LF-ACT040D-1050-42

Triac Dimmable LED Driver

Product family features

— Supports leading edge and trailing edge dimming

— Output current adjustable via DIP switch

— Suitable for Class II light fixtures

— Lifetime up to 100,000h

— 5 years guarantee

Product family benefits

— Supports leading edge and trailing edge dimming

— Flicker free

— SELV output

Typical applications

— For downlight, panel light

— For office, commercial, and decorative lighting

Product parameters

— Output current 700-1050mA

— Output power 17.5-40W

— Input voltage 198–264Vac

— Output voltage 25-42Vdc

— Efficiency 87%

Electrical data

Input data

Nominal input voltage	220 ... 240V
Input voltage AC	198 ... 264V
Mains frequency	50/60Hz
Power factor	≥0.9
Efficiency	≥87% [1)]
THD	<25%
Input current	0.3A Max
Inrush current	4A [2)]
Loading number on circuit breaker 10 A (B)	33
Loading number on circuit breaker 10 A (C)	33
Loading number on circuit breaker 16 A (B)	53
Loading number on circuit breaker 16 A (C)	53
Protective conductor current	≤0.7mA

Output data

Nominal output voltage	25 ... 42V	25 ... 40V	25 ... 38V
Nominal output current	700-950mA	1000mA	1050mA
Default output current	700mA		
Current setting	DIP switch		
Maximum output power	40W		
Nominal output power	17.5... 40W		
Output ripple current (100 Hz)	±3.3 %		
Flicker	According to IEEE Std 1789-2015		
CIE SVM	≤0.4		
IEC-Pst	≤1		
Current tolerance	±5%		
Temperature tolerance	±10%		
Start-up time	<2S		

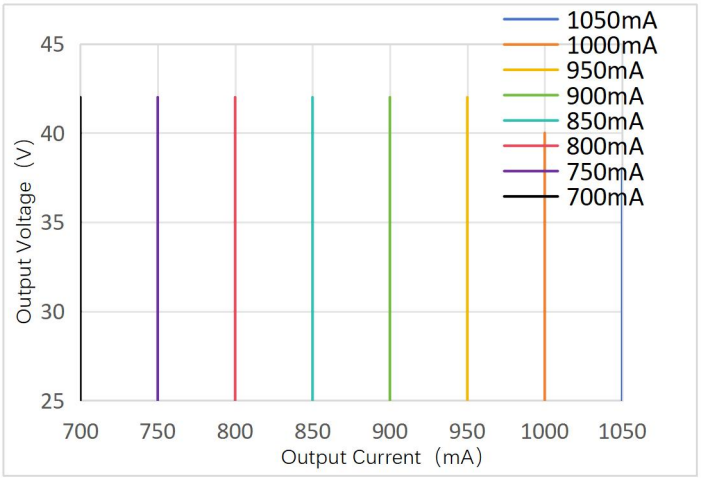
Safety

Withstanding voltage	I/P-O/P: 3.75kV&5mA&60S
Surge capability (L-N)	1kV
Insulation resistance	I/P-O/P: ＞100MΩ@500Vdc
Lifetime	Up to 100,000 hours[3)]
Guarantee	5 years [4)]

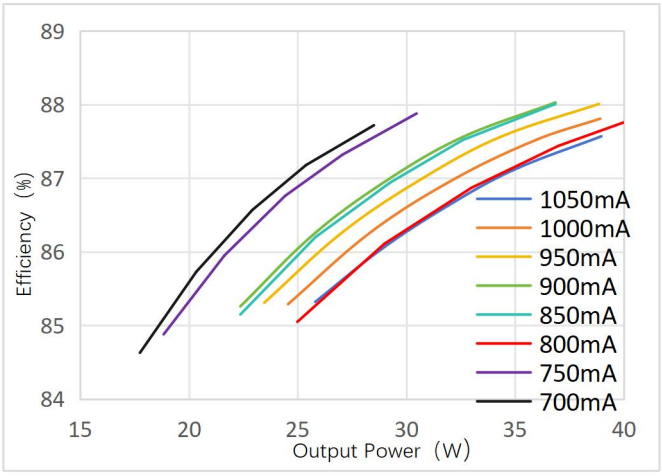
1) 230Vac @full load
2) t =100 μs
3) For details, please refer to the service life table
4) Tc≤80℃

