LF-GCV100H24-YH

24V constant voltage switching power supply　Output current 4.2A max.

Product family features

— Full rated power output
— No-load power consumption≤0.5W
— Protection: short circuit/overload/overvoltage/OTP
— Operating altitude up to 5000m
— Output power adjustable via external DIP switch
— Soft-start function selectable via DIP switch
— Cooling by free air convection
— 5 years guarantee
— Lifetime up to 100,000H

Product family benefits

— Compact size
— High efficiency
— Long lifetime and high reliability

Typical applications

— For strip light
— For office, commercial, and decorative lighting

Product parameters

— Output current 0-4.2A
— Output power 0-100W
— Input voltage 176–264Vac
— Output voltage 24V
— Efficiency 95%

Electrical data

Input data

Nominal input voltage	220 ... 240V
Input voltage AC	176 ... 264V
Mains frequency	50/60Hz
Power factor	≥0.45
Efficiency	≥93%
THD	/
Input current	1.2A Max
Inrush current	≥80A [1)]
Loading number on circuit breaker 16 A (B)	5
Loading number on circuit breaker 16 A (C)	8
Loading number on circuit breaker 20 A (B)	6
Loading number on circuit breaker 20 A (C)	10
Protective conductor current	≤3.5mA
Stand-by power consumption	≤0.5W

Output data

Nominal output voltage	24V
Nominal output current	0-4.2A
Maximum output power	100.8W
Nominal output power	0... 100.8W
Flicker	According to IEEE Std 1789-2015
CIE SVM	≤0.4
IEC-Pst	≤1
Ripple voltage	240mV Max
Voltage tolerance	±2%
No-load voltage	24.5V Max
Start-up time	<0.5S

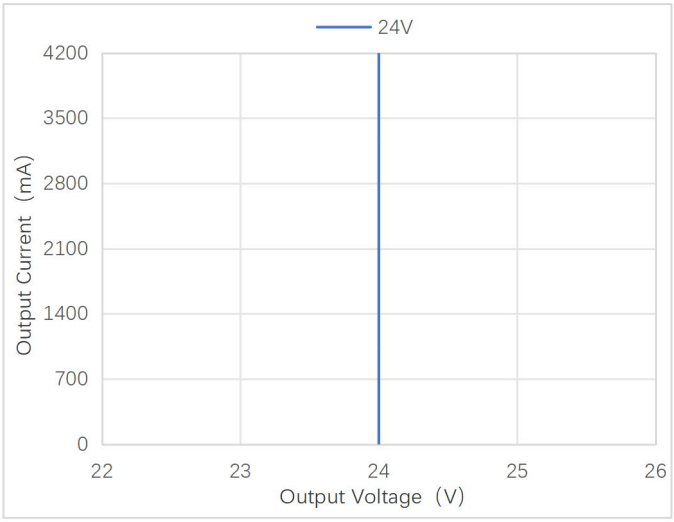
Safety

Withstanding voltage	I/P-O/P: 3kV&5mA&60S; I/P-PE: 2kV&5mA&60S O/P-PE: 0.5kV&5mA&60S
Surge capability (L-N)	2 kV
Surge capability (L/N-Ground)	4 kV
Insulation resistance	I/P-O/P I/P-PE O/P-PE: >100MΩ@500Vdc
Lifetime	Up to 100,000 hours[2)]
Guarantee	5 years [3)]
Noise level	≤24dB [4)]

