



LF-GIT040YA

EU-Standard Flicker-free In-track Light LED Driver

LF-GIT040YA

GIT*YA SELV Current Adjustable LED Driver | Constant Current - Non Dimmable



Product family features

- Low THD $\leq 20\%$ @full load
- Nominal input voltage: 220-240 Vac
- Ta range: -20 - +35 °C
- Ripple current $< 5\%$
- 5 years guarantee



Product family benefits

- 16-shift output current adjustable via DIP switch
- Long lifetime and high reliability
- Flicker free; isolated

Typical applications

- For track lights
- For office, commercial, and decorative lighting

Product parameters

- | | |
|---|--------------------------|
| — Output current | — Output voltage 9-42Vdc |
| 300/350/400/450/500/550/600/650/700/750/800/850/900/950/1000/1050mA | — Efficiency 89% |
| — Output power 2.7-44.1W | |
| — Input voltage 198-264Vac | |

Electrical data

Input data

Nominal input voltage	220 ... 240 V
Input voltage AC	198 ... 264 V
Mains frequency	50/60 Hz
Power factor	≥ 0.9
Efficiency	88% ¹⁾
THD	$\leq 20\%$
Input current	0.28A Max
Inrush current	25A ²⁾
Loading number on circuit breaker 10 A (B)	28
Loading number on circuit breaker 10 A (C)	28
Loading number on circuit breaker 16 A (B)	46
Loading number on circuit breaker 16 A (C)	46
Protective conductor current	$\leq 0.7\text{mA}$

Output data

Nominal output voltage	9 ... 42V ³⁾
Nominal output current	300/350/400/450/500/550/600/650/700/750/800/850/ 900/950/1000/1050mA
Default output current	1050mA
Current setting	DIP Switch (see the DIP switch definition for the corresponding current)
Maximum output power	44.1W
Nominal output power	2.7...44.1W
Output ripple current (100 Hz)	$< 5\%$
Flicker	According to IEEE Std 1789-2015
CIE SVM	≤ 0.4
IEC-Pst	≤ 1
Output current tolerance	$\pm 5\%$ ⁴⁾
Temperature tolerance	$\pm 10\%$
Start-up time	$< 0.5\text{S}$

Safety

Withstanding voltage	I/P-O/P: 3.75kV&5mA&60S
Surge capability (L-N)	2kV
Insulation resistance	I/P-O/P: $> 100\text{M}\Omega @ 500\text{Vdc}$
Guarantee	5 years ⁵⁾

1) @1050mA 230Vac

2) $t = 200 \mu\text{s}$

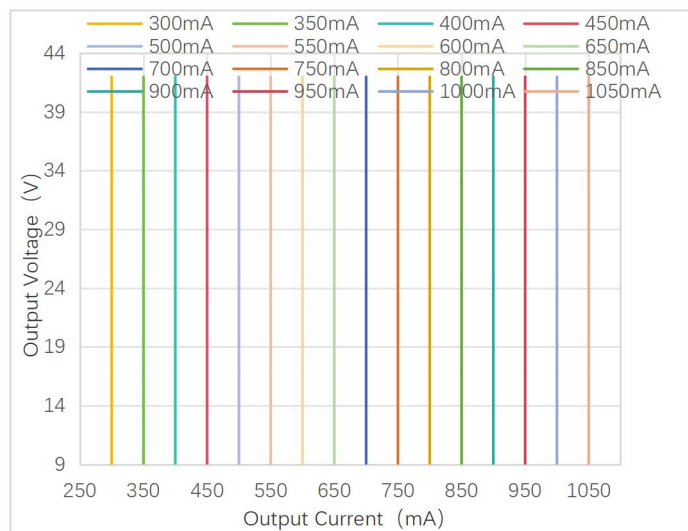
3) Refer to the operating window for the relationship between output voltage and current

4) Output voltage 25-42V; 8% applies below 500mA; 6% applies at 500-800mA

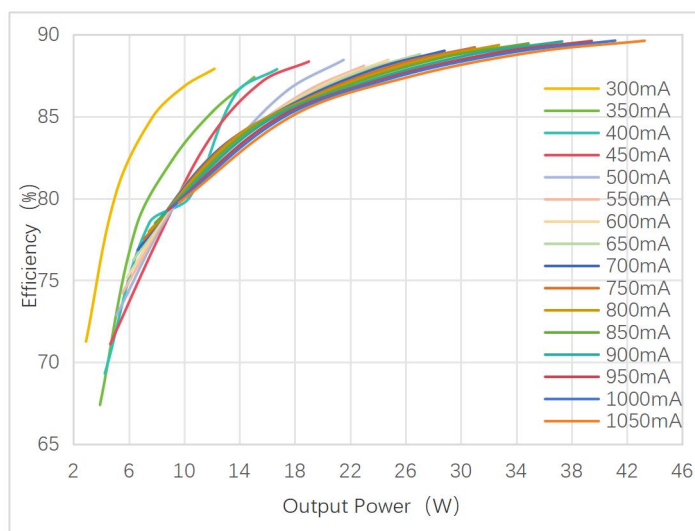
5) 5 years@ $T_{\text{c}} \leq 83^{\circ}\text{C}$

