85W Constant Current - DIP-Switch

■Approve

CB CE EN FC c UL us LISTED (LED POWER SUPPLY) E357718 EL CCC SELV

Features

- For luminaries of protection Class I or II, SELV,Built-in/Independent(With side caps)
- Input Voltage 120-277VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor: 0.95
- Efficiency ： 90%
- Adjustable Output Current with dip-switch
- Suitable for emergency lighting acc. to EN 50172
- 5 years warranty

Applications

- Linear light

◆ Description

FMX-85-2100 LD is a 85W constant current LED driver that operates from 100-305Vac input with 700 to 2100mA output current and a forward voltage range from 9 to 54Vdc. The output current is adjustable by dip-switch.With it's compact dimensions from 280X30X21 mm. It is easy to integrate in linear light products. To ensure trouble-free operation, protection is provided against output short circuit, over load, over voltage and over temperature.

◆ Model code

FMX-85-2100 LD

- Flicker-free
- Current
- Power
- Series

◆ Specification

Output	Constant Current	700mA	800mA	...mA	2100mA
	Voltage Range	9-54VDC		...VDC	9-40.5VDC
	Unload voltage Max.	60VDC			
	Current Accuracy	±5%			
	Output LF current ripple(≤120Hz)	±5%			
	SVM	≤0.4			
	Pst	≤1			
	Efficiency(Typ.)	90% @230-277Vac ; 87%@120Vac，full load			
	EOFI	100%			
Input	Rated input voltage	120-277VAC			
	Rated input voltage(DC)	220-240VDC			
	Range of input voltage(AC)	100-305VAC			
	Maximum voltage	315VAC@1 h maximum,unit might not operate in this abnormal condition			
	Range input voltage(DC)	176-280VDC			
	Frequency(Hz)	0/50/60 Hz			
	Displacement factor	>0.9			
	Power Factor(Typ.)	0.95@Full load,120-277VAC			
	Input Current	1.1A max.			
	Start-up time	＜0.5S			
	No Load Power	≤0.5W@230VAC			
	THD (Typ.)	≤10%@120-240VAC,Full load			
Protection	Over Load Protection	103-120%			
		YES/Latch off			
	Over Voltage Protection	60VDC			
		YES/Latch off			
	Short Circuit Protection	YES/Latch off			
Capability	Surge capability (L-N)	1KV			
	Surge capability (L/N-Ground)	2KV			
Withstand voltage	Input-Output	3750V/5mA/60S			
	Input-Ground	1500V/5mA/60S			
	Output-Ground	500V/5mA/60S			
Environment	Operating Temperature	-25℃~+55℃@700-1400mA，-25℃~+50℃@1500-2100mA			
	Humidity	10%-90%RH			
	Tc	90℃			
	Storage Temperature	-25℃~+85℃			
	Lifetime	>50000h, @Tc=80℃			
	Ripple&Noise	25dB(A)@20CM			

Surface	Dimension	280X30X21(LXWXH)mm
	material	metal case
Standards	Safety	GB/T 19510. 1, GB/T 19510. 213, IEC61347- 1, IEC61347-2- 13;EN61347- 1, EN61347-2- 13;EN61347- 1, EN61347-2- 13, EN62384, UL8750
	EMC	GB/T17743, GB17625. 1;EN55015, EN61000-3-2, EN61000-3-3, EN61547;EN61000-4-2,3,4,5,6,8,11, FCC Part 15 Class B
	ErP	Erp2.0 EU 2019/2020
	RoHS	RoHS (2011/65/EU) (EU)2015/863
Note	1.All parameters NOT specially mentioned are measured at 230/277VAC input , full load and 25℃ of ambient temperature. 2.Ripple & Noise are measured at 20MHz of bandwidth. 3.The DC input for this product is only used for emergency lighting and applies to functional and safety requirements, EMC is not considered. 4.DALI protocol comprises 16 groups and 64 addresses.Up to 32 drivers can perform the PUSH dimming at the same time when utilizing one push button. 5.Unload voltage Max. is measured 5 seconds after power-on. 6.EL compatible with IEC 61347-2-13 Annex J, compatible with EN 60598-2-22 emergency lighting fixtures, compatible with EN 50172 central battery system applications. 7.The over-temperature protection of the product is provided by the IC. 8.All Eaglerise power supply are complied with EMI regulations. Since they are belong to component and will be installed inside system enclosure. When they are integrated into a system, the EMI characteristics of the system must be re-verified again.	

