

Features

- Supports 0-10V dimming; with a 12V AUX power supply
- CCT + current adjustable via external DIP switches
- Smooth dimming curve and dim to off
- Complies with the latest DLC 5.1 standard
- 5-year warranty (please refer to the warranty condition)



Applications

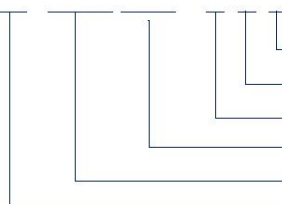
· Tri-proof light · linear light

Descriptions

LF-GMD045YM is an isolated constant current 0-10V dimmable LED driver with the maximum power of 45W. It is equipped with a 12V AUX power supply and can connect to external intelligent sensor module. Its output current is adjustable via an external DIP switch in 3 shifts and CCT in 3 modes.

Product Model

LF - GMD 045YM xxxx - x x x



- serial number of output current
- Y/N: with/without a 12V AUX power supply; Z: without a DIP switch for adjustable CCT
- E: input voltage: 120-347V; U: input voltage: 120-277V
- xxxx: fixed current
- 045: output power: 45W; Y: complies with certifications; M: serial number
- G: isolated design; MD: metal casing

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■ Electrical Characteristics

Model		LF-GMD045YM-EYA			LF-GMD045YM-UYA		
Output	Output Voltage	30-42Vdc					
	Output Current	700mA	850mA		1050mA		
	Current Tolerance	± 5%					
	Temperature Drift	± 10%					
	Startup Time	<1S					
Input	Input Voltage	120-347Vac (voltage limit: 108-382Vac)			120-277Vac (voltage limit: 108-305Vac)		
	Input Frequency	50-60Hz (47-63Hz)					
	Input Current	0.5A max.					
	PF	≥0.98@120Vac&full load ≥0.87@347Vac&full load			≥0.98@120Vac&full load ≥0.9@277Vac&full load		
	Efficiency	≥87%@120Vac&full load					
	Inrush Current	≤28A&100uS@277Vac					
	Loading Quantities of Circuit Breaker	Model	B10	C10		B16	C16
		Quantity (pcs)	13	13		21	21
Leakage Current	<0.75mA			<0.5mA			
12V AUX Power Supply	Output Voltage	11Vdc (9.5-11.5Vdc)					
	Output Current	50mA max.					
	Dynamic Load	Please make sure that the dynamic load matches for the LED driver.					
	Ripple Voltage	≤150mV					
Protections	Open Circuit	≤55Vdc					
	Short Circuit	Hiccup mode					
Environment Descriptions	Operating Temperature	-40°C - +50°C					
	Operating Humidity	10-95%RH (without condensation)					
	Storage Temperature/ Humidity	-40°C - +85°C (6 months in Class I environment); 0-95%RH (without condensation)					
	Atmospheric Pressure	86-106kPa					

■ Electrical Characteristics

Model		LF-GMD045YM-EYB		LF-GMD045YM-UYB		
Output	Output Voltage	30-42Vdc				
	Output Current	450mA	650mA		800mA	
	Current Tolerance	±7%	±5%		±5%	
	Temperature Drift	±10%				
	Startup Time	<1S				
Input	Input Voltage	120-347Vac (voltage limit: 108-382Vac)		120-277Vac (voltage limit: 108-305Vac)		
	Input Frequency	50-60Hz (47-63Hz)				
	Input Current	0.5A max.				
	PF	≥0.98@120Vac&full load ≥0.87@347Vac&full load		≥0.98@120Vac&full load ≥0.9@277Vac&full load		
	Efficiency	≥87%@120Vac&full load				
	Inrush Current	≤28A&100uS@277Vac				
	Loading Quantities of Circuit Breaker	Model	B10	C10	B16	C16
		Quantity (pcs)	13	13	21	21
Leakage Current	<0.75mA		<0.5mA			
12V AUX Power Supply	Output Voltage	11Vdc (9.5-11.5Vdc)				
	Output Current	50mA max.				
	Dynamic Load	Please make sure that the dynamic load matches for the LED driver.				
	Ripple Voltage	≤150mV				
Protections	Open Circuit	≤55Vdc				
	Short Circuit	Hiccup mode				
Environment Descriptions	Operating Temperature	-40°C - +50°C				
	Operating Humidity	10-95%RH (without condensation)				
	Storage Temperature/ Humidity	-40°C - +85°C (6 months in Class I environment); 0-95%RH (without condensation)				
	Atmospheric Pressure	86-106kPa				

