LF-FMR020YSIII

FMR*YSIII non-SELV 1-driver with 4-output current | Constant Current - Non Dimmable

Product family features

— Low THD<10%@full load

— Rated input voltage: 220-240Vac

— Ta: -40℃~+60℃

— Ripple current<5%

— Suitable for Class I light fixtures

— 5 years guarantee

Product family benefits

— Output current adjustable via DIP switch in 4 shifts

— Super high efficiency

— Linear metal casing with 21mm housing height

— Long lifetime and high reliability

— Flicker free

— Non-SELV output

Typical applications

— For linear light, tri-proof light and strip light

— For office, commercial, and decorative lighting

Product parameters

— Output current 200/250/300/350mA

— Output power 5-20W

— Input voltage 176–264Vac

— Output voltage 25-75Vdc

— Efficiency 87%

Electrical data

Input data	
Rated input voltage	220 ... 240V
AC voltage range	176 ... 264V[1)]
Mains frequency	0/50/60Hz
Input voltage DC	180 ... 264V[2)]
Power factor	≥0.93
Efficiency	87%[3)]
THD	≤10%
Input current	0.15A Max
Inrush current	20A[4)]
Loading number on circuit breaker 10 A (B)	28
Loading number on circuit breaker 10 A (C)	45
Loading number on circuit breaker 16 A (B)	46
Loading number on circuit breaker 16 A (C)	74
Loading number on circuit breaker 20 A (C)	92
Loading number on circuit breaker 25 A (C)	115
Protective conductor current	≤3.5mA
Output data	
Nominal output voltage	25... 75V[5)]
Nominal output current	200/250/300/350mA[6)]
Default output current	350mA
Current setting	DIP switch (please see the DIP switch definition)
Maximum output power	20W
Nominal output power	5... 20W
Output ripple current (100 Hz)	<5%
Flicker	According to IEEE Std 1789-2015
CIE SVM	≤0.4
IEC-Pst	≤1
Output current tolerance	±5%
Temperature tolerance	±10%
Start-up time	<0.5S
Safety	
Withstanding voltage	I/P-PG: 1.6kV&5mA&60S;
Surge capability (L-N)	1kV
Surge capability (L/N-Ground)	2kV
Insulation resistance	I/P-PG O/P-PG: >100MΩ@500VDC
Guarantee	5 years[7)]

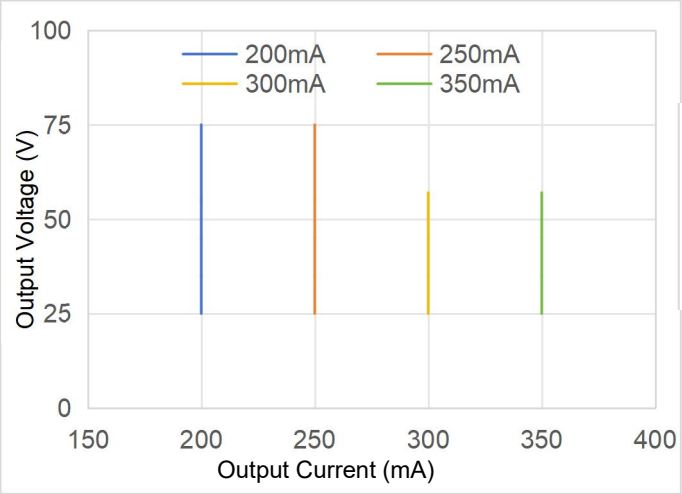
1) 176V can be used for a short time when the power grid fluctuated, and the maximum use time is 4H. It is not recommended to use 176V under the normal use environment for a long time
2) DC input is only for emergency
3) @when the output voltage is 75V, the output current is 250mA
4) t =175μs
5) Please refer to the operating window about the relationship between output voltage and output current

