

Product Description

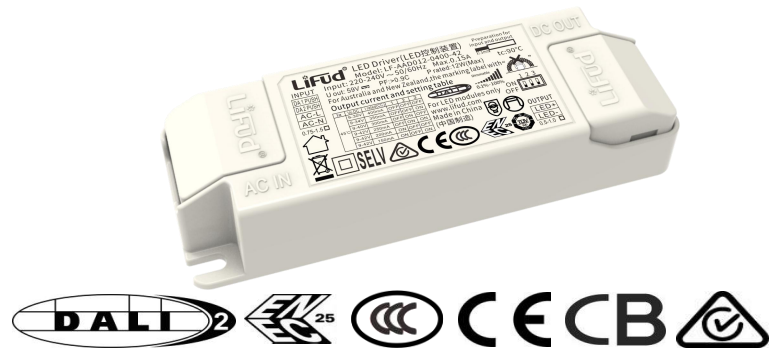
LF-AAD012-0400-42 is a 12W constant current LED driver. It has DALI dimming and push dimming functions. Its rated input voltage limit is 198-264Vac. The output current can be adjusted via the DIP switch from 150mA to 400mA, in steps of 50mA.

Features

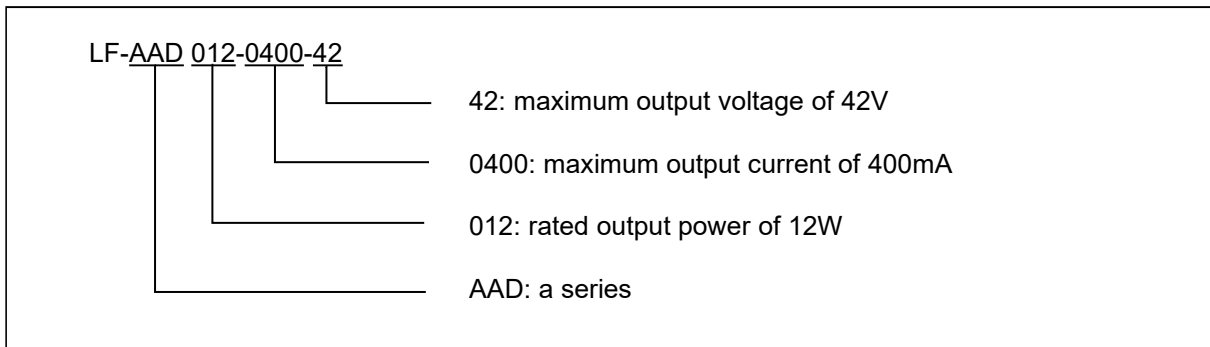
- IP20
- Suitable for Class II light fixtures
- Constant current output. The output current can be adjusted via the DIP switch
- Built-in active PFC function
- Standby power consumption: $\leq 0.5W$
- Dimming depth: 0.1%
- DALI dimming function. The logarithmic dimming curve or the linear dimming curve 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



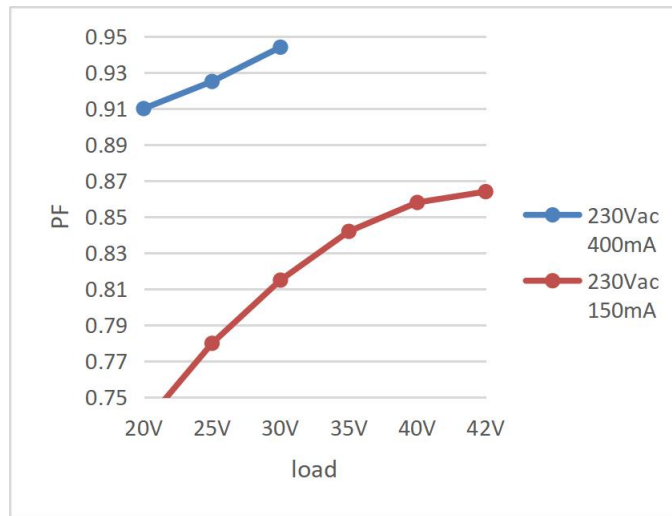
Electrical Characteristics

| 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 \leq 1, CIE SVM \leq 0.4, Modulation Depth \leq 1% (Meet with flicker free standard: IEEE Std 1789-2015) | | | | | | |
| | Ripple Current | <10% (rated current) | | | <5% (rated current) | | | |
| | Current Tolerance | \pm 5% | | | | | | |
| | Temperature Drift | \pm 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 | \geq 0.83 | \geq 0.88 | \geq 0.90 | \geq 0.92 | \geq 0.92 | \geq 0.92 | |
| | THD | \leq 15% @230Vac (DC42V full load) | | | | | | |
| | Efficiency | \geq 70% | \geq 75% | \geq 78% | \geq 80% | \geq 80% | \geq 80% | |
| | Inrush Current | \leq 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 | \leq 0.7mA | | | | | | |
| Standby Power Consumption | \leq 0.5W (when the DALI signal is off) | | | | | | | |
| Protection Characteristics | Open Circuit Protection | <59V | | | | | | |
| | Short Circuit Protection | Hiccup mode (auto-recovery) | | | | | | |

