Features

- Supports NFC function
- DALI or PUSH dimmable
- Dim to off without afterglow
- Supports 2 sets of light fixtures connected in series
- Output current set via external resistor
- Output current and output lumen compensation set via programmer
- Supports logarithmic dimming (default setting) and linear dimming
- Supports corridor lighting and emergency lighting
- Flicker free; IP20
- Suitable for Class I light fixtures

PRODUCT PICTURE: TBD

Applications

· Indoor office lighting · decorative lighting · commercial lighting · residential lighting

Descriptions

LF-FSD150YA is a 150W (max.) non-isolated DALI NFC dimmable constant current LED driver featuring 150W constant power output. Its rated input voltage ranges from 220 to 240Vac; output voltage from 64 to 300Vdc and output current from 250 to 1000mA. It is suitable for Class I light fixtures, including linear light, tri-proof light, etc.

Product Model

LF - FSD 150 YA

- Y: complies with certifications; A: serial number
- 150: output power: 150W
- F: non-isolated design; SD: indoor dimmable LED driver

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■ Electrical Characteristics

Model		LF-FSD150YA				
Output	Output Voltage	64-300V				
	Output Current	250-1000mA① (default current: 350mA②)				
	Flicker Index	IEC-Pst ≤1, CIE SVM ≤0.4 Complies with IEEE Std 1789-2015				
	Current Tolerance	±5%				
	Temperature Drift	±10%				
Input	Input Voltage	220-240Vac (voltage limit: 198-264Vac)				
	DC Input Voltage	180-264Vdc				
	Input Frequency	0/50/60Hz				
	Input Current	0.85A max.				
	PF	≥0.98				
	THD	<8%				
	Efficiency	≥95%				
	Inrush Current	72A&240uS				
	Loading Quantities of Circuit Breaker	Model	B10	C10	B16	C16
		Quantity (pcs)	4	7	7	12
	Leakage Current	<0.7mA				
	Standby Power Consumption	≤0.3W (DALI OFF)				
Protections	Open Circuit	<310V				
	Short Circuit	Hiccup mode (auto-recovery)				
Environment Descriptions	Operating Temperature	-40℃~+65℃				
	Operating Humidity	0-95%RH (no condensation)				
	Storage Temperature/ Humidity	-40℃~+85℃ (6 months in Class I environment); 0-95%RH (no condensation)				
	Atmospheric Pressure	86-106kPa				

■ Electrical Characteristics

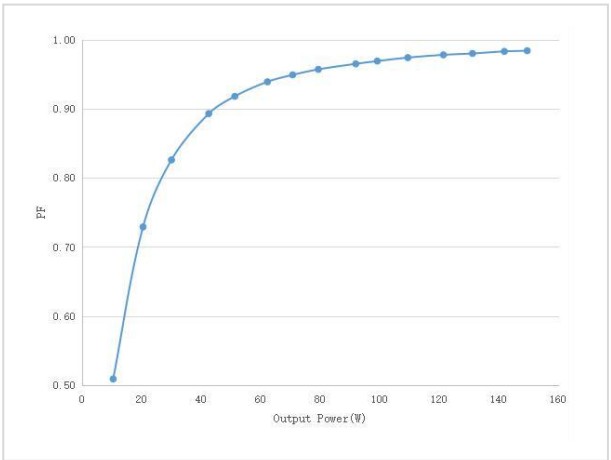
Safety and EMC	Certifications	ENEC, CE, CB, UKCA, RCM, EL, CCC
	Withstanding Voltage	I/P-PG: 1.6kV 5mA 60S
	Insulation Resistance	I/P-PG: >100MΩ@500Vdc
	Safety Standards	CE-LVD: EN61347-2-13: 2014/A1: 2017, EN61347-1: 2015, EN62493: 2015 CCC: GB19510.1-2009, GB19510.14-2009 CB: IEC61347-1: 2015, IEC61347-2-3: 2014, IEC 61347-2-13: 2014/AMD1: 2016 EL: IEC61347-2-13: 2014 Annex J RCM: AS 61347.2-13: 2018 EN 62386-101 (DALI-2), EN 62386-102 (DALI-2), EN 62386-207 (DALI-2)
	EMI	CE-EMC/RCM: EN55015, EN61000-3-2, EN61000-3-3 CCC: GB/T17743, GB17625.1, GB17625.2
	EMS	CE-EMC: EN61000-4-2, 3, 4, 5 (lightning strike 4kV/6kV), 6, 11 CCC: GB/T17626.2, 3, 4, 5 (lightning strike 4kV/6kV), 6, 11
Other Parameters	IP Rating	IP20
	RoHS	RoHS 2.0 (EU) 2015/863
	Warranty Condition	5 years (Tc≤82℃)
	Lifetime	100,000 hours
	Compatibility of DALI Dimming③	Yuanhao Master, Philips Master DDBC120-DALI, OSRAM Master, Helvar Master 905 Router, Tridonic Master-24138923 and HDL MC64-DALI431 Master
	DALI Standard	IEC 62386-101 102 207: DALI 2.0
Testing Equipment	AC power source: CHROMA6530, digital power meter: CHROMA66202, oscilloscope: Tektronix DPO3014, DC electronic load: M9712B, LED board, constant temperature and humidity chamber; Everfine EMS61000-5B, fast transient generator: Everfine EMS61000-4A, spectroanalyzer: KH3935, hi-pot tester: TH9201B, flicker tester (flicker-free coefficient test) 60N-01, etc.	
Testing 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