■ Electrical Characteristics

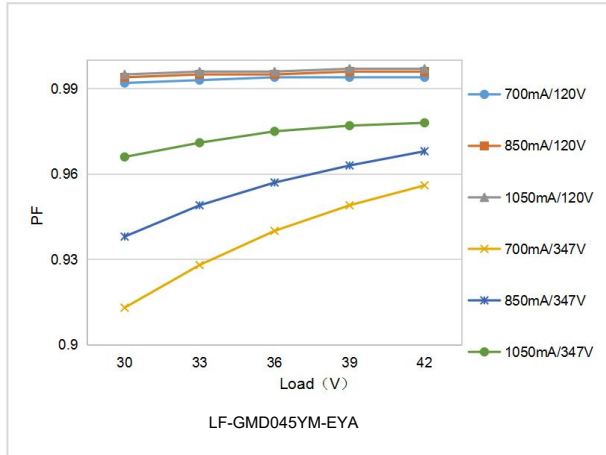
Model		LF-GMD045YM0950-EY		LF-GMD045YM0950-UY		
Output	Output Voltage	30-42Vdc				
	Output Current	950mA				
	Current Tolerance	± 5%				
	Temperature Drift	± 10%				
	Startup Time	<1S				
Input	Input Voltage	120-347Vac (voltage limit: 108-382Vac)		120-277Vac (voltage limit: 108-305Vac)		
	Input Frequency	50-60Hz (47-63Hz)				
	Input Current	0.5A max.				
	PF	≥0.98@120Vac&full load ≥0.87@347Vac&full load		≥0.98@120Vac&full load ≥0.9@277Vac&full load		
	Efficiency	≥87%@120Vac&full load				
	Inrush Current	≤28A&100uS@277Vac				
	Loading Quantities of Circuit Breaker	Model	B10	C10	B16	C16
		Quantity (pcs)	13	13	21	21
Leakage Current	<0.75mA		<0.5mA			
12V AUX Power Supply	Output Voltage	11Vdc (9.5-11.5Vdc)				
	Output Current	50mA max.				
	Dynamic Load	Please make sure that the dynamic load matches for the LED driver.				
	Ripple Voltage	≤150mV				
Protections	Open Circuit	≤55Vdc				
	Short Circuit	Hiccup mode				
Environment Descriptions	Operating Temperature	-40°C - +50°C				
	Operating Humidity	10-95%RH (without condensation)				
	Storage Temperature/ Humidity	-40°C - +85°C (6 months in Class I environment); 0-95%RH (without condensation)				
	Atmospheric Pressure	86-106kPa				