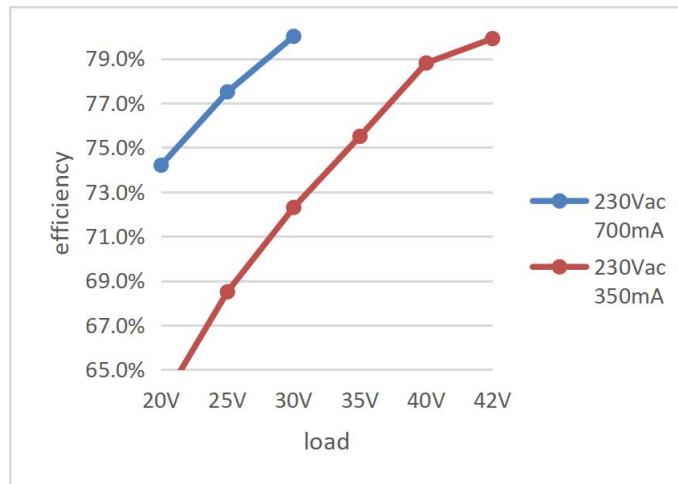
| | | |
|--|---|--|
| Environment Description | Operating Temperature | -20℃~+45℃ |
| | Operating Humidity | 20-90%RH (no condensation) |
| | Storage Temperature/Humidity | -30℃~+ 80℃ (six months under class I environment); 10-90%RH (no condensation) |
| | Atmospheric Pressure | 86KPa~106KPa |
| Safety & 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 | <p>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.</p> <p>2.Please disconnect the AC input before adjusting the output current via the DIP switch.</p> <p>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.</p> <p>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.</p> <p>5. Unless otherwise stated, the parameters above are test results under these conditions: ambient temperature 25℃, humidity 50%, input voltage 230Vac and 100% load.</p> | |

Product Characteristic Curves

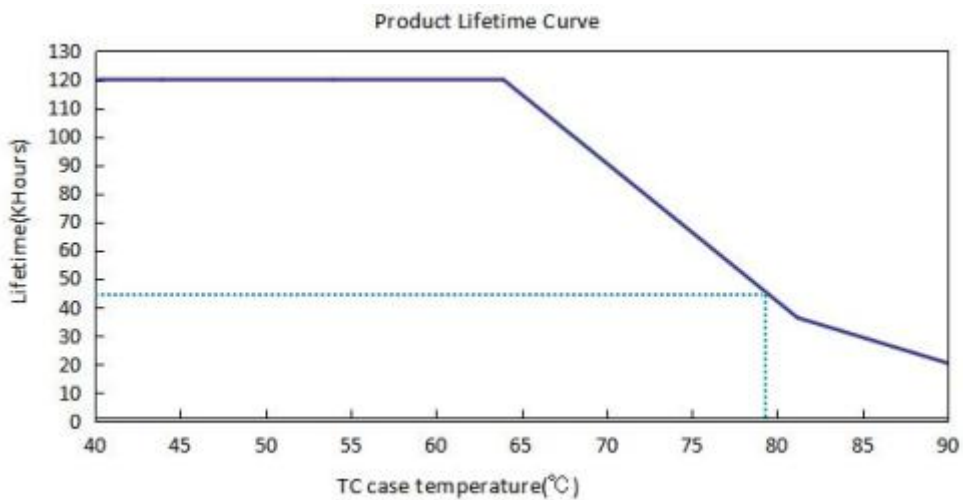
■ PF Curve



■ 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

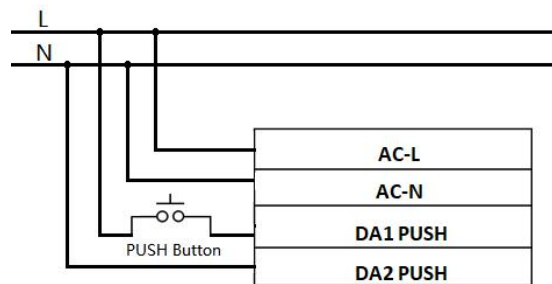
| | |
|------|---|
| LED+ | Positive electrode output of the driver |
| LED- | Negative electrode output of the driver |