◆ Parameter

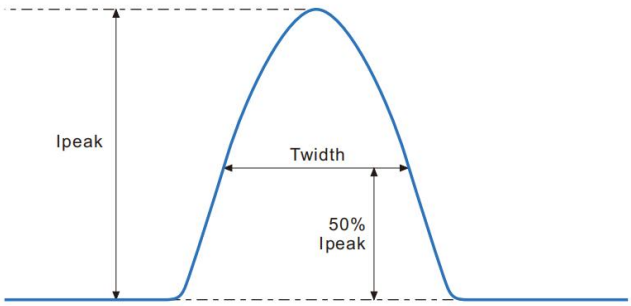
Number	Output				Switch position			
	Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)	1	2	3	4
1	700mA	9-54VDC	60VDC	37.8W	--	--	--	--
2	700mA				ON	--	--	--
3	800mA	9-54VDC		43.2W	--	ON	--	--
4	900mA	9-54VDC		48.6W	ON	ON	--	--
5	1000mA	9-54VDC		54W	--	--	ON	--
6	1100mA	9-54VDC		59.4W	ON	--	ON	--
7	1200mA	9-54VDC		64.8W	--	ON	ON	--
8	1300mA	9-54VDC		70.2W	ON	ON	ON	--
9	1400mA	9-54VDC		75.6W	--	--	--	ON
10	1500mA	9-54VDC		81W	ON	--	--	ON
11	1600mA	9-53VDC		84.8W	--	ON	--	ON
12	1700mA	9-50VDC		85W	ON	ON	--	ON

13	1800mA	9-47VDC		85W	--	--	ON	ON
14	1900mA	9-44.7VDC		85W	ON	--	ON	ON
15	2000mA	9-42.5VDC		85W	--	ON	ON	ON
*16	2100mA	9-40.5VDC		85W	ON	ON	ON	ON

* Factory default

◆ Inrush Current

I_{peak}	Twidth	B10	B16	B20	C10	C16	C20
30.8A	190μs	7pcs	11pcs	14pcs	7pcs	11pcs	14pcs

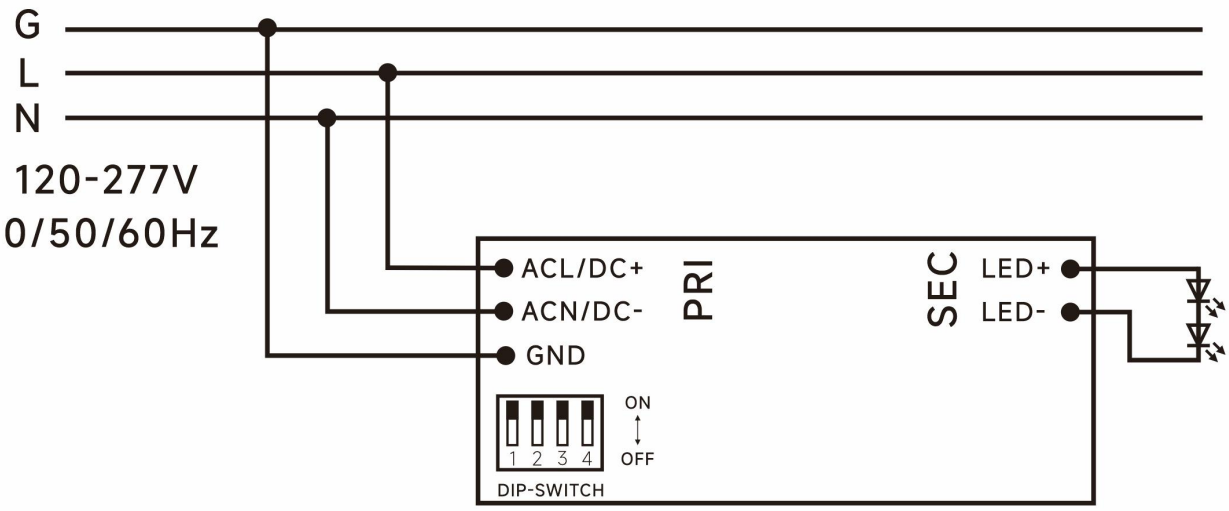


Remarks:

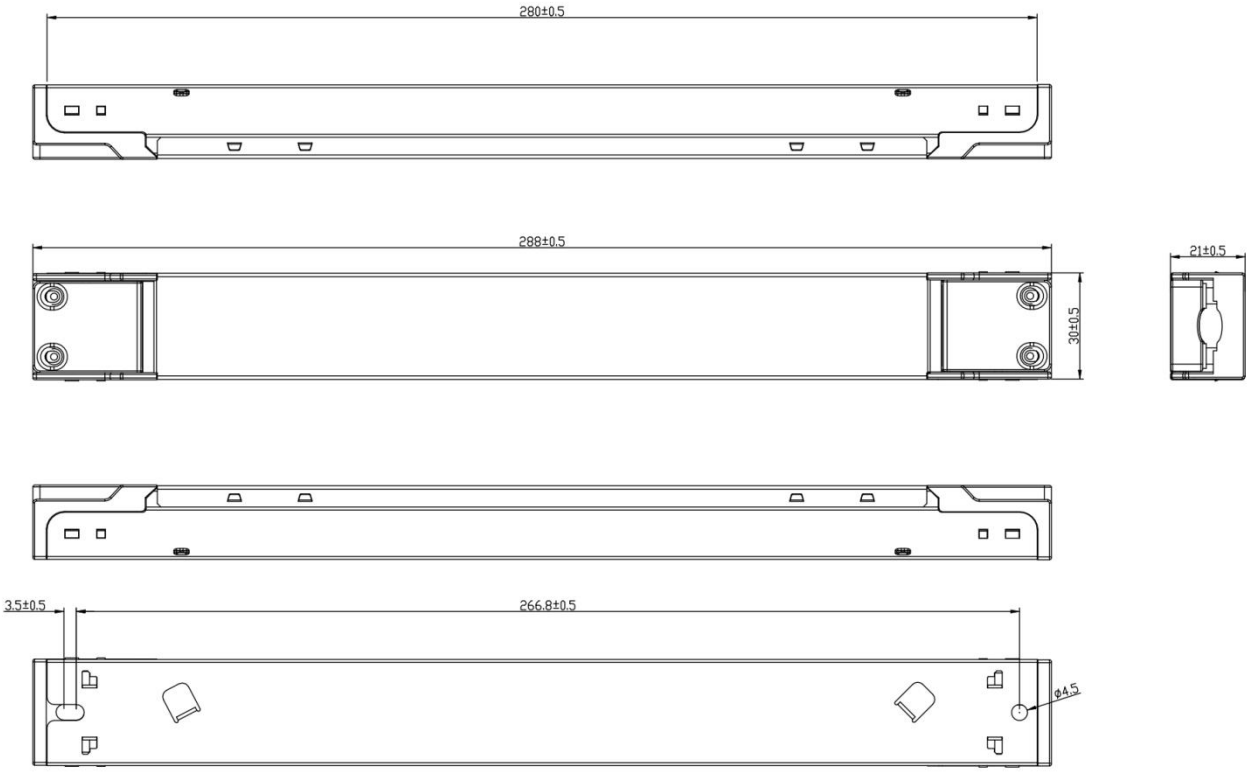
1.The number of drives mounted under different MCBs in the table is the maximum value. Please do not exceed this number during installation.

2.Different brands and models of miniature circuit breakers, the number of drives mounted will be slightly different.

◆ Wiring diagram



◆ 2D diagram



◆ Wiring & Connections

Specification item		Value (Unit)
Input	Input wire cross-section	0.5...1.5 mm^2 (With A side caps: 0.75...1.5 mm^2)
	Input wire gauge.	16...20 AWG (With A side caps: 16...22 AWG)
	Input wire strip length	7...9mm
Output	Output wire cross-section	0.5...1.5 mm^2
	Output wire gauge.	16...20 AWG
	Output wire strip length	7...9mm