■ Electrical Characteristics

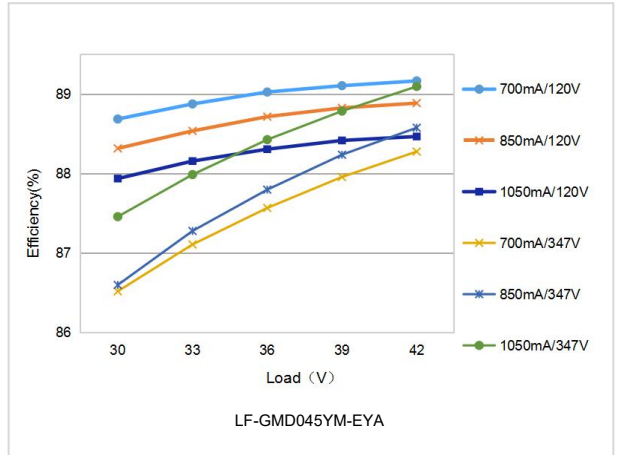
Safety and EMC	Certifications	FCC, UL
	Withstanding Voltage	I/P-O/P: 3.75kV&5mA&60S; I/P-PG: 1.5kV&5mA&60S; O/P-PG: 0.5kV&5mA&60S; DIM+/DIM--PG: 0.5kV&5mA&60S
	Insulation Resistance	I/P-O/P: >100MΩ@500Vdc
	Safety Standards	UL8750
	EMI	Part 15 Class B@120Vac; Part 15 Class A@277Vac&347Vac
	EMS	Ring wave: 2.5kV (Class B); lightning strike: L-N: 1kV, L/N-PE: 2kV
Other Parameters	IP Rating	IP20
	RoHS	RoHS 2.0 (EU) 2015/863
	Warranty	5 yrs (Tc≤84°C)
Testing 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, spectrometer: KH3935, withstanding voltage tester: EEC SE7440, flicker tester (flicker-free coefficient test) Everfine LFA-3000, etc.	
Remarks	<ol style="list-style-type: none"> 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 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 test conditions of the circuit breaker configuration quantity are the same as those of the inrush current. 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 above parameters are tested at the ambient temperature of 25°C, humidity of 50%, full load and input voltage of 120Vac/60Hz without any special remarks. 6. The LED driver is equipped with a 12V AUX power supply, and if it is not loaded, the output current will be 25mA (max.) higher than the rated one. 	