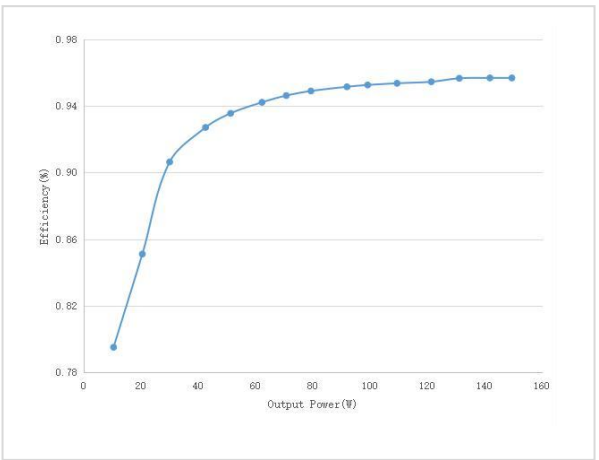
Additional Remarks	1. It is recommended that user install the over voltage protection, under voltage protection and surge protection devices in the power supply circuits of light fixtures to ensure electricity safety. 2. The LED driver used in combination with the end device is one of the accessories 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 test conditions of the circuit breaker configuration quantity are the same as those of the inrush current. 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. In no-load condition, it is recommended that user not directly connect the LED driver to the light fixture in case that the light fixture is damaged. 6. It is well-advised that the withstanding voltage of LEDs and aluminum substrates >3kVac. Note: ① When the load voltage of LED driver ranges from 64 to 150Vdc, the LED driver outputs with the maximum constant current of 1000mA; when the load voltage >150Vdc, the LED driver outputs with the constant power of 150W. ② The default current of LED driver is 350mA and its output current has two settings: 1) Set by Lifud programmer and DALI programming software 2) Set by the external resistor at LEDset terminal ③ When using other DALI masters, please test their compatibilities with Lifud LED driver in advance.