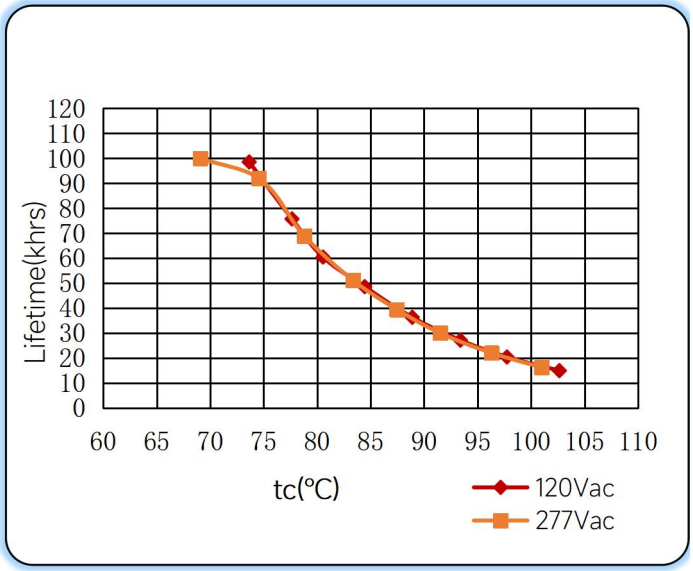
Note:Solid wire is risky to use on an angled terminal.Stranded wire is recommended for this kind of use.

◆ Packaging

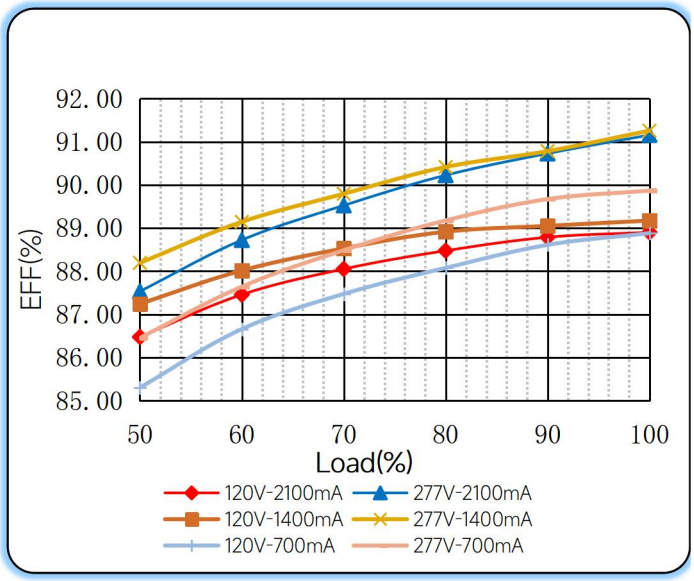
Model	Product Dimensions(mm)	weight/piece(Kg)	Outer carton dimension(mm)	Quantity/carton	Net weight/carton(Kg)	Gross weight/carton(Kg)
FMX-85-2100 LD	280X30X21	0.251	285X245X125	40	10.04	10.85

