220-240Vac (limit: 198-264Vac)					
	DC Input Voltage	180-280Vdc					
	Input Frequency	47Hz-63Hz					
	Input Current	0.15A Max.					
	Power Factor	≥0.83	≥0.88	≥0.90	≥0.92	≥0.92	≥0.92
	THD	≤15% @230Vac (DC42V full load)					
	Efficiency	≥70%	≥75%	≥78%	≥80%	≥80%	≥80%
	Inrush Current	≤6.5A & 100uS @230Vac (max)					
	Load Quantity Carried by the Circuit Breaker	Circuit Breaker Model		B10	C10	B16	C16
		Quantity (pcs)		44	44	71	71
	Surge Protection	L-N: 1KV					
	Leakage Current	≤0.7mA					
	Standby Power Consumption	≤0.5W (when the DALI signal is off)					
Protection Characteristics	Open Circuit Protection	<59V					
	Short Circuit Protection	Hiccup mode (auto-recovery)					

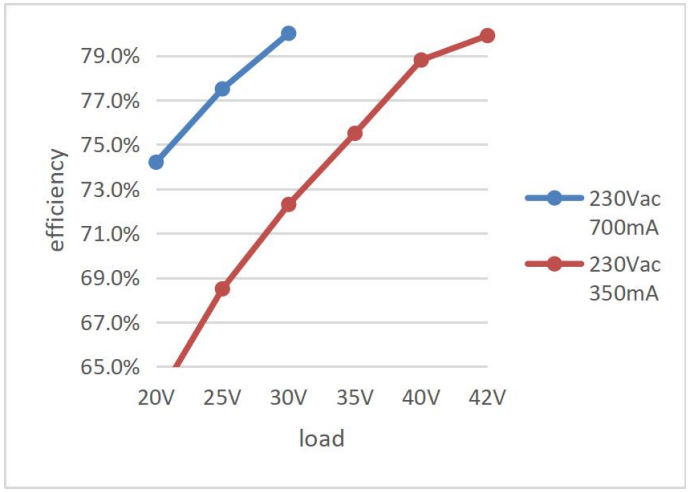
Environment Description	Operating Temperature	-20℃~+45℃
	Operating Humidity	20-90%RH (no condensation)
	Storage Temperature/Humidity	-30℃~+ 80℃ (six months under class I environment); 10-90%RH (no condensation)
	Atmospheric Pressure	86KPa~106KPa
Safety & Electromagnetic Compatibility	Certifications	ENEC, CE, CB, RCM, CCC
	Withstanding Voltage	I/P-O/P: 3.75KV, 5mA, 60S
	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≤79℃)
	DALI Standard	IEC 62386-101 102 207: DALI 2.0
Remarks	1.It is recommended that customer should install overvoltage and undervoltage protection devices and surge protection devices in the power supply circuits of the light fixtures to ensure safety before connecting to electricity. 2.Please disconnect the AC input before adjusting the 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%, input voltage 230Vac and 100% load.	