Characteristic diagrams

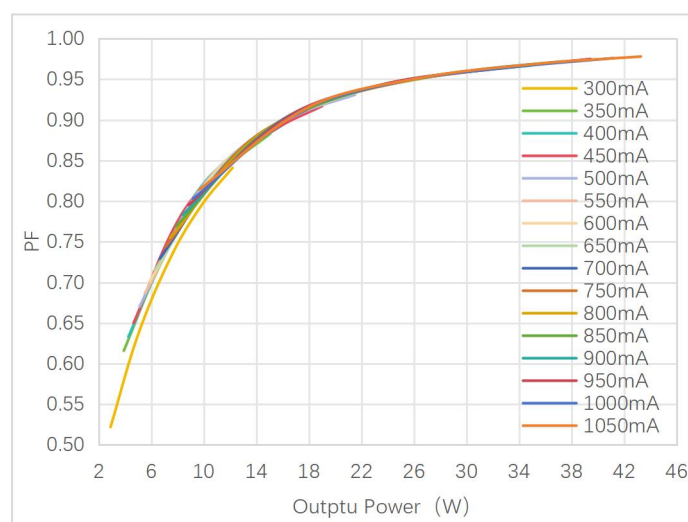
Operating Window



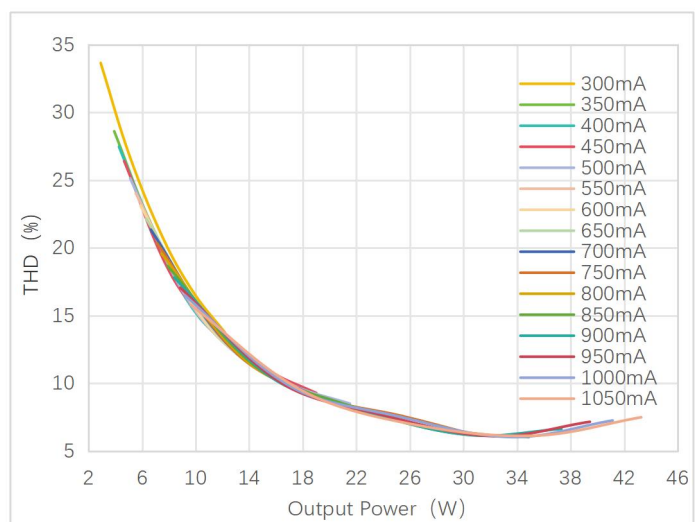
Typical Efficiency vs Load



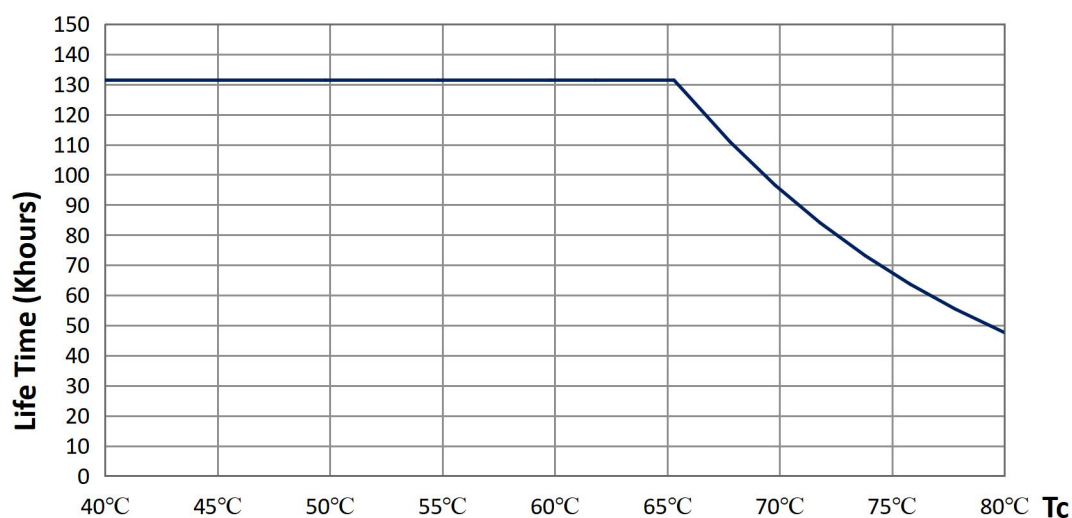
Typical Power Factor vs Load



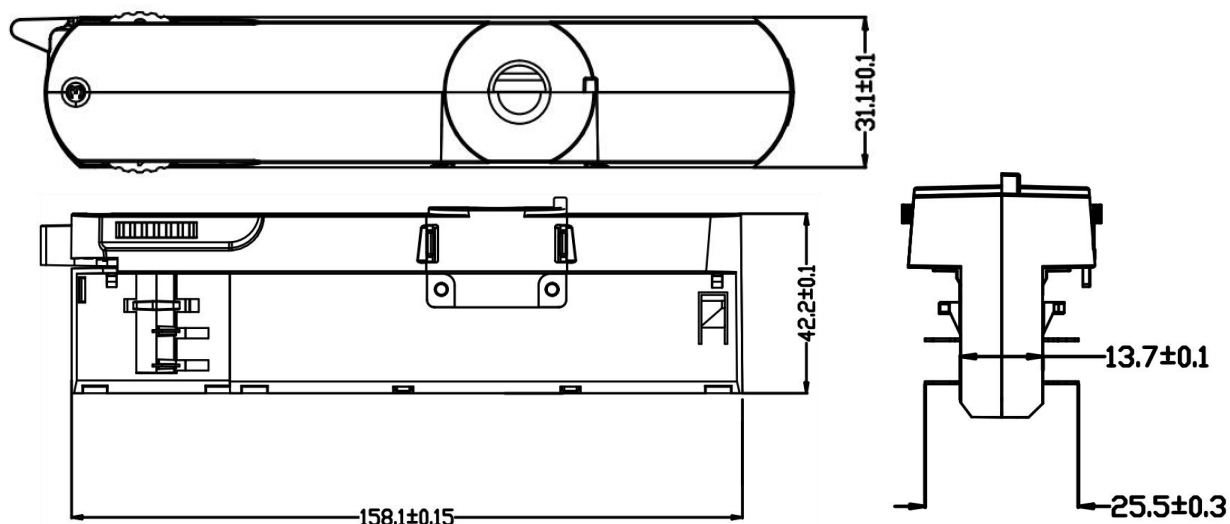
Typical THD vs Load



Lifespan



Dimensions



Product weight	$106.5 \pm 5\%$ g
Cable cross-section, output side	0.5 ... 1.5 mm ²
Wire preparation length, output side	7 ... 8mm
Length	158.1 ± 0.15 mm
Width	42.2 ± 0.1 mm
Height	31.1 ± 0.1 mm

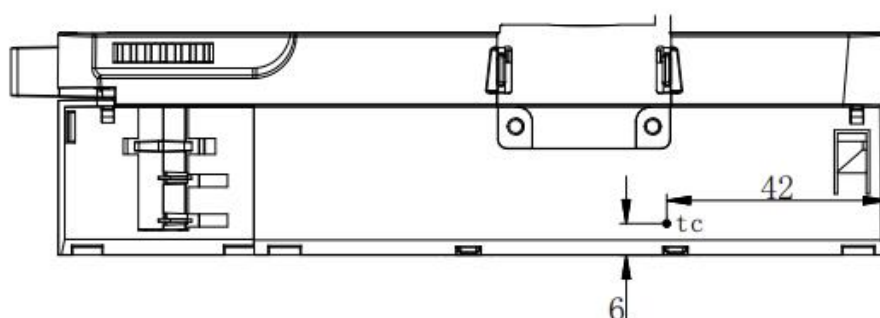
Colors & materials

Casing material	PC
Casing color	White, black, grey

Temperature & operating conditions

Ambient temperature range	-20 ... +35°C
Maximum temperature at tc test point	85°C
Temperature range at storage	-30 ... +80°C (6 months in Class I environment)
Humidity range at storage	20-95%RH (no condensation)