■ **Product Characteristic Curves**

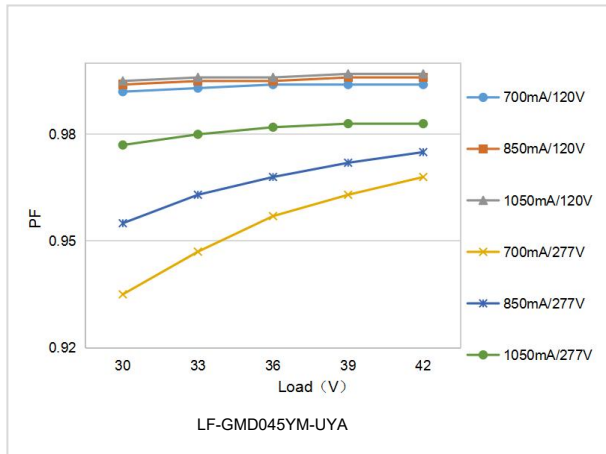
PF Curve 1



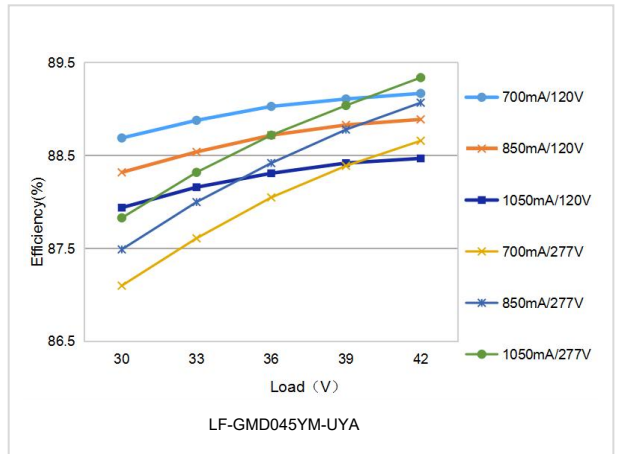
Efficiency Curve 1



PF Curve 2

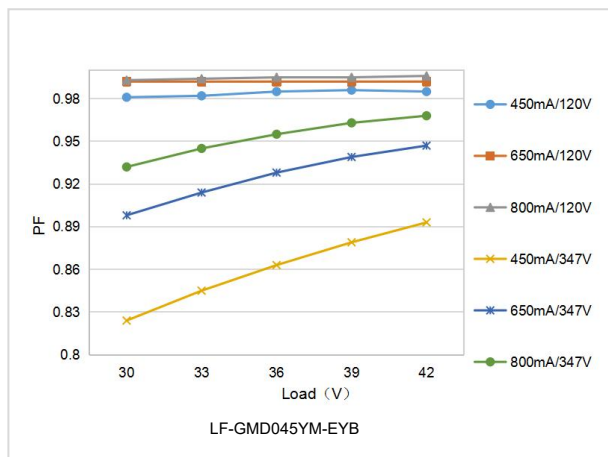


Efficiency Curve 2

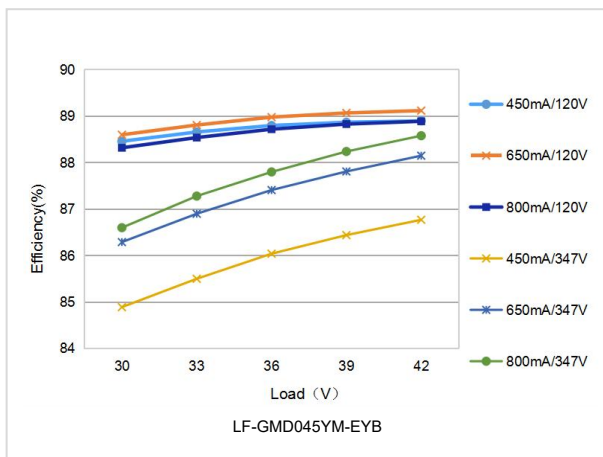


■ **Product Characteristic Curves**

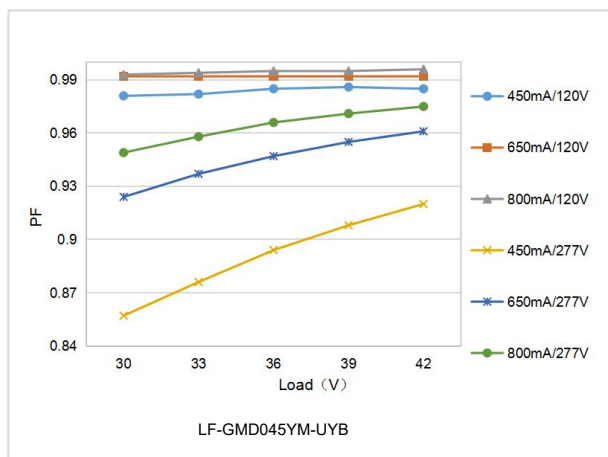
PF Curve 3



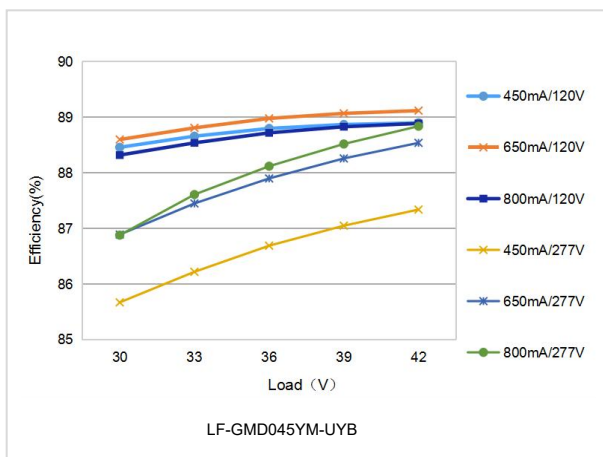
Efficiency Curve 3



PF Curve 4

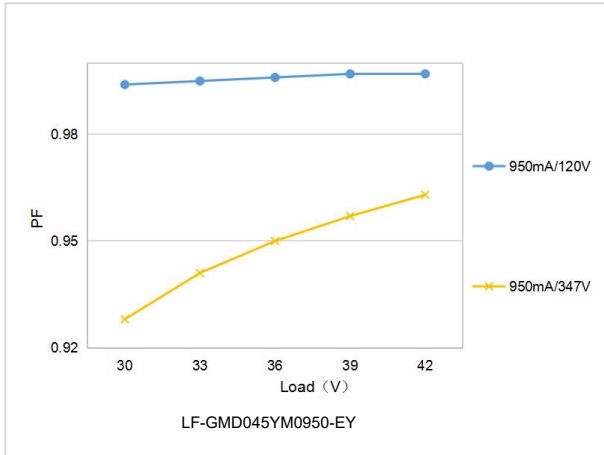


Efficiency Curve 4