Product Characteristic Curves

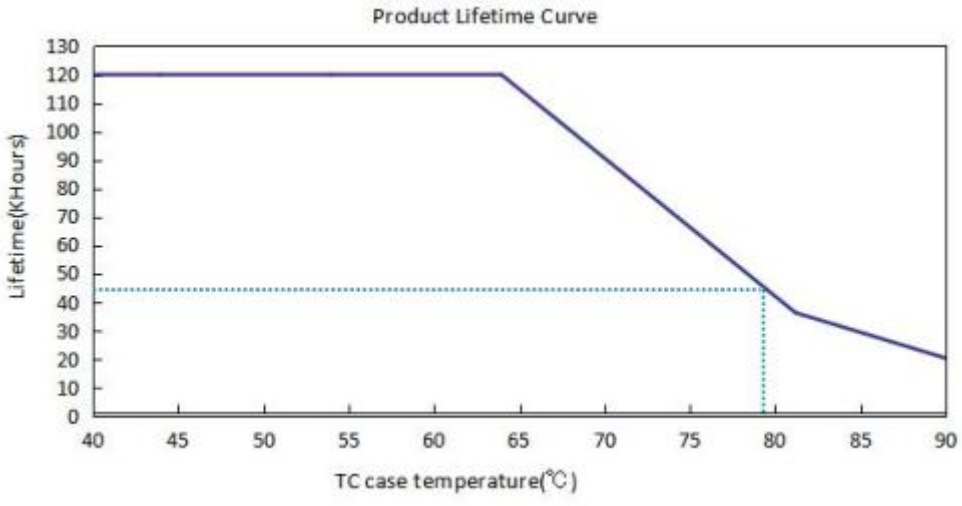
■ PF Curve



■ Efficiency Curve



■ Lifetime Curve



Instructions of Dimming Operation

■ Definition of Terminals

INPUT

DA1 PUSH	Input terminal of DA1 and push dimming
DA2 PUSH	Input terminal of DA2 and push dimming
AC-L	Input terminal of AC live wire
AC-N	Input terminal of AC neutral wire

OUTPUT

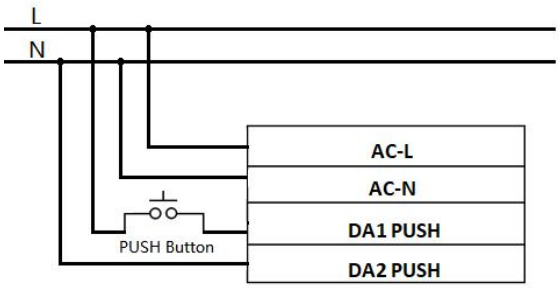
LED+	Positive electrode output of the driver
LED-	Negative electrode output of the driver

■ DIP Switch Table

I rated (CC)	1	2	3
400mA	OFF	OFF	OFF
350mA	OFF	OFF	ON
300mA	OFF	ON	OFF
250mA	OFF	ON	ON
200mA	ON	OFF	OFF
150mA	ON	OFF	ON

Remark: Except the settings mentioned in the table above, other DIP switch settings are default to be the maximum current 400mA.

■ Wiring Instruction of the Push Dimming



⚠ **Remark: Before using PUSH dimming function, please connect AC-L/AC-N to electricity FIRST, then connect the PUSH terminal to electricity. Otherwise the PUSH terminal will be burned.**

■ Operation Instructions of Push Dimming

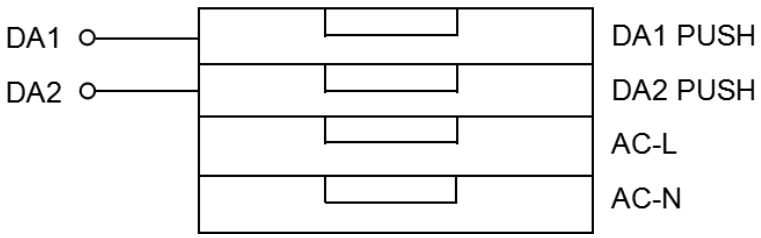
Operation	Operation Time	Function
Instant Push	0.1 sec - 0.5 sec	Light on / off
Long Push	0.6 sec - 9 sec	Dim up / down
Reset Push	> 9 sec	Reset to the 50% brightness

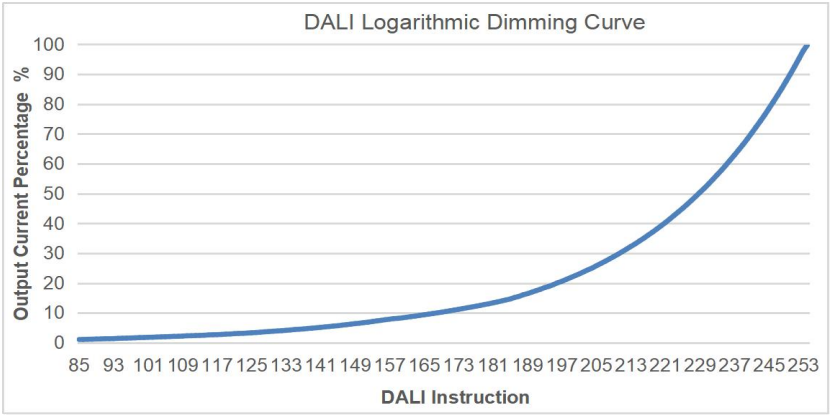
The push operation won't cause any variation if it's less than 0.1 sec.