Humidity during operation	20-90%RH
RoHS	RoHS 2.0 (EU) 2015/863

Tc test point



Note: The picture is a front view, and the Tc point is on the front of the product.

Product terminal

Input		Output	
AC-L	AC live wire input	LED+	Positive terminal output of LED driver
AC-N	AC neutral wire input	LED-	Negative terminal output of LED driver

DIP switch definition

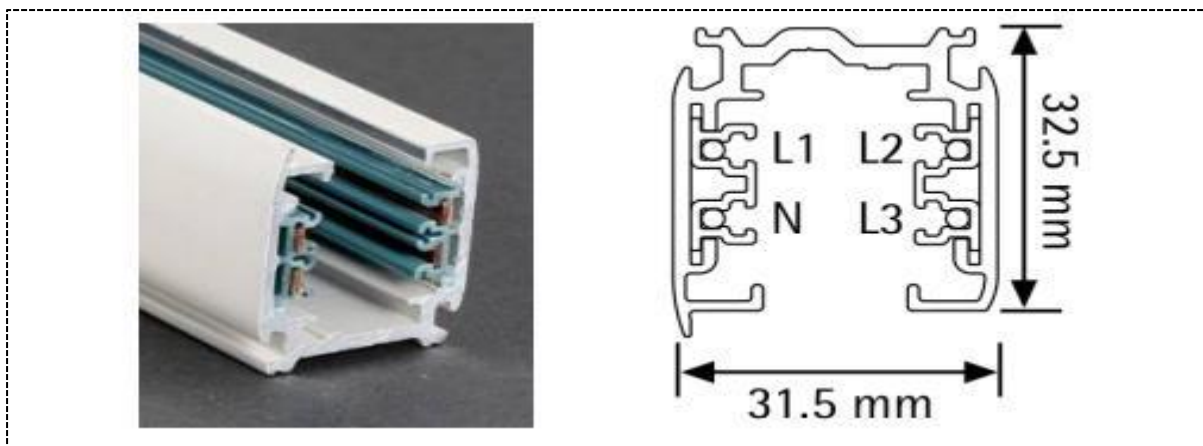
Output current	Output voltage	DIP switch 1	DIP switch 2	DIP switch 3	DIP switch 4
300mA	9-42Vdc	-	-	-	-
350mA	9-42Vdc	-	-	-	ON
400mA	9-42Vdc	-	-	ON	-
450mA	9-42Vdc	-	-	ON	ON
500mA	9-42Vdc	-	ON	-	-
550mA	9-42Vdc	-	ON	-	ON
600mA	9-42Vdc	-	ON	ON	-
650mA	9-42Vdc	-	ON	ON	ON
700mA	9-42Vdc	ON	-	-	-
750mA	9-42Vdc	ON	-	-	ON
800mA	9-42Vdc	ON	-	ON	-
850mA	9-42Vdc	ON	-	ON	ON
900mA	9-42Vdc	ON	ON	-	-
950mA	9-42Vdc	ON	ON	-	ON
1000mA	9-42Vdc	ON	ON	ON	-
* 1050mA	9-42Vdc	ON	ON	ON	ON

