Features

- DALI or PUSH dimmable
- Current adjustable via DIP switch
- 1% dimming depth; standby power consumption <0.5W
- Advanced functions: EL, CorridorDIM, CLO
- Suitable for Class II light fixtures
- 5-year warranty (please refer to the warranty condition)



Applications

· Indoor office lighting · commercial lighting · residential lighting

Descriptions

LF-ADD040-1050-42 is a 40W DALI or PUSH dimmable constant current LED driver supporting corridor function (corridor DIM) and emergency escape lighting system via Lifud programmer. Its input voltage ranges from 220 to 240Vac and output current is adjustable via DIP switch from 700 to 1050mA with every 50mA as a step. It has all-round protections: over voltage protection and short circuit protection.

Product Model

LF - ADD 040 - 1050 - 42

- 42: max. output voltage: 42Vdc
- 1050: max. output current: 1050mA
- 040: output power: 40W
- ADD: DALI dimmable LED driver

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■ Electrical Characteristics

Model		LF-ADD040-1050-42							
Output	Output Voltage	9-42Vdc							9-40Vdc
	Output Current	700mA	750mA	800mA	850mA	900mA	950mA	1000mA	1050mA
	Flicker Index (Modulation Depth)	IEC-Pst ≤1, CIE SVM ≤0.4 According to IEEE Std 1789-2015							
	Current Tolerance	±5%							
	Temperature Drift	±10%							
	Start-up Time	<2S							
Input	AC Input Voltage	220-240Vac (voltage limit: 198-264Vac)							
	DC Input Voltage	180-264Vdc							
	Input Frequency	0/50/60Hz							
	Input Current	0.3A max.@AC input 0.019-0.038A@DC input							
	PF	≥0.95	≥0.96						
	THD	<20%							
	Efficiency	≥87%							
	Inrush Current	<25A&240uS							
	Loading Quantity on Circuit Breaker	Model	B10	C10	B16	C16			
		Quantity (pcs)	23	38	37	61			
	Leakage Current	<0.7mA							
	Standby Power Consumption	≤0.5W (when PWM OFF signal is effective)							
Protection Characteristics	Open Circuit	<59V							
	Short Circuit	Hiccup mode (self-recovery)							
Environment Descriptions	Operating Temperature	-30℃ - +45℃							
	Operating Humidity	20-95%RH (no condensation)							
	Storage Temperature/ Humidity	-30℃ - 80℃ (6 months in Class I environment); 20-75%RH (no condensation)							
	Atmospheric Pressure	86-106kPa							

■ Electrical Characteristics

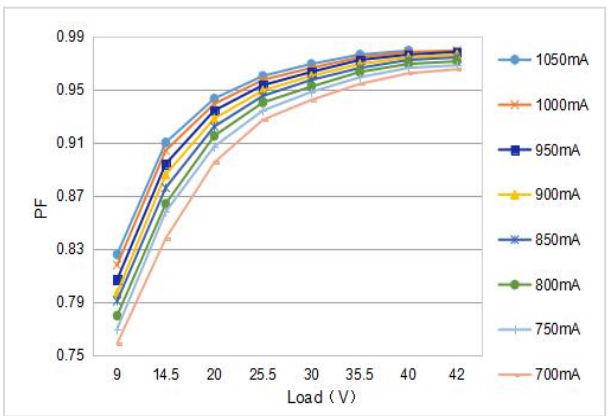
Safety & EMC	Certifications	TUV-ENEC, CE, CB, RCM, EL, UKCA, CCC
	Withstanding Voltage	I/P-O/P: 3.75kV 5mA 60S; I/P-DA1/DA2: 1.5kV 5mA 60S O/P-DA1/DA2: 0.5kV 5mA 60S
	Insulation Resistance	I/P-O/P: ＞100MΩ@500VDC; I/P-DA1/DA2: ＞100MΩ@500VDC O/P-DA1/DA2: ＞100MΩ@500VDC
	Safety Standards	ENEC: EN61347-1:2015, 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 CB:IEC 61347-1:2015, IEC61347-2-3:2014, IEC 61347-2-13:2014/AMD1:2016 RCM: AS 61347.2-13:2018 EL: IEC 61347-2-13:2014 Annex J UKCA: BS EN IEC 55015:2019+A11:2020, BS EN 61547:2009, BS EN IEC 61000-3-2:2019, BS EN 61000-3-3:2013/A2:2021 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
	DALI Inrush	DA1-DA2: 0.5kV
Other Parameters	IP Rating	IP20
	RoHS	RoHS 2.0 (EU) 2015/863
	DALI Standard	IEC62386-101 102 207: DALI2.0
	Noise Level	≤29dB (this data is measured in a soundproof room and the noise collector should be 10cm away from the LED driver)
	Warranty	5 years (Tc≤82℃)
Test Equipment	AC power source: CHROMA6530, digital power meter: CHROMA66202, oscilloscope: Tektronix DPO3014, DC electronic load: M9712B, LED board, constant temperature and humidity chamber, lightning surge generator: Everfine EMS61000-5B, rapid group pulse generator: Everfine EMS61000-4A, spectroanalyzer: KH3935, Hi-pot tester: EEC SE7440, flicker tester (flicker-free coefficient test): Everfine LFA-3000, etc.	
Test Remark	If there are no special remarks, the above parameters are tested at the ambient temperature of 25℃, humidity of 50%, full load and input voltage of 230Vac/50Hz.	