■ Product Characteristic Curves

PF Curve

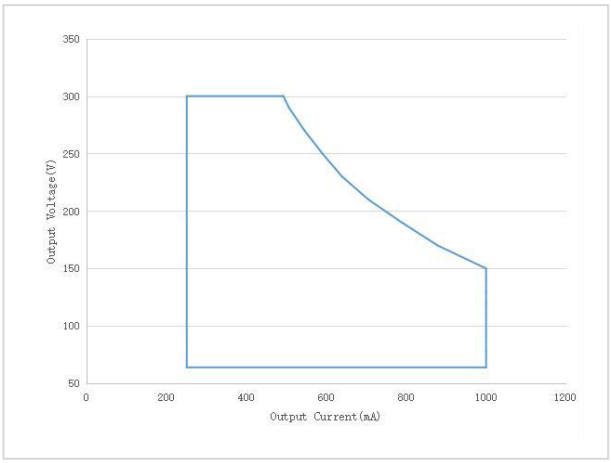


Efficiency Curve

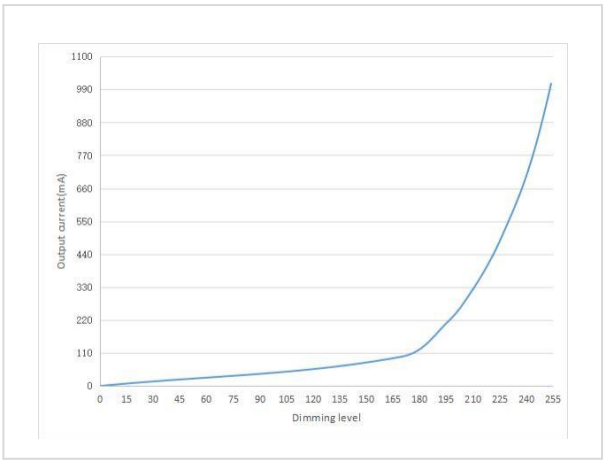


■ Product Characteristic Curves

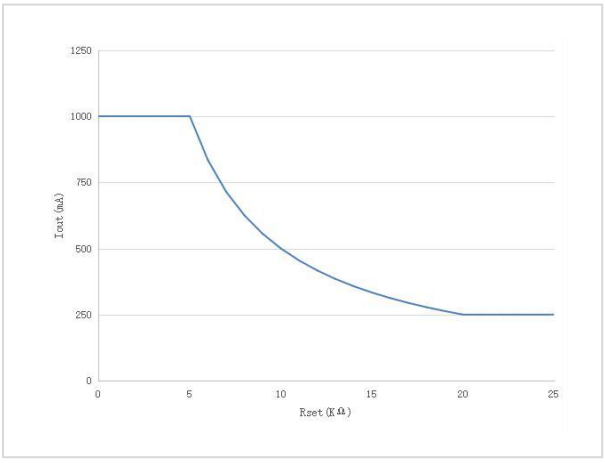
Working Curve



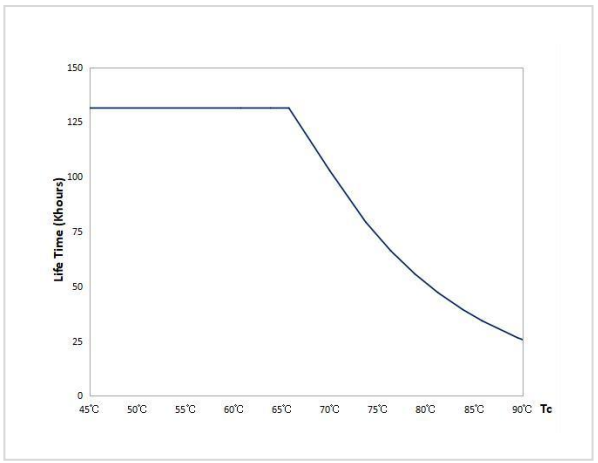
Dimming Curve



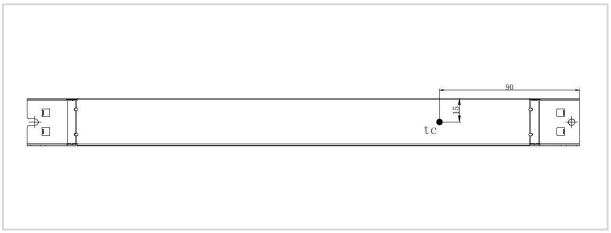
Output Current & Rset Curve



Lifetime Curve



Tc Point

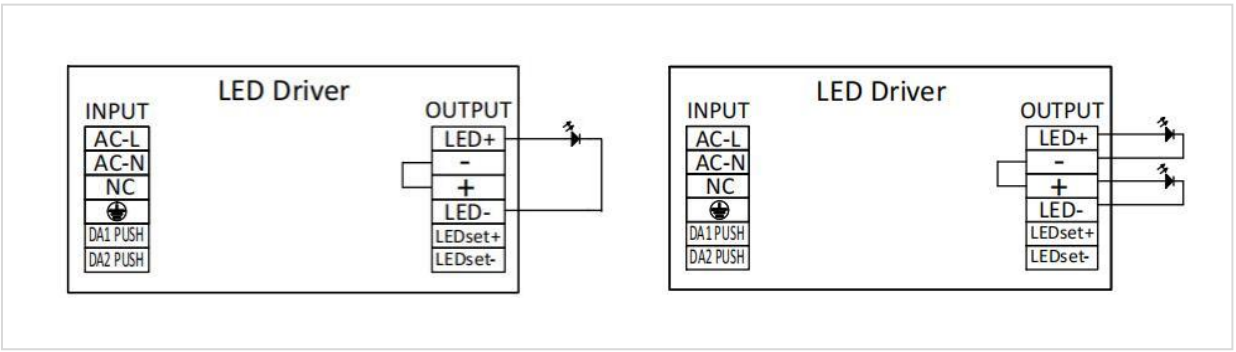


■ Product Terminal Definition

Product Terminals

INPUT		OUTPUT	
AC-L (grey terminal)	Input terminal of AC live wire	LED+ (red terminal)	Positive electrode output of LED driver
AC-N (grey terminal)	Input terminal of AC neutral wire	- (black terminal)	Negative electrode of LED board in series
/	/	+ (red terminal)	Positive electrode of LED board in series
FG (grey terminal)	Earth wire	LED- (black terminal)	Negative electrode output of LED driver
DA1 PUSH (green terminal)	DALI 1/PUSH dimming input	LEDset+ (orange terminal)	Access Port 1 of Rset resistor
DA2 PUSH (green terminal)	DALI 2/PUSH dimming input	LEDset- (orange terminal)	Access Port 2 of Rset resistor