Note: "-": shift OFF. "**": default current. DIP when power on is NOT allowed. Please disconnect the AC power before DIP.

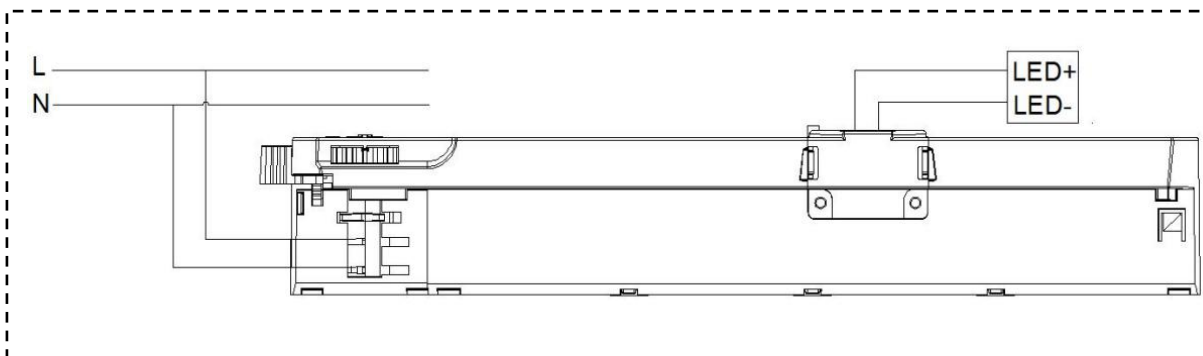
Product application track

No.	Brand	Track type	Phase position
1	Global	XTS 4 & XTSF 4	3P
2	Eutrac	2510x	3P
3	Ivela	7501	3P
4	Unipro	T32B	3P
5	Stucchi	9000XX Series	3P

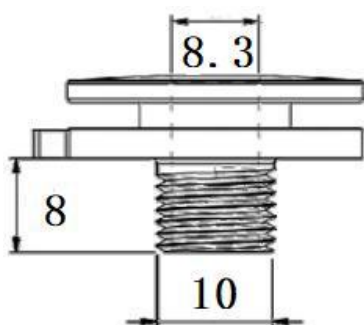
Diagram of a 4-wire, 3-circuit track



Wiring diagram



Screw thread



Specification	Color
M10*8mm	Black
	White
	Grey

Capabilities

Dimmable	-
Over-temperature protection	When the front temperature of U2 reaches 145 °C , the output current will drop
Overload protection	-
Short circuit protection	Automatic reversible
No-load protection	<55V
Suitable for fixtures with prot. class	II
Control interface	-
Output interface	1 channel

Programming

Programming device	-
DALI control software	-
APP	-

Certificates & standards

Approval marks – approval	ENEC, CB, CE, RCM, UKCA, EAC
Standards	IEC/EN 61347-2-13, IEC/EN 61347-1, IEC/EN 62493 IEC/EN 62384 AS 61347.1, AS 61347.2.13
EMC	EN 55015, EN 61547, EN 61000-3-2,3
Type of protection	IP20

Logistical data

Product	Packaging unit (Pieces/Unit)	Dimensions (L*W*H)	Volume	Gross weight
LF-GIT040YA	36	385mm*285mm*210mm	23.04dm ³	4.76kg±5%

Test equipment & condition

Test equipment	AC power source: CHROMA6530, digital power meter: CHROMA66205, 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.
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If there are no special remarks, the above parameters are tested at the ambient temperature of 25°C, humidity of 50%, full load and input voltage of 230Vac/50Hz.

Additional information

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.

Transportation & storage

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.

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.

Disclaimer

Subject to change without notice. Errors and omissions excepted. Always make sure to use the most recent release.

Lifud Technology Co., Ltd. reserves the right to interpret any content of this specification.



LF-GIT040YA(D)

EU-Standard Flicker-free In-track Light LED Driver

Features

- High performance; low THD
- Flicker free; high PF
- Support DALI 2.0 dimming
- Suitable for Class I/II light fixtures
- 5-year warranty (please refer to the warranty condition)



Applications

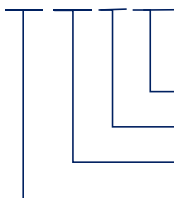
· Commercial lighting · indoor office lighting · decorative lighting · residential lighting

Descriptions

LF-GIT040YA(D) is a 44.1W isolated constant current flicker-free LED driver. Its input voltage ranges from 220-240V and its output voltage ranges from 9-42V. Its output current is adjustable from 300-1050mA via DIP switch with every 50mA as a step. It is suitable for Class I/II light fixtures, including in-track lighting.