Characteristic diagrams

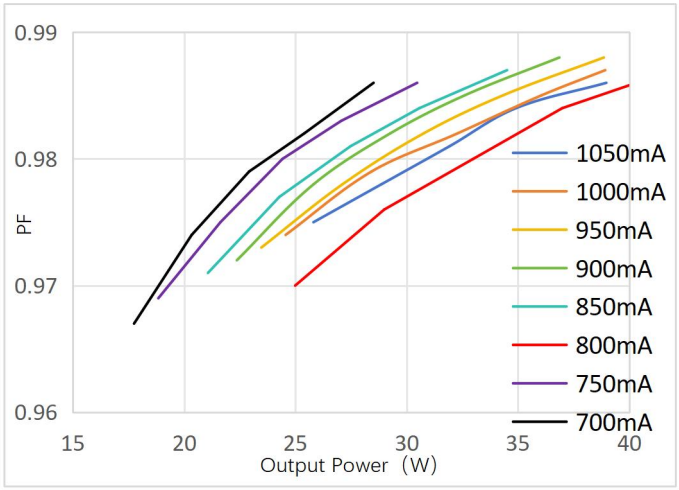
Operating Window



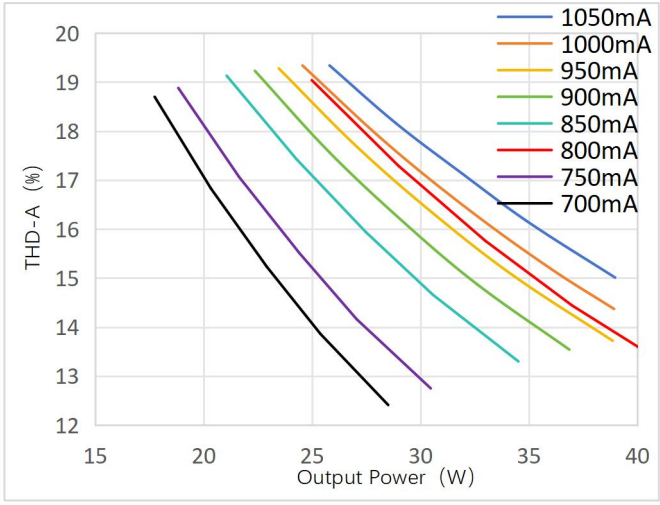
Typical Efficiency vs Load



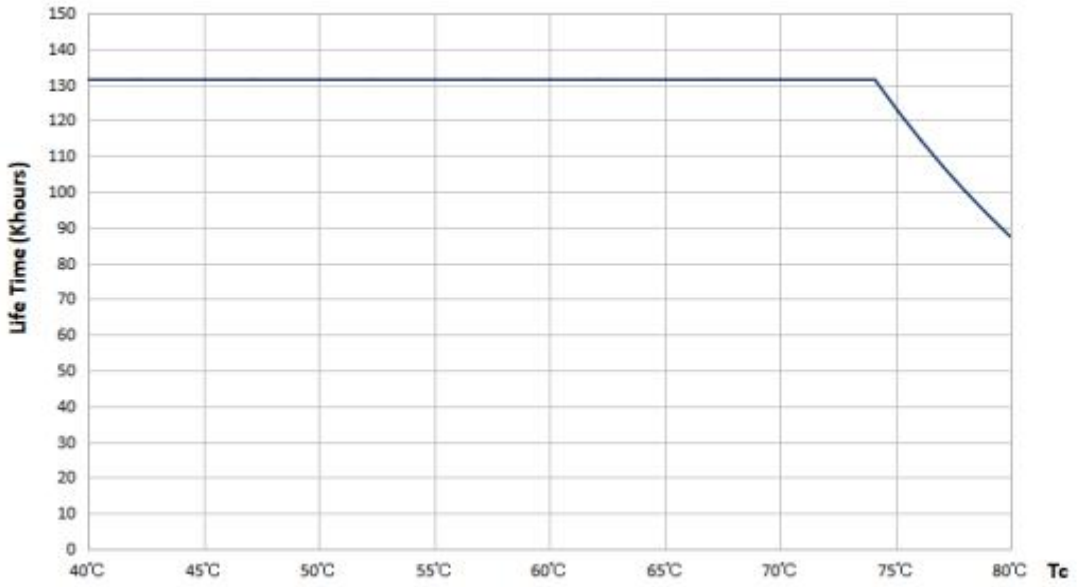
Typical Power Factor vs Load



Typical THD vs Load



Lifespan



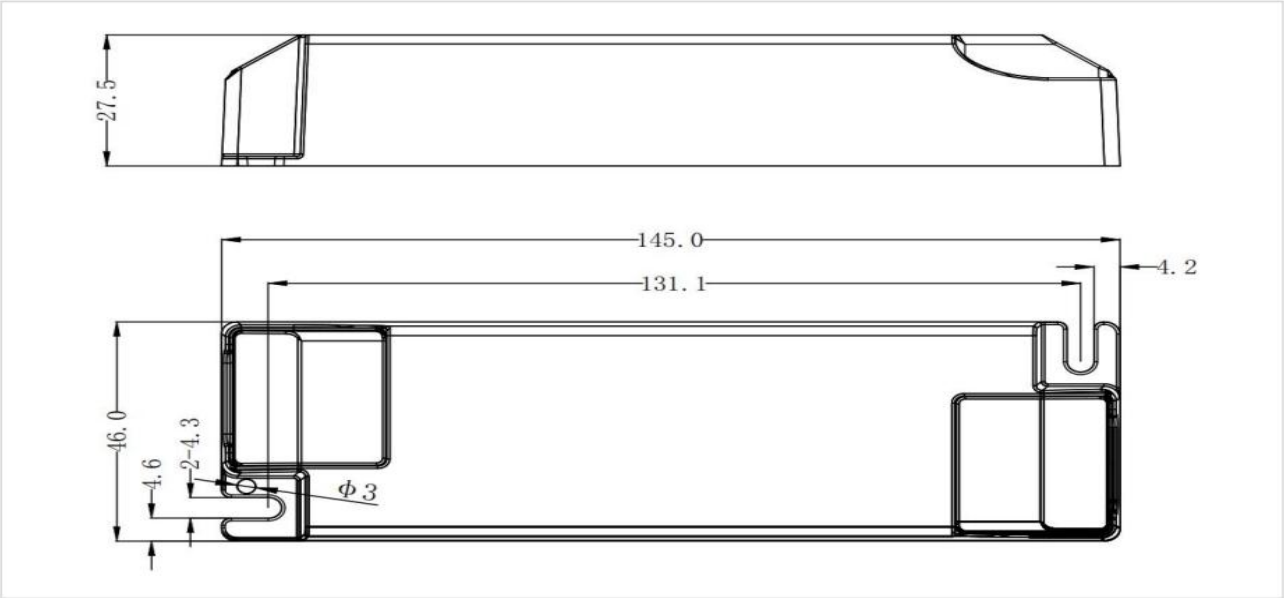
Service life

Model	Iout	Pout	Ta	35°C	45°C
LF-ACT040D-1050-42	1050mA	40W	Tc	70°C	80°C
			Lifetime	>100,000h	>50,000h

Note: The design life of the LED driver is as described above under reference conditions. The failure probability is less than 10%.

The relationship between Tc and Ta also depends on the design of the luminaire.

Dimensions (unit: mm)



Mounting hole spacing, length	131.1mm
Product weight	153 g
Cable cross-section, input side	0.75 ... 1.5 mm²
Cable cross-section, output side	0.5 ... 1.5 mm²
Cable outside diameter, input side	3 ... 7 mm
Cable outside diameter, output side	3 ... 7 mm
Wire preparation length, input side	7 ... 8mm
Wire preparation length, output side	7 ... 8mm
Length	145mm
Width	46mm
Height	27.5mm