6) Fixed current version optional

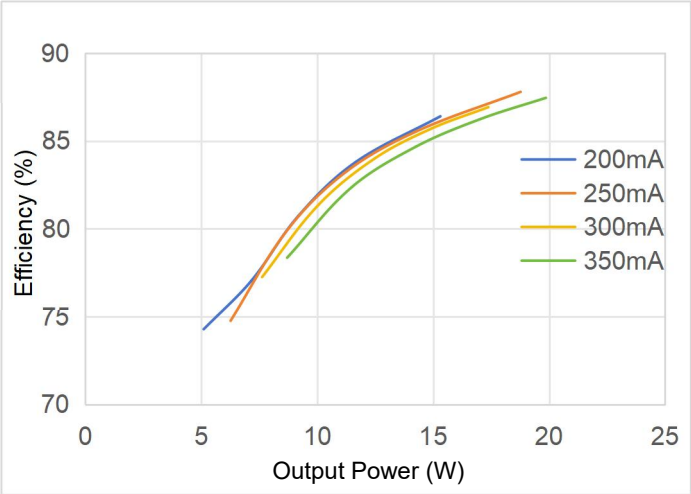
7) 5 years @Tc≤ 80℃

Characteristic diagrams

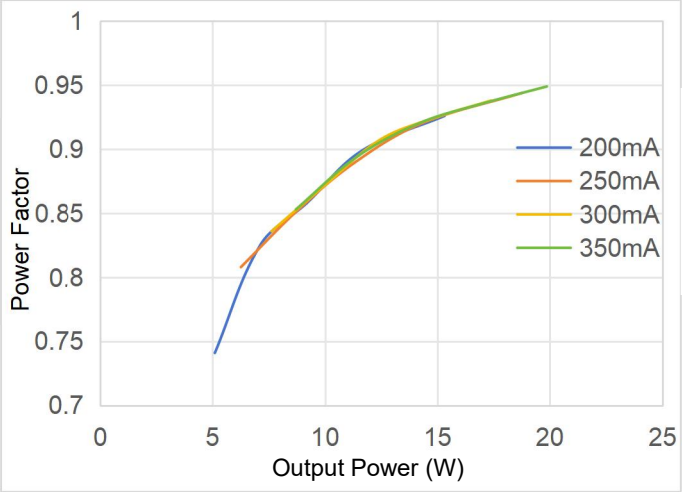
Operating Window



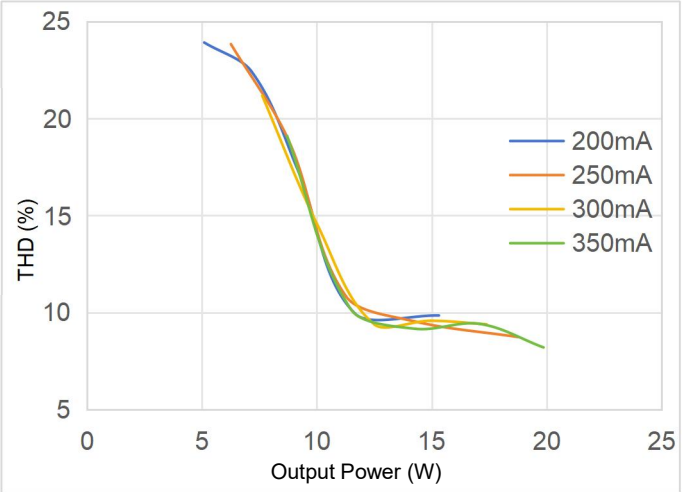
Typical Efficiency vs Load



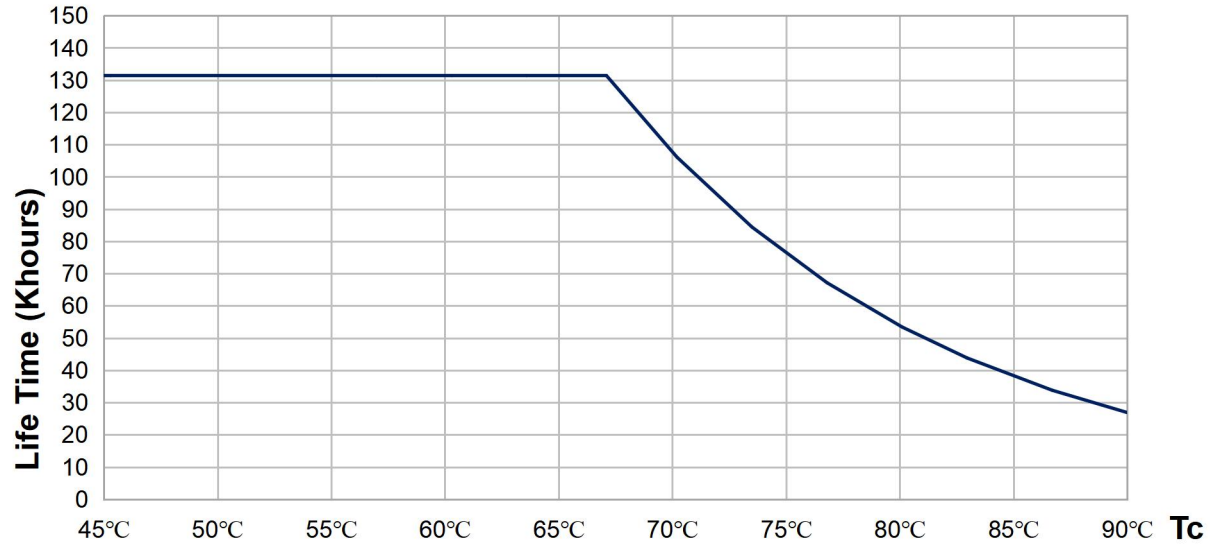
Typical Power Factor vs Load



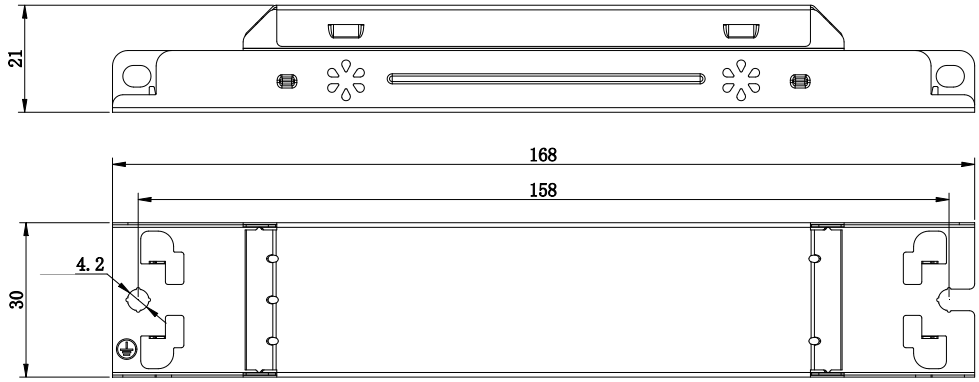
Typical THD vs Load



Lifespan



Dimensions



Mounting hole spacing, length	158.0mm
Positioning hole diameter	4.2mm
Product weight	96.0g
Cable cross-section, input side	0.5 ... 1.5 mm²
Cable cross-section, output side	0.5 ... 1.5 mm²
Wire preparation length, input side	7 ... 8mm
Wire preparation length, output side	7 ... 8mm
Length	168.0mm
Width	30.0mm
Height	21.0mm

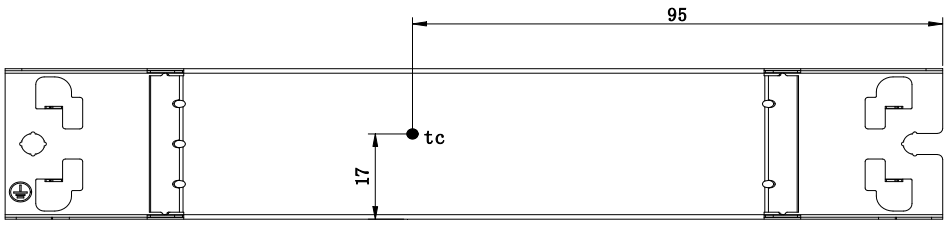
Colors & materials

Casing material	Color coated galvanized sheet
Casing color	White

Temperature & operating conditions

Ambient temperature range	-40℃ - +60℃
Maximum temperature at Tc test point	80℃
Temperature range at storage	-40℃ - +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



Note: this diagram is the front view and Tc point is on the front side of the LED driver.

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
⏚	Earth wire		

DIP switch definition

Output current	Output voltage	DIP switch 1	DIP switch 2
200mA	25-75Vdc	-	-
250mA	25-75Vdc	-	ON
300mA	25-57Vdc	ON	-
*350mA	25-57Vdc	ON	ON

Note: "-": shift OFF. "*": default current. 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.

Capabilities

Dimmable	-