Product Model

LF - GIT 040 YA (D)



- (D): DALI dimming
- Y: complies with certifications; A: serial number
- 040: output power
- G: isolated design; IT: in-track

■ Electrical Characteristics

Model		LF-GIT040YA(D)																
Output	Output Voltage	9-42V																
	Output Current (mA)	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	
	Ripple Current (<100Hz)	±5%																
	Flicker Index	Complies with IEEE 1789-2015 standard																
	CIE SVM	≤0.4																
	IEC-Pst	≤1																
	Current Tolerance	±5%																
	Temperature Drift	±10%																
	Start-up Time	<2S																
Input	Input Voltage	220-240Vac																
	Input Voltage Range	198-264Vac																
	DC Input Voltage	180-264Vdc ^①																
	Input Frequency	0/50/60Hz																
	Input Current	0.28A max.																
	PF	≥0.87			≥0.9					≥0.95								
	THD	≤20%																
	Efficiency	≥84%				≥86%						≥87%						
	Inrush Current	≤22A ^②																
	Loading Quantities of Circuit Breaker	Model			B10			C10			B16			C16				
		Quantity (pcs)			25			25			40			40				
	Leakage Current	≤0.7mA																
	Standby Power Consumption	≤0.5W																
Protection Characteristics	Open Circuit	<55V																
	Short Circuit	Hiccup mode (auto-recovery)																
Environment Descriptions	Operating Temperature	-20℃ - +35℃																
	Operating Humidity	20-90%RH (no condensation)																
	Storage Temperature/ Humidity	-30℃ - 80℃ (6 months in Class I environment); 10-90%RH (no condensation)																
	Atmospheric Pressure	86-106kPa																

■ Electrical Characteristics

Surge Level	L-N	1KV
	PUSH	0.5KV
Safety & EMC	Certifications	ENEC, CE, CB, UKCA, RCM, EAC
	Withstand 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
	Safety Standards	ENEC: EN61347-1:2015, EN 61347-2-13:2014/A1:2017, EN 62384: 2020 CE-LVD: EN 61347-2-13:2014/A1:2017, EN 61347-1:2015, EN 62493:2015 UKCA-LVD: EN 61347-1:2015/A1:2021, EN 61347-2-13:2014/A1:2017 EN 62493:2015 RCM: AS 61347.2.13:2018 & AS/NZS 61347.1:2016+A1
	EMI	CE-EMC/RCM: EN55015, EN61000-3-2, EN61000-3-3
	EMS	CE-EMC/RCM: EN61000-4-2,3,4,5,6,11
Other Parameters	IP Rating	IP20
	DALI Standard	IEC62386-101、102、207、250、251、252、253
	RoHS	RoHS 2.0 (EU) 2015/863
	Tc Max	90°C
	Warranty	5 years [®]
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°C, humidity of 50%, maximum output power and input voltage of 230Vac/50Hz.	

■ Electrical Characteristics

Additional Remarks

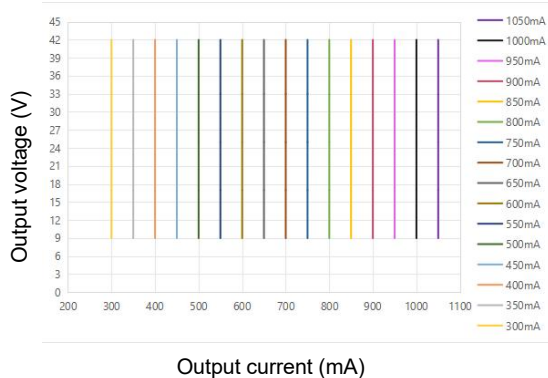
1. It is recommended that user install over voltage protection, under voltage protection and surge protection devices in the power supply circuits of light fixtures to ensure electricity safety.
2. The PC cover, casing and end cap for assembling the LED driver in the light fixture must meet the fire rating of UL94-V0 or above.
3. 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.
4. The test conditions of the circuit breaker configuration quantity are the same as those of the inrush current.

Note:

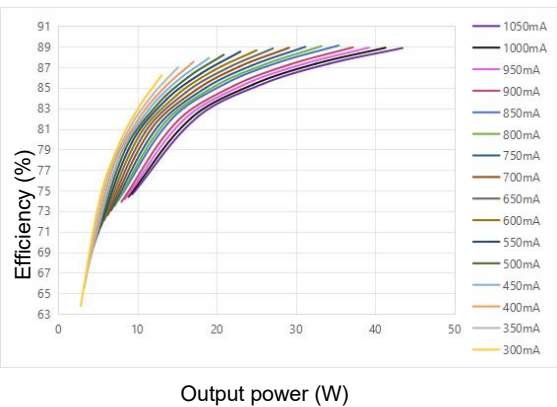
- ① DC input is only for emergency with the maximum using time of 90 mins
- ② @10uS
- ③ 5 years@Tc≤74°C