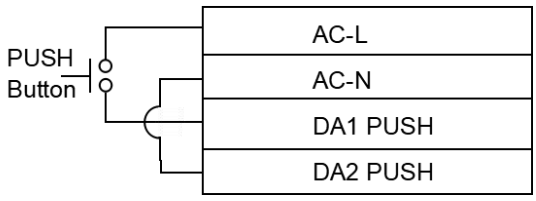
Wiring Diagram of Product Output Terminal



⚠ Do not connect LED set+ to LED- in case that the LED driver is damaged.

■ Dimming Operation Instructions

Wiring Diagram of PUSH Dimming



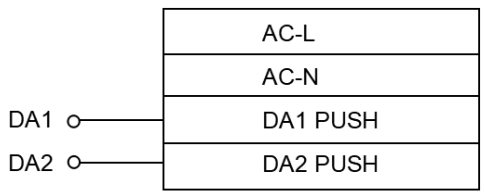
■ Dimming Operation Instructions

Operations of PUSH Dimming

Operation	Duration	Function
Instant Push	0.1-0.5 sec	LED light on/off
Long Push	0.6-9 sec	When the light is on, long press the PUSH button to dim up/down
Long Push	0.6-9 sec	When the light is off, long press the PUSH button to enable synchronous dimming of all drivers from the minimum brightness
Reset Push	>15 sec	Long press the PUSH button to reset the brightness of all luminaires to 50%

- The PUSH operation won't cause any variations on LED driver if it's less than 0.1S.
- Connect the PUSH switch in series between AC-L and DA1 PUSH terminals; short circuit AC-N and DA2 PUSH terminals.
- Minimum dimming depth of PUSH dimming: 1% (maximum output current)
- 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 dimming direction of PUSH dimming is opposite to the former one.
- Maximum length of leading wire from the PUSH switch to the farthest LED driver: 135m; wire diameter: 16-22AWG.
- Do NOT long press the button for more than 2 mins.

Wiring Diagram of DALI Dimming



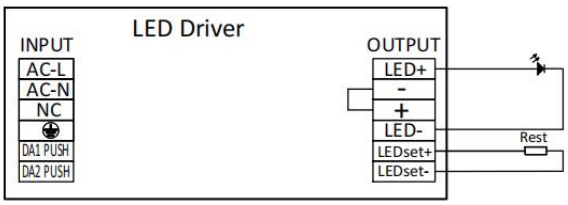
⚠ DALI and PUSH dimming cannot be used at the same time in case that the DALI dimming master is damaged.

Operations of DALI Dimming

- Connect DALI signal to DA1 PUSH and DA2 PUSH terminals.
- DALI protocol includes 16 groups and 64 IP addresses.
- Maximum number of LED drivers connected in parallel in DALI dimming mode: 64 pcs.
- Minimum dimming depth of DALI dimming: 1% (maximum output current)

■ LEDset Current Setting Instructions

Wiring Diagram of LEDset



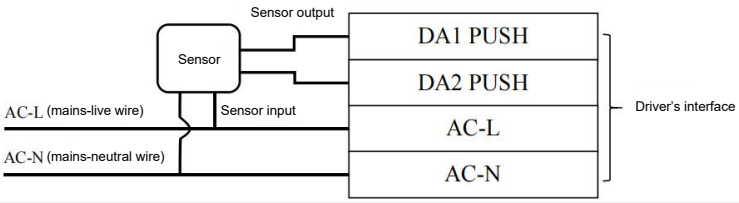
- Default current: 250mA
- The LED driver outputs with the maximum current of 1000mA when the resistance value of LEDset ranges from 0 to 5KΩ
- The LED driver outputs with the current that ranges from 250 to 1000mA when the resistance value of LEDset ranges from 5 to 20KΩ [reference formula: Iout=(5/Rset)*1000mA; unit of Rset: KΩ]
- The LED driver outputs with the minimum current of 250mA when the resistance value of LEDset >20KΩ.