■ 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

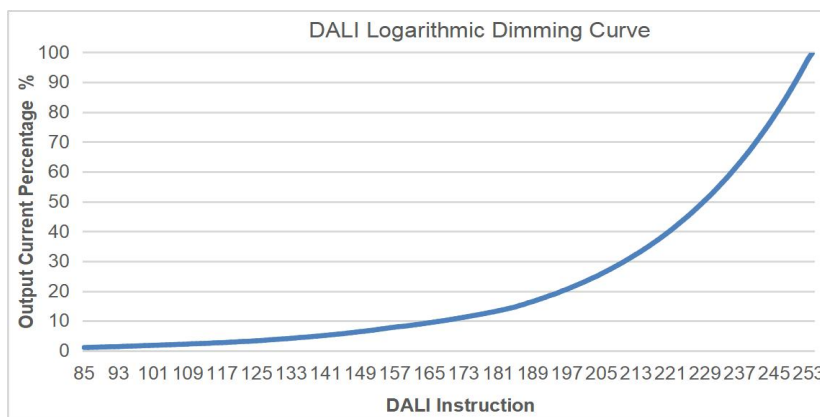
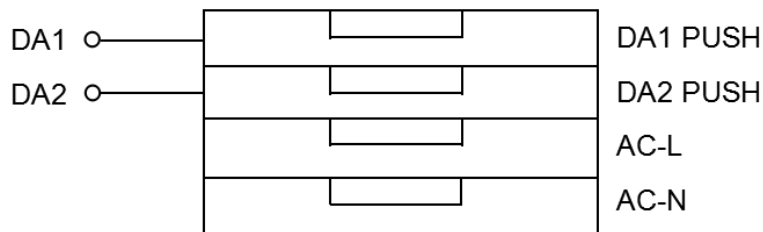
| Operation | Operation Time | Function |
|--------------|-------------------|-----------------------------|
| Instant Push | 0.1 sec - 0.5 sec | Light on / off |
| Long Push | 0.6 sec - 9 sec | Dim up / down |
| Reset Push | > 9 sec | Reset to the 50% brightness |

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% (lout).
- 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% (lout).



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

Label

LIFUD® LED Driver(LED控制装置) Model: LF-AAD012-0400-42

Preparation for input and output

INPUT: 220-240V ~ 50/60Hz Max.0.15A 17.5mm

U out: 59V = PF:>0.9C P rated:12W(Max) tc:90°C

For Australia and New Zealand, the marking label with “~~⊗~~”

Output current and setting table

| ta | Vo DC | I rated(CC) | 1 | 2 | 3 |
|------|-------|-------------|-----|-----|-----|
| 45°C | 9-30V | 400mA | OFF | OFF | OFF |
| | 9-34V | 350mA | OFF | OFF | ON |
| | 9-40V | 300mA | OFF | ON | OFF |
| | 9-42V | 250mA | OFF | ON | ON |
| | 9-42V | 200mA | ON | OFF | OFF |
| | 9-42V | 150mA | ON | OFF | ON |

Dimmable 0.1%-100% 1 2 3

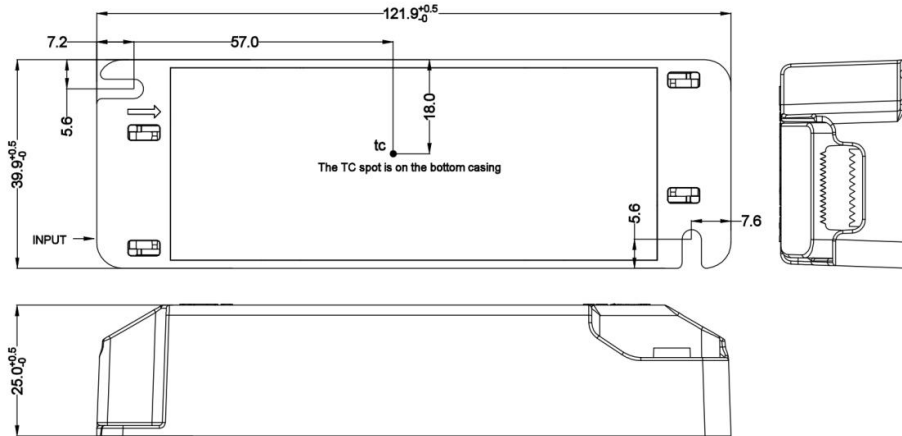
For LED modules only ON OFF

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-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.