■ Product Characteristic Curves

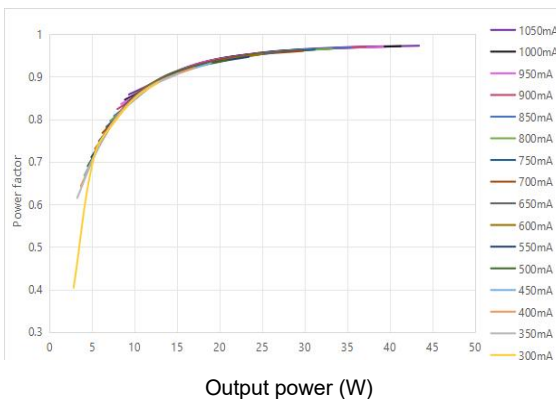
Working Window Curve



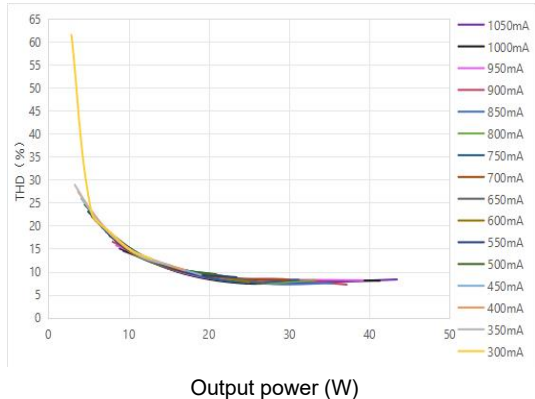
Efficiency Curve



PF Curve

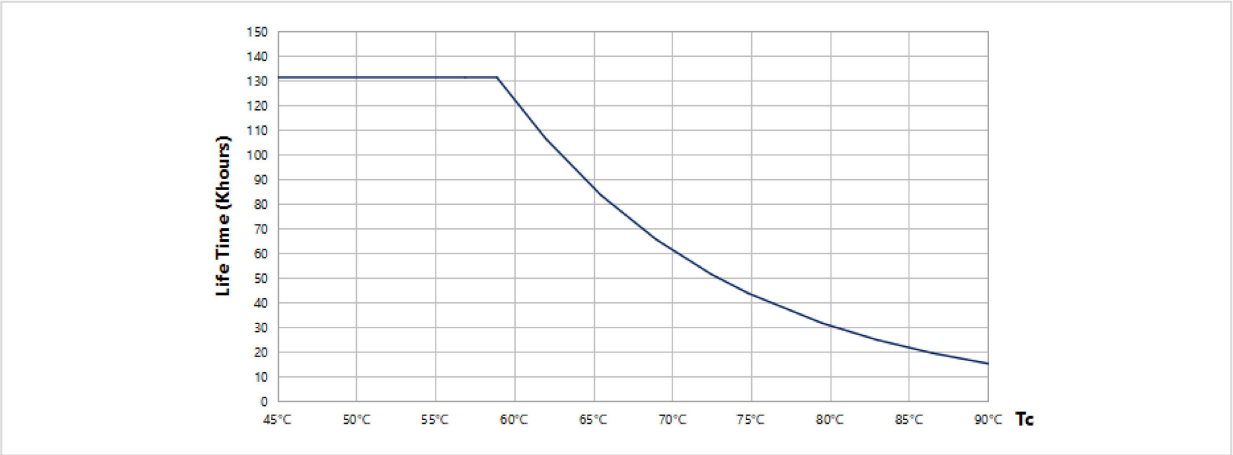


THD Curve

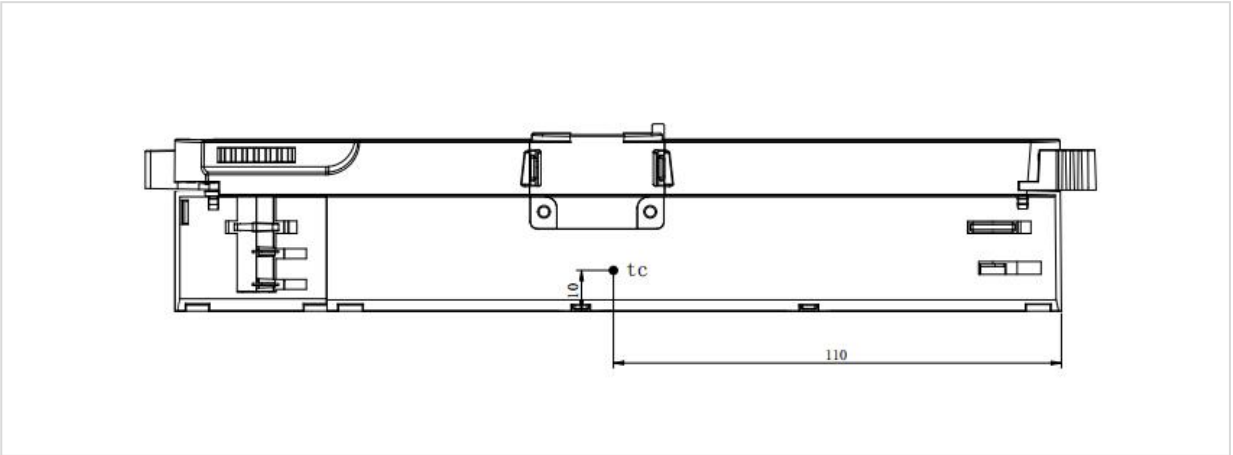


■ Product Characteristic Curves

Lifetime Curve



Tc Point Test Diagram



■ Product Definitions

Product Terminals

INPUT		OUTPUT	
AC-L	AC live wire input	LED-	Negative electrode output of LED driver
AC-N	AC neutral wire input	LED+	Positive electrode output of LED driver