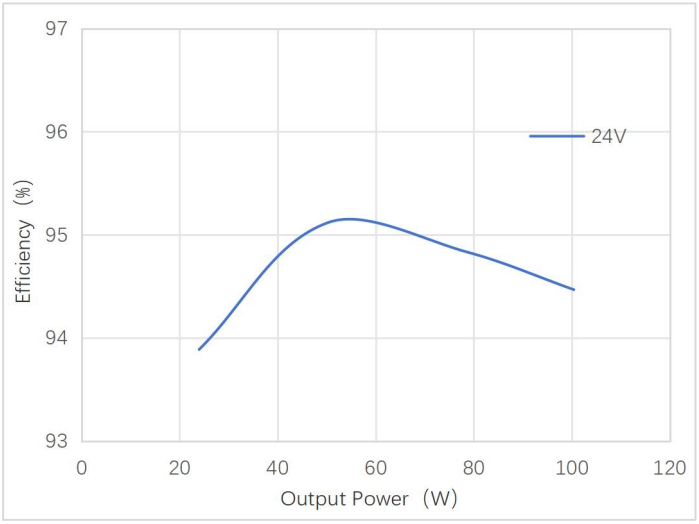
1) t =300 μs
2) For details, please refer to the service life table
3) 5 years@Tc≤70℃
4) Output: load ≥35%; With no dimmer connected to the output
5) The ambient temperature derating of 5℃/1000m for operating altitude higher than 2000m