Electrical Characteristics

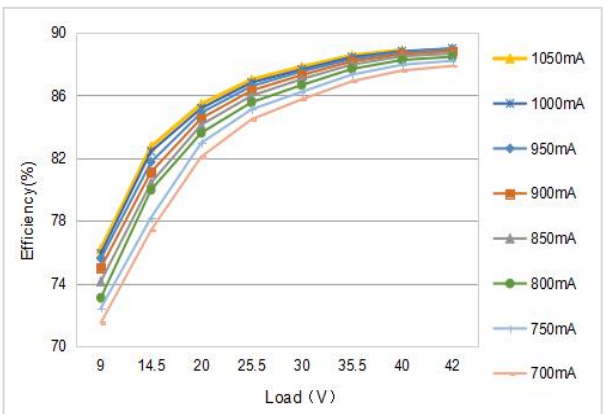
Additional Remarks	1. It is recommended that user install the over voltage protection, under voltage protection and surge protection devices in the power supply circuits of light fixtures to ensure electricity safety. 2. The LED driver used in combination with the end device is one of the accessories 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. 3. The number of LED drivers that can be connected to a circuit breaker and the inrush current are tested under the same conditions. 4. The PC cover, casing and end cap for assembling the LED driver in the light fixture must meet the fire rating of UL94-V0 or above. 5. Please disconnect AC when switching the current shift; connect AC after adjusting the DIP switch to the according current. 6. In the case of DC input, the driver is only for emergency escape lighting system. 7. Lifud reserves the right to interpret any of the above parameters.