■ Product Definitions

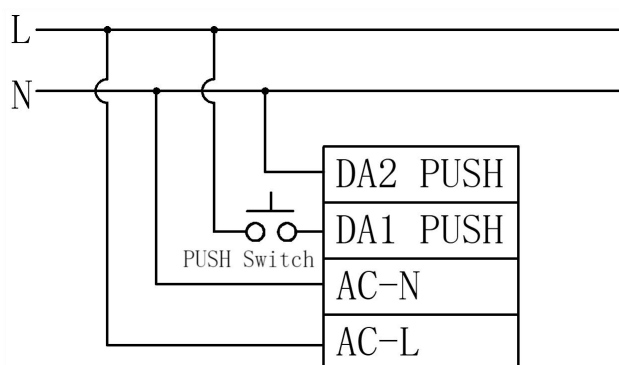
Product DIP Switch

I rated (CC)	1	2	3	4
300mA	-	-	-	-
350mA	-	-	-	ON
400mA	-	-	ON	-
450mA	-	-	ON	ON
500mA	-	ON	-	-
550mA	-	ON	-	ON
600mA	-	ON	ON	-
650mA	-	ON	ON	ON
700mA	ON	-	-	-
750mA	ON	-	-	ON
800mA	ON	-	ON	-
850mA	ON	-	ON	ON
900mA	ON	ON	-	-
950mA	ON	ON	-	ON
1000mA	ON	ON	ON	-
*1050mA	ON	ON	ON	ON

Remark: “-”: shift OFF. “*”: default current. DIP when power on is NOT allowed. Please disconnect the AC power before DIP.

■ Dimming Operation Instructions

Wiring Diagram of PUSH Dimming



- Connect PUSH switch between AC-L and DA1 PUSH in series and connect DA2 PUSH to AC-N.
- Make sure that AC-L and AC-N are not directly connected to DA1 PUSH and DA2 PUSH terminals.
- Make sure that PUSH switch is off before the AC is powered on; operate PUSH after the AC is powered on.
- Make sure the PUSH switch is off before disconnecting the AC.
- If you have any questions about the wiring and operation, please confirm with Lifud FAE.
-  Wrong wiring or operation may cause damage to the driver.

Operations of PUSH Dimming

Operation	Duration	Function
Instant Push	0.1-0.5 sec(s)	LED light on/off
Long Push	0.6-9 sec(s)	When light is on, long PUSH to dim up/down
Reset Push	>9 sec(s)	Long press the PUSH button to reset the brightness to 50%

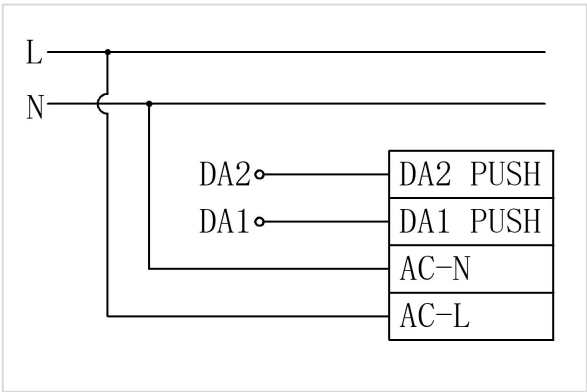
- The PUSH operation won't cause any variations on LED driver if it's less than 0.1S.
- Min. dimming depth of PUSH dimming: 3%.
- The PUSH dimming mode has the memory function in case of any power failure. When powering the LED driver on again, the light will return to the previous state before power failure.
- The present dimming direction of PUSH dimming is opposite to the former one.
- In automatic mode, long press for over 3 mins to enter the corridor lighting function.

■ Dimming Operation Instructions

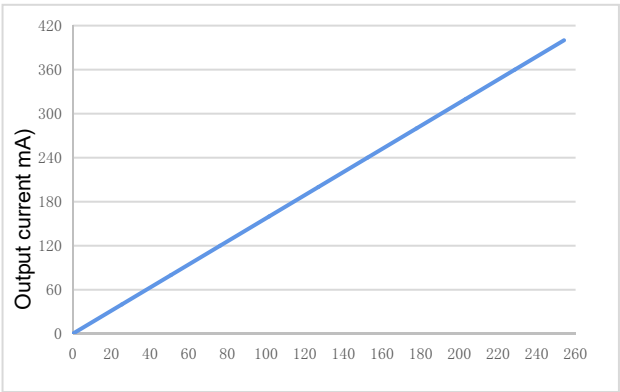
Operations of DALI Dimming

- Default setting brightness is 100%.
- Connect DALI signal to DA1 PUSH and DA2 PUSH.
- DALI protocol includes Max.16 scene groups.
- Maximum number of LED drivers connected in parallel in DALI dimming mode: 64 pcs.
- Dimming depth of DALI dimming: 3%.