Characteristic diagrams

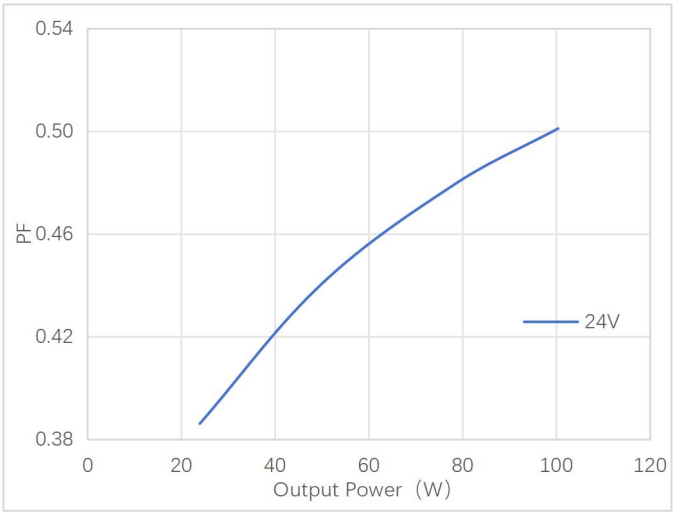
Operating Window



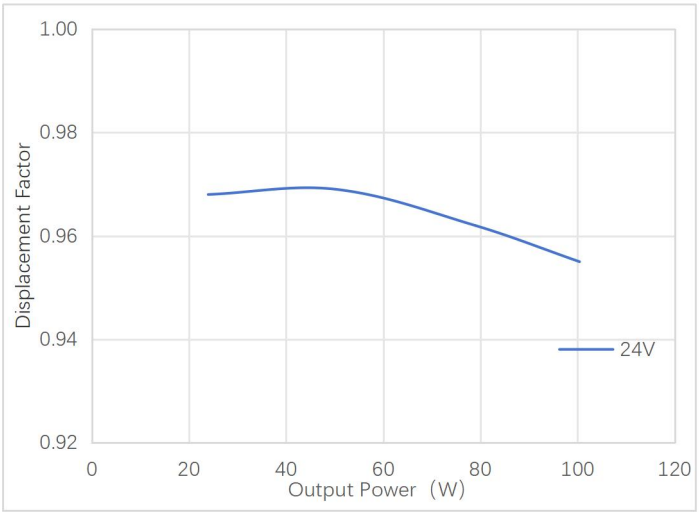
Typical Efficiency vs Load



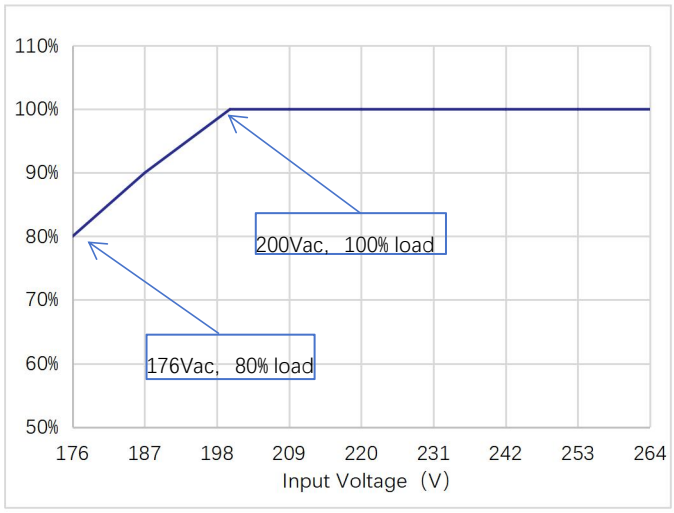
Typical Power Factor vs Load



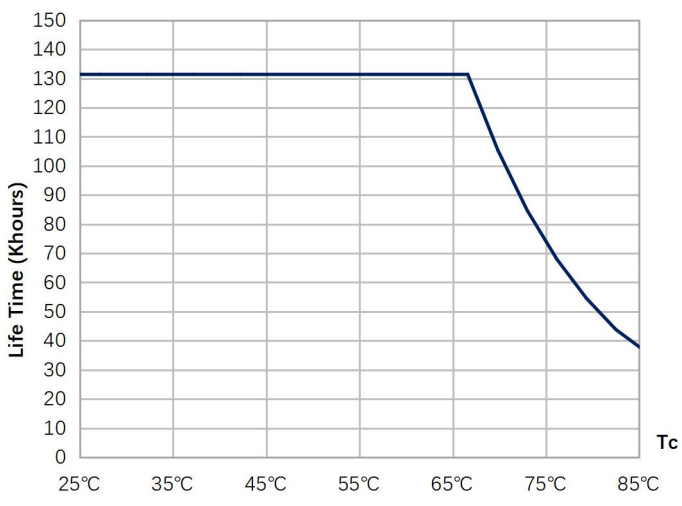
Displacement Factor vs Load



Derating Curve



Lifespan

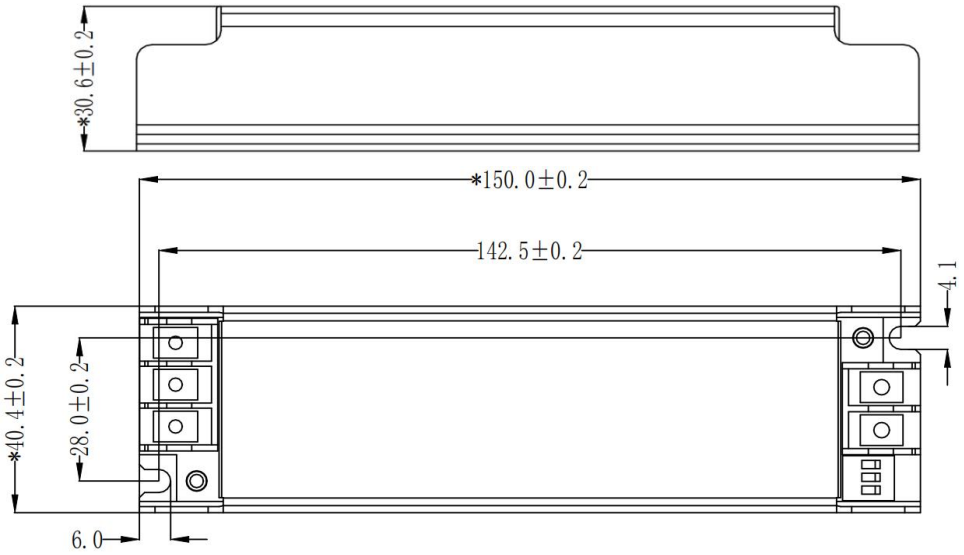


Service life

Model	Iout	Pout	Ta	40°C	50°C
LF-GCV100H24-YH	4.2A	100.8W	Tc	60°C	70°C
			Lifetime	>100,000h	>100,000h

Note: The design life of the product 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 load.