Product Characteristics Curves

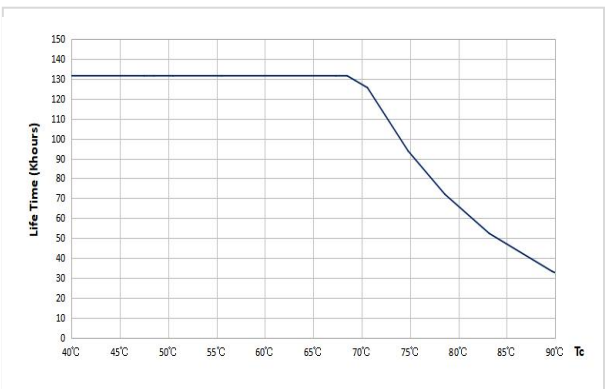
PF Curve



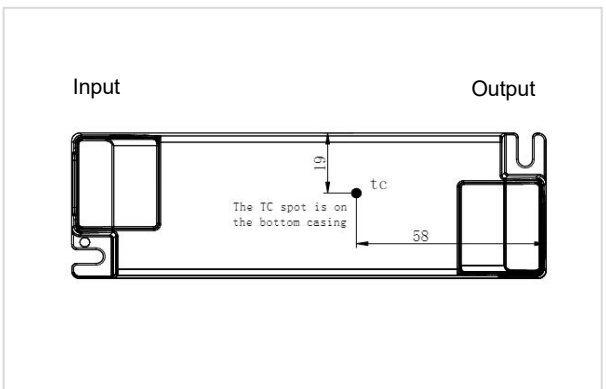
Efficiency Curve



Lifetime Curve



Tc Point Test Diagram



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■ Product Definitions

Product Terminals

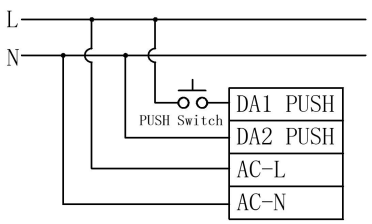
Input		Output	
DA1/PUSH (Black)	DA1/PUSH dimming input	LED+ (Red)	Positive terminal output of LED driver
DA2/PUSH (Red)	DA2/PUSH dimming input	LED- (Black)	Negative terminal output of LED driver
AC-L (Gray)	Input terminal of AC live wire		
AC-N (Gray)	Input terminal of AC neutral wire		

Product DIP Switch

Vo DC	I rated (CC)	1	2	3
9-40V	1050mA	OFF	OFF	OFF
9-42V	1000mA	OFF	OFF	ON
9-42V	950mA	OFF	ON	OFF
9-42V	900mA	OFF	ON	ON
9-42V	850mA	ON	OFF	OFF
9-42V	800mA	ON	OFF	ON
9-42V	750mA	ON	ON	OFF
9-42V	700mA	ON	ON	ON

Remark: when adjusting the output current via the DIP switch, please disconnect input AC first so as to use the DIP switch without the input AC connected.

Wiring Diagram of PUSH Dimming



PUSH Dimming Operations

- Connect the PUSH switch in series between AC-L and DA1 PUSH terminals; connect AC-N to DA2 PUSH terminal.
- Do not directly connect AC-L and AC-N to DA1 PUSH and DA2 PUSH terminals.
- Before the mains is connected, please ensure that the PUSH switch is disconnected. After the mains is connected, the PUSH operation can be performed.
- Before the mains is disconnected, please ensure that the PUSH switch is disconnected.
- Shall you have any questions about the wiring or the operation method, please contact Lifud FAE team.
- ⚠ Any improper wiring or operation method may lead to the damage of LED driver.

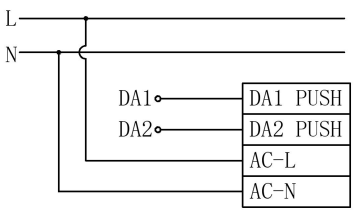
■ Dimming Operation Instructions

PUSH Dimming Operations

Operation	Duration	Function
Instant Push	0.1-0.5 sec	LED light on/off
Long Push	0.6-9 sec	LED light dims up/down
Reset Push	>9 sec	Reset to 50% brightness

- The PUSH operation won't cause any variations on LED driver if it's less than 0.1S.
- Min. dimming depth of PUSH dimming: 1% (Iout&Vout max).
- The PUSH dimming mode has the memory function in case of any power failure. When the LED driver is powered on again, the light will return to the previous state before power failure.
- The present PUSH dimming direction is opposite to the fomer one.
- In auto mode, long press for 3+ mins to switch to corridor lighting (see the instructions of corridor dimming mode).