Over-temperature protection	-
Overload protection	-
Short circuit protection	Automatic reversible
No-load protection	<160V

Suitable for fixtures with prot. class	I
Control interface	-
Number of channels	1 channel

Programming

Programmer	-
DALI control software	-
APP	-

Certificates & standards

Approval marks	ENEC, UKCA, CE, CB, EL, RCM, SAA, EAC, CCC
Standards	GB 19510.1-2009, GB 19510.14-2009 IEC/EN 61347-2-13, IEC/EN 61347-1, IEC/EN 62493 IEC/EN 62384 IEC/EN 61347-2-13 Annex J AS 61347.1, AS 61347.2.13 TP TC 004/2011+TP TC 020/2011
EMC	GB 17625.1-2022, GB/T 17743-2021 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-FMR020YSIII	84	385mm*285mm*210mm	23.04 dm^3	8.56kg±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%, maximum output power 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. The withstand voltage between LEDs and PCBA should be >3KV.

6. It is recommended to install double-pole switch at AC input terminal. If user uses the single-pole switch, make sure to connect it to wire L (live wire), otherwise the afterglow of light fixture would be incurred after the AC is disconnected.

7. Because there is parasitic capacitance between LEDs and the PCBA, there will be a slight flicker when the PCBA (the light fixture) is grounded and AC is powered on. It’s normal for non-isolated products. To avoid this phenomenon, please choose a light board with lower parasitic capacitance.

8. The light panel, fixed bracket and driver grounding should be secure.

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.