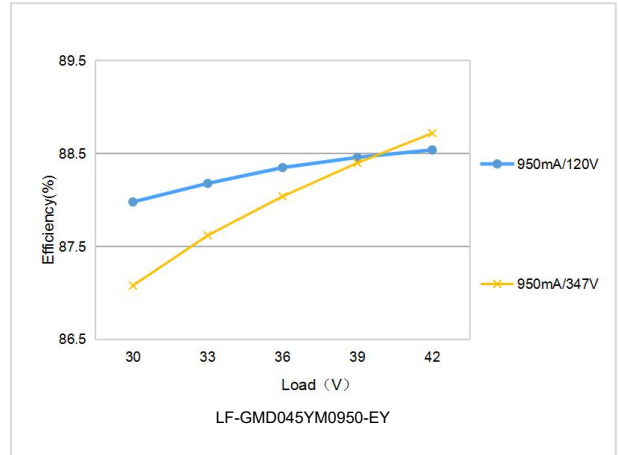


■ **Product Characteristic Curves**

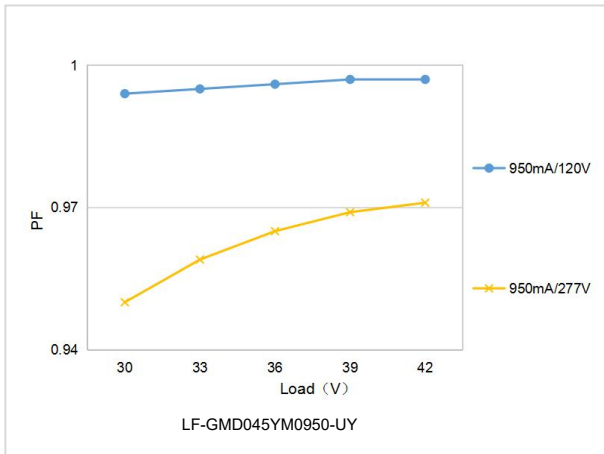
PF Curve 5



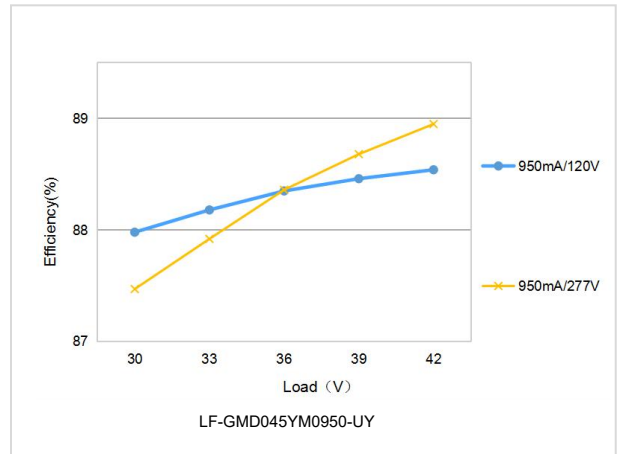
Efficiency Curve 5



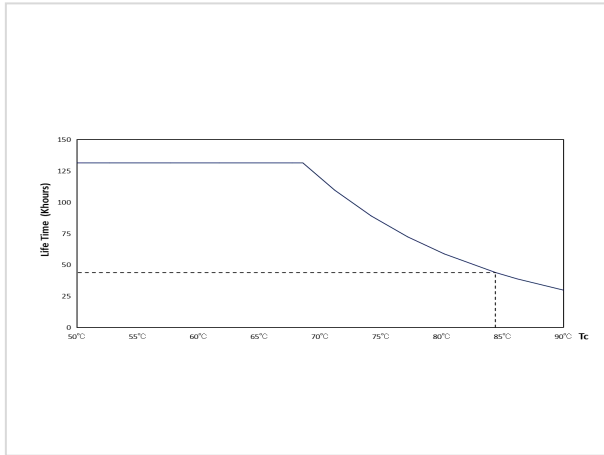
PF Curve 6



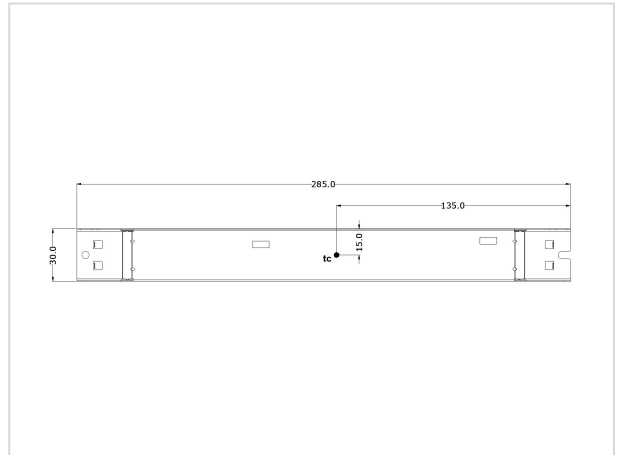
Efficiency Curve 6



Lifetime Curve

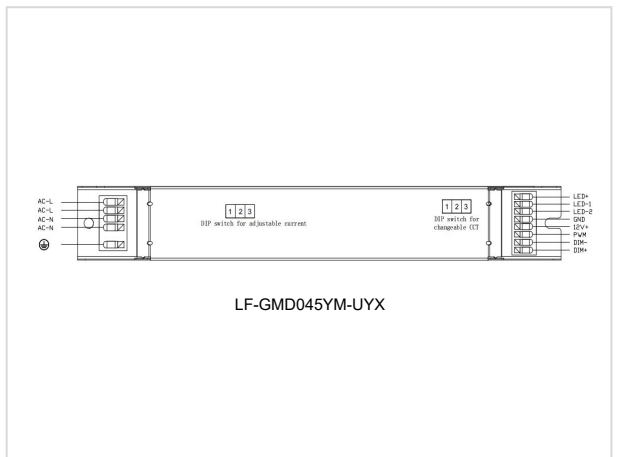
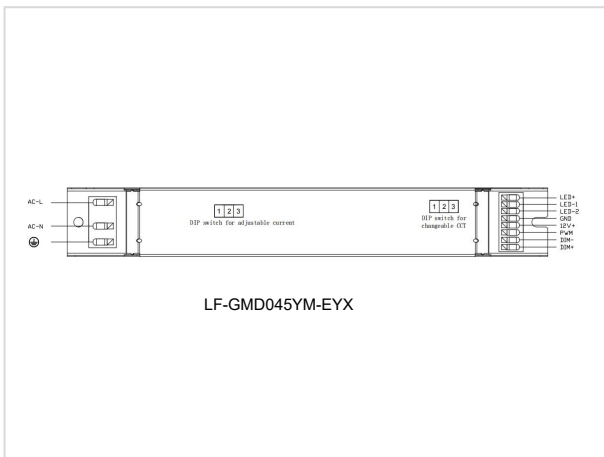



Tc Point Testing Diagram




■ Dimming Operation Instructions

Product Terminal Definitions



LF-GMD045YM-Exx			
Input terminal		Output terminal	
AC-L	Input terminal of AC live wire	LED+	Positive electrode output of LED driver
		LED-1	Negative electrode output of LED driver
AC-N	Input terminal of AC neutral wire	LED-2	Negative electrode output of LED driver
		GND	Negative electrode output of 12V AUX power supply
	Grounding wire	12V+	Positive electrode output of 12V AUX power supply
		PWM	Input terminal of PWM signal
		DIM-	Negative electrode input of 0-10V signal
		DIM+	Positive electrode input of 0-10V signal