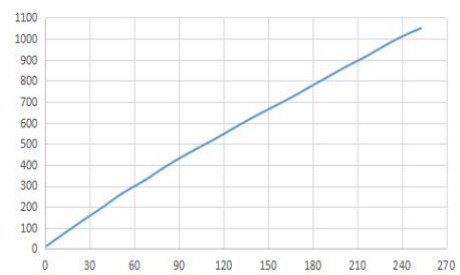
Wiring Diagram of DALI Dimming



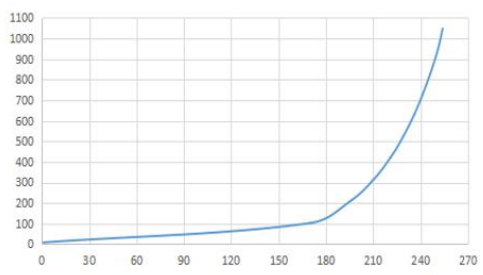
DALI Dimming Operations

- Default setting: 100% brightness.
- Connect DALI signal to DA1 PUSH & DA2 PUSH terminals.
- DALI protocol includes Max. 16 group scenes.
- Max. quantity of drivers connected in parallel in DALI dimming mode: 64 pcs.
- Min. dimming depth of DALI dimming: 1%(Iout&Vout max).

DALI Dimming Curve (linear)



DALI Dimming Curve (logarithmic)



⚠ The DALI and PUSH dimming functions cannot be used simultaneously; otherwise, it will damage the DALI dimmer.

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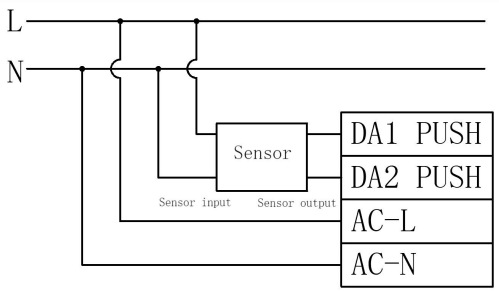
■ Dimming Operation Instructions

Wiring Diagram of Corridor Dimming (sensor switch)



Operations for Entering Corridor Lighting Mode

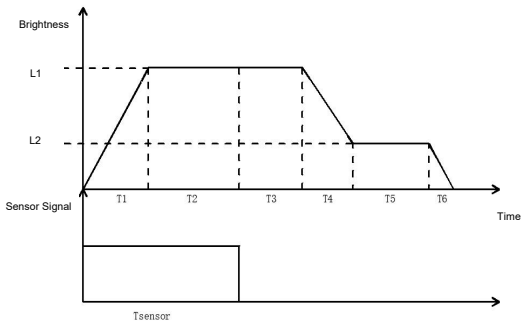
- Approach 1: use Lifud programmer to enable the driver's corridor lighting mode and set parameters.
- Approach 2: keep pressing PUSH for 3+ mins so as to switch to the corridor lighting mode.
- Approach 3: keep the effective sensing signal for 3+ mins (set the sensor's hold time to 3+ mins) to enable the corridor lighting mode.
- Remarks:
- 1. In the automatic detection mode, the driver can be switched from PUSH mode to corridor lighting mode by approach 2 and 3, and its brightness will dim up to 50%; long press for 3 mins and then it dims down first and then dims up, which means the driver has entered the corridor lighting mode.
- 2. After activating the corridor dimming mode, PUSH DIM is turned off.
- 3. In the case of AC input and any level of brightness in the corridor lighting mode, switching to DC and then returning to AC will restart the corridor lighting mode.

Operations for Exiting Corridor Lighting Mode

- Approach 1: use Lifud programmer to choose other modes and exit corridor lighting mode.
- Approach 2: connect the driver to the DALI master to send DALI command, and the driver will return to the DALI dimming mode.
- Approach 3: connect the driver to the PUSH switch and continuously press the switch 10 times within 10 secs, and the driver will return to the PUSH dimming mode.
- Remark:
- 1. The 3-sec or above single press or release will cause the press number to be counted as 0.
- 2. The approach 2 and 3 CANNOT be used if the corridor lighting mode of driver is set via Lifud programmer.