- Connect the push button in series between the AC-L and the DA1 terminals. Connect the AC-N and DA2 terminals directly.
- The minimum dimming depth of push dimming is 1% (Iout).
- The push dimming mode has memory function in case of power failure. When the power supply is restored, the light will return to the exact status before power failure.
- The maximum wire length between the push button and the farthest LED driver is 135 meters. Wire diameter: 16-22AWG.
- In the DALI dimming and push dimming modes, the maximum quantity of the LED drivers connected in parallel is 64 pieces.

■ Operation Instructions of DALI Dimming

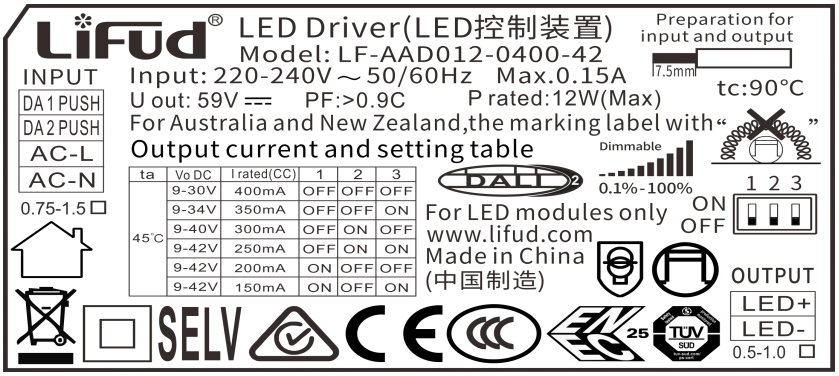
- Factory default setting is of 100% brightness.
- Connect the DALI signal to the DA1 and DA2 terminals.
- DALI protocol includes 16 groups and 64 IP addresses.
- The minimum dimming depth of the DALI dimming is 0.1% (Iout).



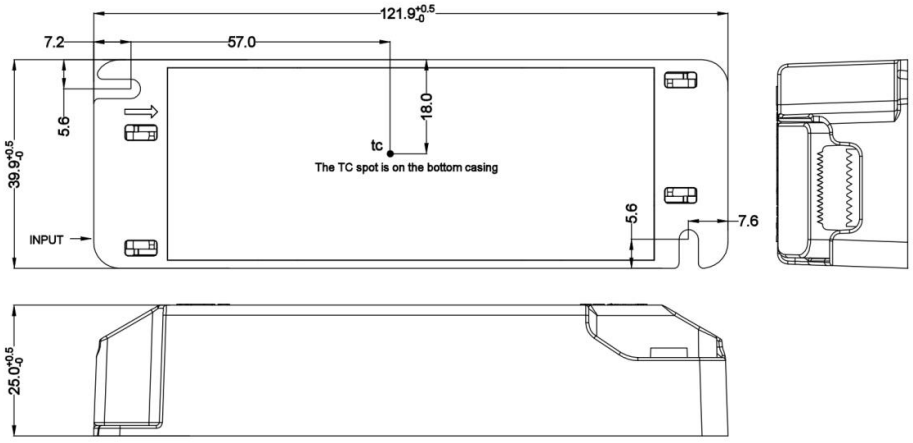


⚠ The DALI dimming function and the push dimming function cannot be used at the same time, otherwise the DALI dimmer will be damaged.

Label



Structure & Dimensions (Unit: mm)



Packaging Specifications

Model	LF-AAD012-0400-42
Packaging Dimensions	385*285*210 mm (L*W*H)
Quantities	14 pcs/layer; 9 layers/ctn; 126 pcs/ctn
Weights	85g/pc; 8.2kg/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 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.

Change Resume

Version	Content of Change	Date	Remark
V1.0	Formal release	29 APR 2021	