■ NFC Current Setting Instructions

Specific paramaeters to be determined after the software perfected

■ Corridor Dimming Mode Instructions

Wiring Diagram of Corridor Dimming Operation



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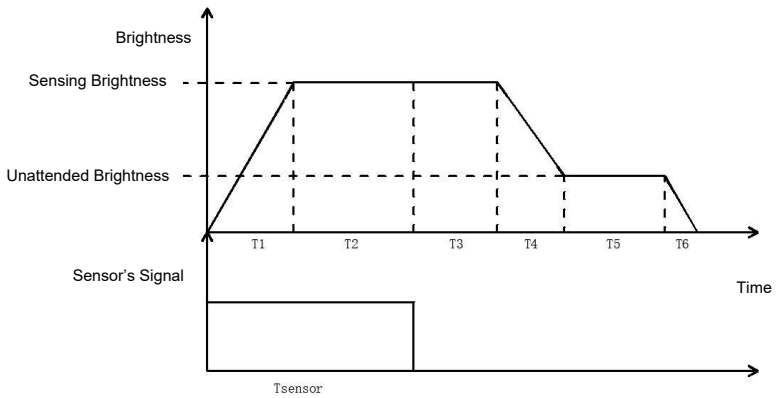
■ Corridor Dimming Mode Instructions

Entrance Methods of Corridor Dimming Mode

- Method 1: keep the movement within the active sensing area for more than 3 minutes (set the sensor's holding time to more than 3 minutes), and the driver's corridor dimming mode is enabled;
- Method 2: replace the sensor with an ordinary switch and keep it on for more than 3 minutes, and the driver will switch to the corridor dimming mode;
- Method 3: use the configuration tool to enable the corridor dimming mode of the driver and set the parameters.
- Remarks:
  1. PUSH operation: long press the PUSH button and the brightness will reset to 50%; after entering into the corridor dimming mode, the brightness goes down first and then up;
  2. After the corridor dimming mode is enabled, the PUSH DIM will be off.

Working Process of Corridor Dimming Mode



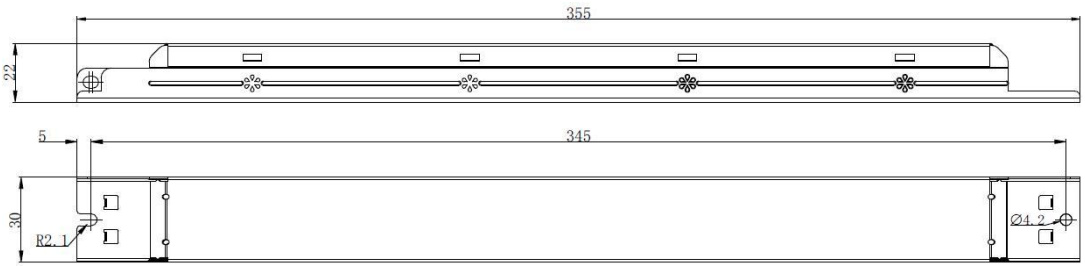
/	/	Default Value	Available Scope Setting
T1	Fade-in time of sensing	1 sec	0-100 sec
T2	Holding time of sensing	Depends on sensor	Depends on sensor
T3	Waiting time of sensing	180 sec	0-59999 sec, 60000 sec (infinite)
T4	Fade-out time of sensing	5 sec	0-100 sec
T5	Unattended time	60000 sec (infinite)	0-59999 sec, 60000 sec (infinite)
T6	Fade-out off time	0 sec	0-100 sec
/	Sensing brightness	100%	0-100%
/	Unattended brightness	10%	0-100%

■ Emergency Function Instructions

- When there is no mains input, the driver switches to the emergency mode; output: 10% Iomax
- Emergency input voltage: 180-264Vdc
- Note: the emergency output current can be set via Lifud programmer and programming software; wait for the programming software function to be determined.

■ Structure & Dimensions (unit: mm)

Overall Appearance (L*W*H)	Distance Between 2 Positioning Holes	Diameter of Positioning Hole
355*30*22 mm	345 mm	4.2 mm



■ Packaging Specifications

Model	LF-FSD150YA
Carton Size	385*285*210mm (L*W*H)
Quantity	6 pcs/layer; 6 layers/ctn; 36 pcs/ctn
Weight	0.3 kg/pc; 11.48±5% kg/ctn

■ Transportation and 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 of 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 Tecnology Co., Ltd. reserves the right to interpret any contents of this specification.