■ Dimming Operation Instructions

Working Process of Corridor Dimming Mode



Symbol	Name	Default Value	Available Setting Scope
T1	Fade-in time of sensing	1 sec	0-100 sec(s)
T2	Hold time of sensing	Depends on sensor	Depends on sensor
T3	Wait time of sensing	180 secs	0-59999 sec(s); 60000 secs (∞)
T4	Fade-out time of sensing	5 secs	0-100 sec(s)
T5	Unattended time	60000 secs (∞)	0-59999 sec(s); 60000 secs (∞)
T6	Fade-out to off time	0 sec	0-100 sec(s)
L1	Sensing brightness	100%	0-100%
L2	Unattended brightness	10%	0-100%

Operations for Emergency Escape Lighting System

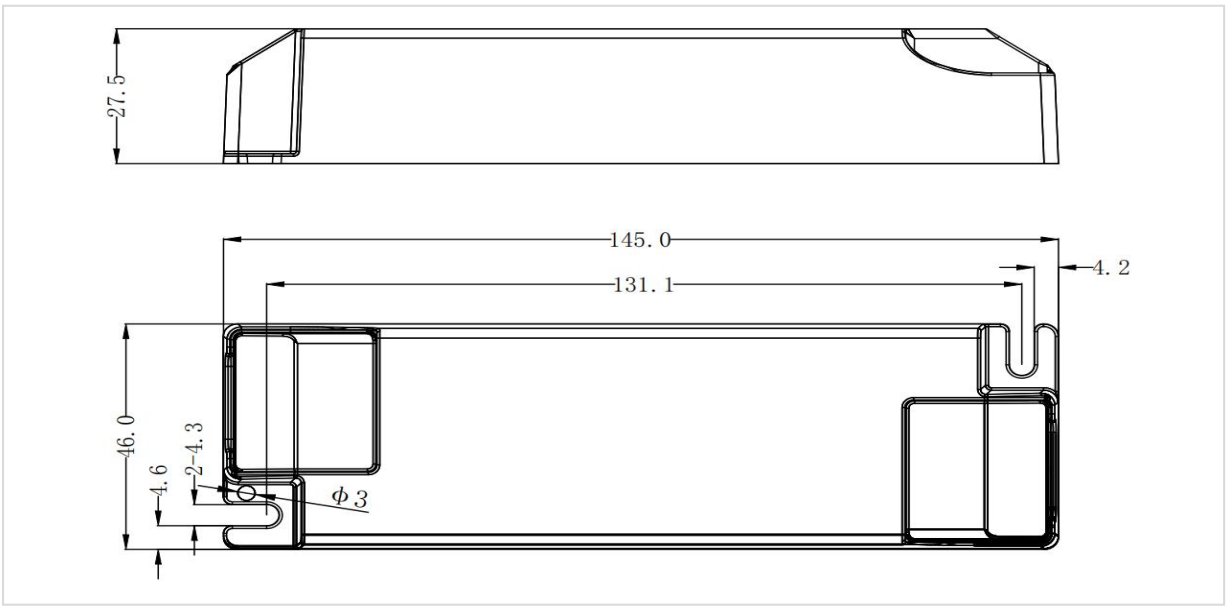
When there is no mains input, the driver switches to the emergency escape lighting system; driver's output: 15% (Iomax)
Emergency input voltage: 180-264Vdc
Remarks:
1. The emergency output current is settable via Lifud programmer and programming software.
2. Max. setting: 15%.
3. When the emergency escape lighting function is off, the driver will have no output in the case of DC input.
4. In the case of mains input, the brightness is random when using PUSH dimming. When the driver enters the emergency lighting mode and then reconnects AC, the light brightness will remain the one set via PUSH switch when mains is connected.
5. In the case of mains input, the brightness is random when using DALI dimming. When the driver enters the emergency lighting mode and then reconnects AC, the light brightness will return to the brightness when DALI is powered on.

■ Structure & Dimensions (unit: mm)

Product Dimensions

Model	Overall Appearance (L*W*H)	Center-to-center Spacing of Positioning Hole	Diameter of Positioning Hole
LF-ADD040-1050-42	145.0*46.0*27.5 mm	131.1 mm	3 mm

Structure Diagram



■ Packaging Specifications

Model	LF-ADD040-1050-42
Carton Size	385*385*210 mm (L*W*H)
Quantity	10 pcs/layer; 7 layers/ctn; 70 pcs/ctn
Weight	0.123 kg/pc; 9.62 kg±5%/ctn

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■ Transportation & 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 on 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 Technology Co., Ltd. reserves the right to interpret any content of this specification.

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