◆ Curve for FMX-85-2100 LD, Io=700/1300/2100mA

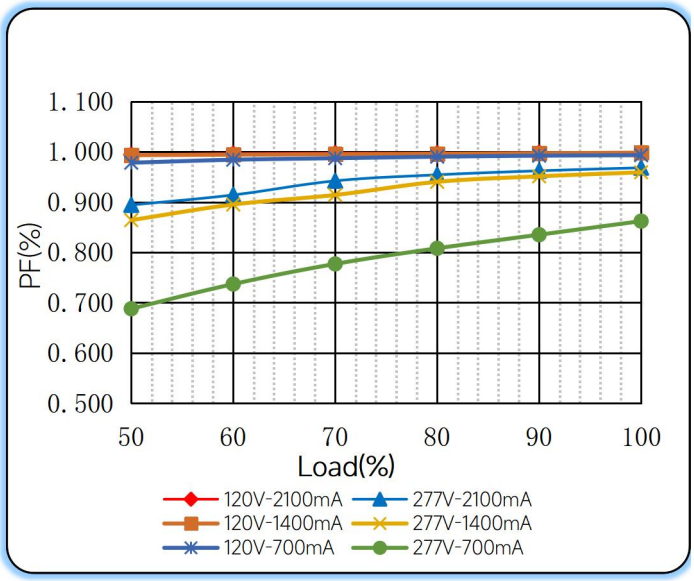
Lifetime vs. Temperature Curve



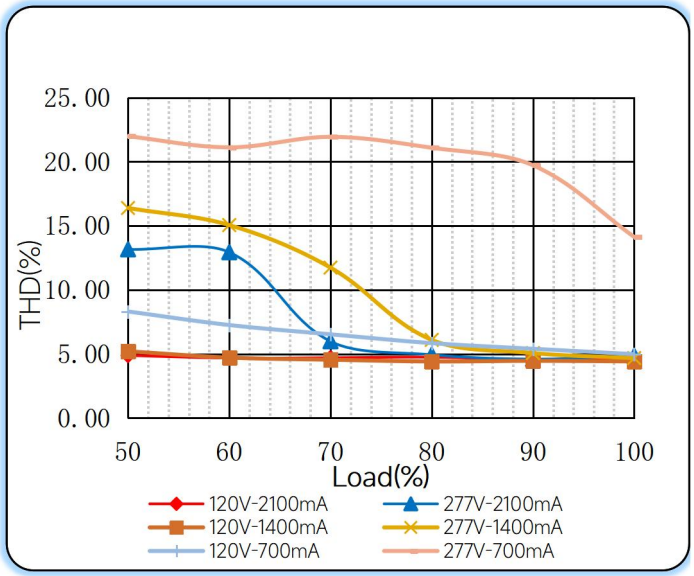
Efficiency vs. Load



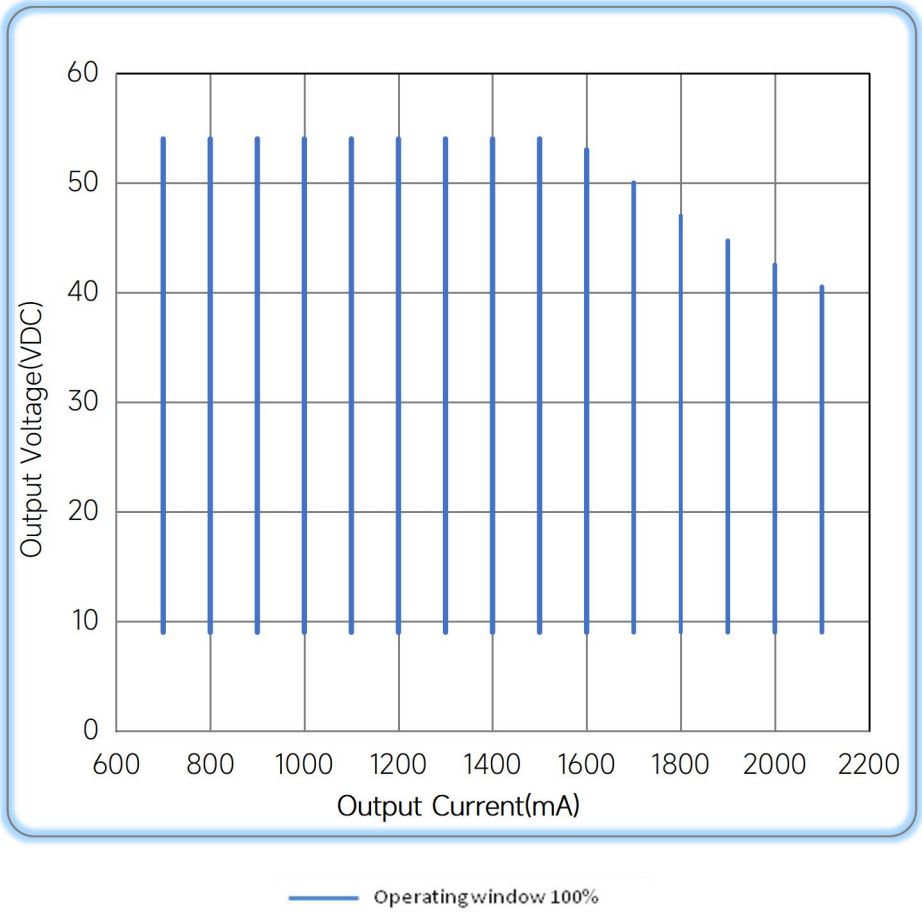
Power Factor Characteristics



THD vs. Load



◆ Operating window



◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2025/10/14

Remark:The final interpretation of the contents of the specification belongs to Eaglerise Electric & Electronic (China) Co., Ltd.

Tel: +86-0757-86256822, +86-0757-86256831
E-mail: sales@eaglerise.com
Website : https://lighting.eaglerise.com

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