Dimensions (unit:mm)



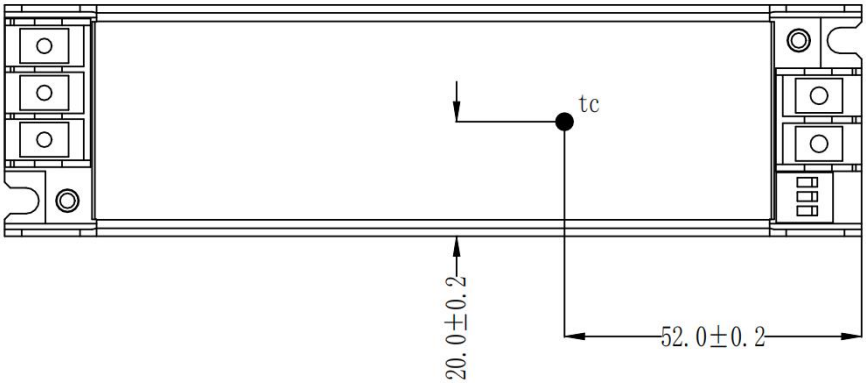
Mounting hole spacing, length	142.1±0.2mm
Diameter of positioning hole	4.1mm
Product weight	173g±5%
Cable cross-section, input side	0.75 ... 2.5 mm²
Cable cross-section, output side	1.0 ... 2.5 mm²
Wire preparation length, input side	6 ... 7mm
Wire preparation length, output side	6 ... 7mm
Length	150±0.2mm
Width	40.4±0.2mm
Height	30.6±0.15mm

Colors & materials

Casing material	Aluminium alloy
Casing color	Silver gray

Temperature & operating conditions	
Ambient temperature range	-30 ... +50°C
Maximum temperature at tc test point	70°C
Temperature range at storage	-30 ... +80℃ (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 (unit: mm)



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

Product terminal

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

DIP switch definition

Output power	DIP switch 1	DIP switch 2	DIP switch 3
*100%	-	-	ON (Soft-start function activated) *- (Soft-start function inactivated)
75%	-	ON	
50%	ON	-	
35%	ON	ON	

Note:

1. Factory default: 100% output power, soft-start function OFF;

2. The soft-start time is 3 to 8S (vary due to different light strips being connected in series or parallel and their different Vf levels).

3. The output power will vary due to different light strips being connected in series or parallel and their different Vf levels.

Capabilities

Dimmable	-
Over-temperature protection	It resumes normal operation after the output voltage is turned off and temperature drops
Overload protection	110-200% (self-recovery)
Short circuit protection	Hiccup mode (self-recovery)
Overvoltage protection	Hiccup mode. It resumes normal operation after the fault condition is removed
Suitable for fixtures with prot. class	I/ II
Control interface	-
Output interface	1 channel

Programming

Programming device	-
DALI control software	-
APP	-

Certificates & standards

Approval marks – approval	CCC, CE
Standards	EN IEC 62368-1 GB 4943.1
EMC	EN 55032, EN 55035, EN IEC 61000-3-2, EN IEC 61000-3-3 GB/T 9254.1, GB17625.1
Type of protection	IP20

Logistical data

Product	Packaging way	Packaging unit (Pieces/Unit)	Dimensions (L*W*H)	Volume	Gross weight
LF-GCV100H24-YH	Overall packaging	50	410mm*390mm*230mm	36.77 dm³	9.1kg±5%
	SP in a small white box	80	338mm*317mm*186mm	19.93 dm³	14.2kg±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.

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. Ripple and noise are measured at 20MHz of bandwidth by connecting a 0.1uf and 10uf parallel capacitor at the terminal.

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.