Colors & materials

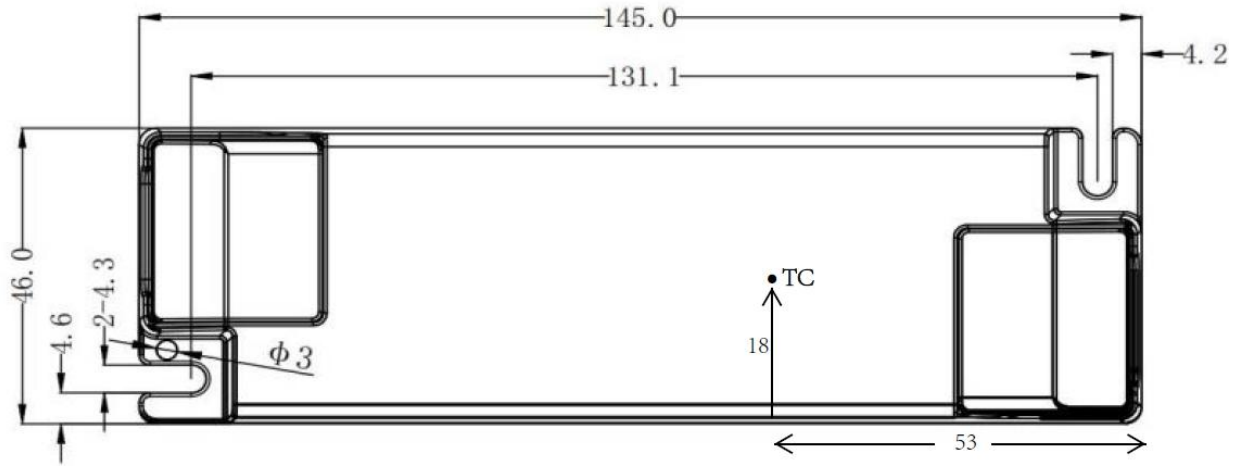
Casing material	PC
Casing color	White

Temperature & operating conditions

Ambient temperature range	-20 ... +45°C
Maximum temperature at tc test point	80°C

Temperature range at storage	-30 ... +80℃ (6 months in Class I environment)
Humidity range at storage	20-75%RH (no condensation)
Humidity during operation	20-95%RH (no condensation)
Atmospheric pressure	86-106kPa
RoHS	RoHS 2.0 (EU) 2015/863

Tc test point (unit: mm)



Note: Tc point is on the top of the product.

Product terminal

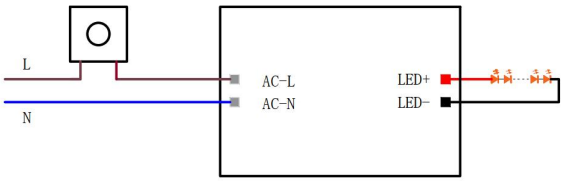
Input		Output	
AC-L (Gray)	AC live wire input	**LED+**	Positive terminal output of LED driver
AC-N (Gray)	AC neutral wire input	**LED-**	Negative terminal output of LED driver

DIP switch definition

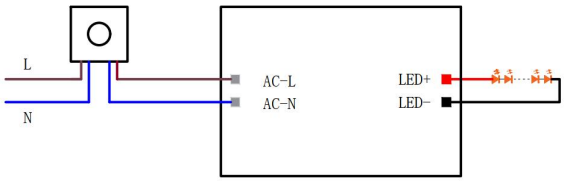
Vo DC	I rated (CC)	1	2	3
25-40V	1050mA	ON	ON	ON
25-38V	1000mA	-	ON	ON
25-42V	950mA	ON	-	ON
	900mA	-	-	ON
	850mA	ON	ON	-
	800mA	-	ON	-
	750mA	ON	-	-
	*700mA	-	-	-

Note: 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.

Dimmer wiring



Single-live wire diagram



Neutral-live wire diagram

Capabilities

Dimmable	Leading edge and trailing edge dimming
Dimming range	1...100%
Overload protection	Yes
Short circuit protection	Automatic reversible (Power off and restart the AC to restore)
No-load protection	≤59V
Suitable for fixtures with prot. class	II
Control interface	-
Output interface	1 channel

Certificates & standards

Approval marks – approval	ENEC, CCC, SAA, CB, CE, RCM
Standards	GB/T 19510.1; GB/T 19510.213; GB/T 7000.1; GB 17625.1; GB/T 17743 EN 61347-2-13; EN 61347-1; EN 62384; EN 62493; EN 55015; EN 61547; EN 61000-3-2; EN 61000-3-3; IEC61347-1; IEC61347-2-13; AS 61347.2.13 & AS/NZS 61347.1
Type of protection	IP20

Logistical data

Product	Packaging unit (Pieces/Unit)	Dimensions (L*W*H)	Volume	Gross weight
LF-ACT040D-1050-42	70	385mm*285mm*210mm	23.1 dm^3	11kg±5%

Test equipment & condition

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.

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.

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.

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. The default current of the product is 700mA.

7. Hot-swapping is prohibited. Always disconnect AC power before replacing the load.

8. Lifud Technology Co., Ltd. reserves the right to interpret all parameters 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.