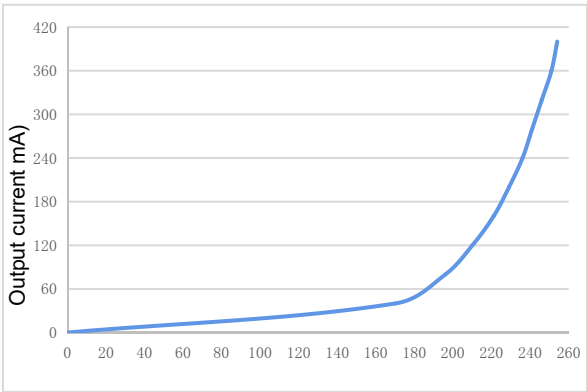
Wiring Diagram of DALI Dimming



DALI Dimming Curve (Linear)



DALI Dimming Curve (Logarithmic)



⚠ Remark: Choose only ONE as opposed to use DALI or PUSH at the same time in case of the damage of DALI master.

■ Product Application Track

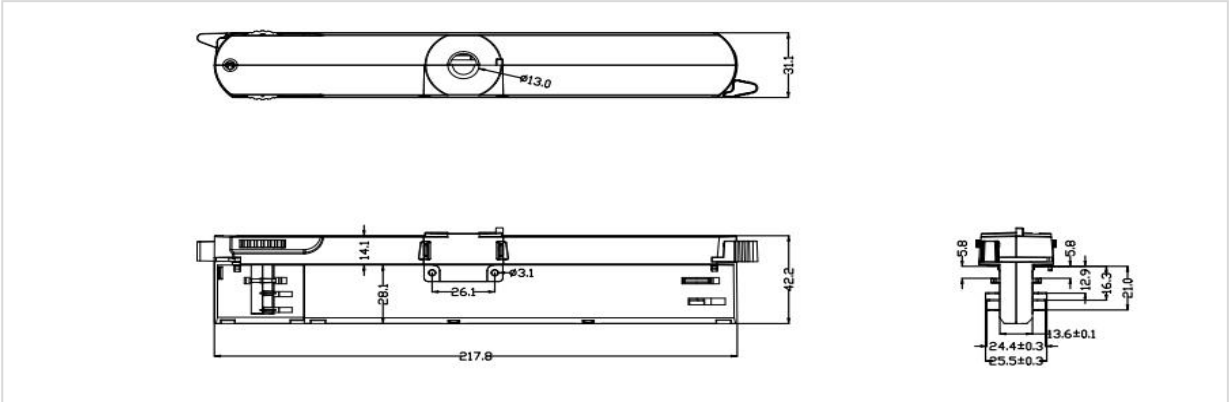
Number	Brand
1	NORDIC ALUMINIUM
2	Stucchi
3	Powergear

■ Structure & Dimensions (unit: mm)

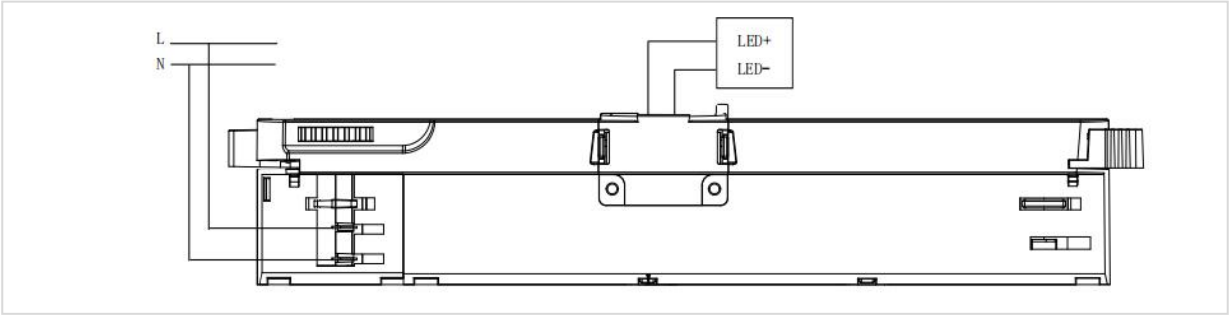
Product Dimensions

Model	Overall Appearance (L*W*H)	Color
LF-GIT040YA(D)	217.8*42.2*31.1mm (±0.5mm)	Black
		White
		Grey

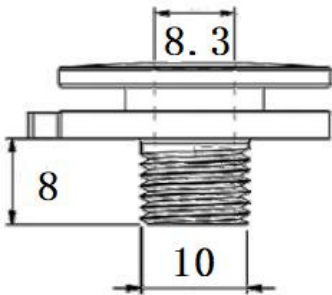
Structure Diagrams



■ Wiring Diagram



■ Screw thread



Specification	Color
M10*8mm	Black
	White
	Grey

Remark: The screw thread need to be purchased separately and shipped as accessories.

■ Packaging Specifications

Model	LF-GIT040YA(D)
Carton Size	385*285*210mm (L*W*H)
Quantity	8 pcs/layer; 3 layers/ctn; 24 pcs/ctn
Weight	0.157 ± 5% kg/pc; 4.43 ± 5% kg/ctn

■ 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 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.