LF-GMD045YM-Uxx			
Input terminal		Output terminal	
AC-L	Input terminal of AC live wire	LED+	Positive electrode output of LED driver
AC-L	Input terminal of AC live wire	LED-1	Negative electrode output of LED driver
AC-N	Input terminal of AC neutral wire	LED-2	Negative electrode output of LED driver
AC-N	Input terminal of AC neutral wire	GND	Negative electrode output of 12V AUX power supply
	Grounding wire	12V+	Positive electrode output of 12V AUX power supply
		PWM	Input terminal of PWM signal
		DIM-	Negative electrode input of 0-10V signal
		DIM+	Positive electrode input of 0-10V signal

DIP Switch Instructions

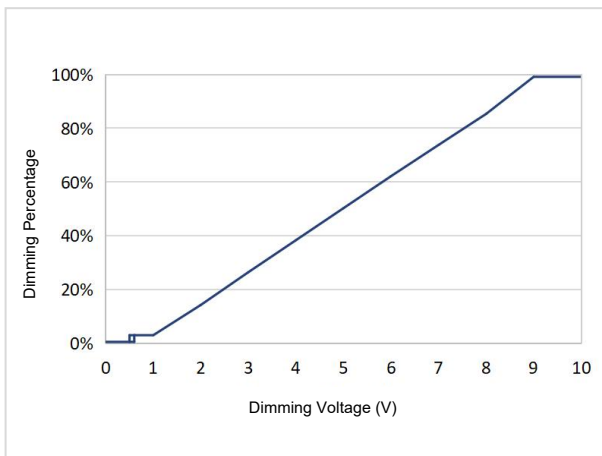
DIP Switch for Adjustable Current SW1		
Shift	LF-GMD045YM-EYA LF-GMD045YM-UYA	LF-GMD045YM-EYB LF-GMD045YM-UYB
1	700mA	450mA
2	850mA	650mA
3	1050mA	800mA

DIP Switch for Adjustable CCT SW2	
Shift	Instruction
1	Loops of LED+ & LED-2 connected, light of LED-2 turns on
2	Loops of LED+, LED-1 & LED-2 connected, lights of LED-1 & LED-2 turn on synchronously
3	Loops of LED+ & LED-1 connected, lights of LED-1 turns on

0-10V Dimming Operation

- Connect 0-10V signal to DIM+ and DIM- terminals.
- In 0-10V dimming mode, when the input voltage is less than $0.4V \pm 0.2$, the light turns off. When it's more than $0.5V \pm 0.2$, the light turns on.
- Dimming depth: 8% (typical value)
- DIM+/- (without signal connected): 100% rated current output
- It is recommended that user set the dimmer to "DIM OFF" when its voltage <1V.

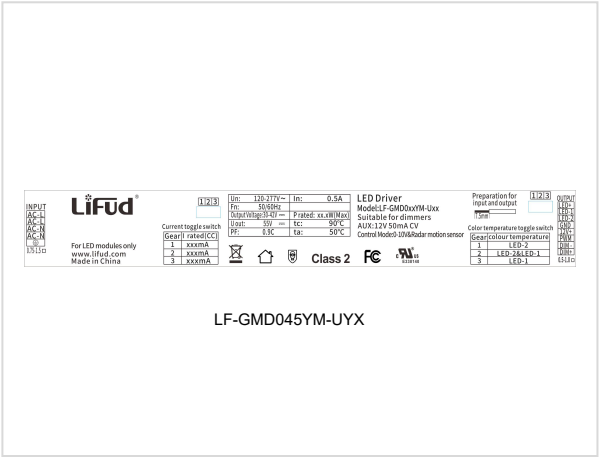
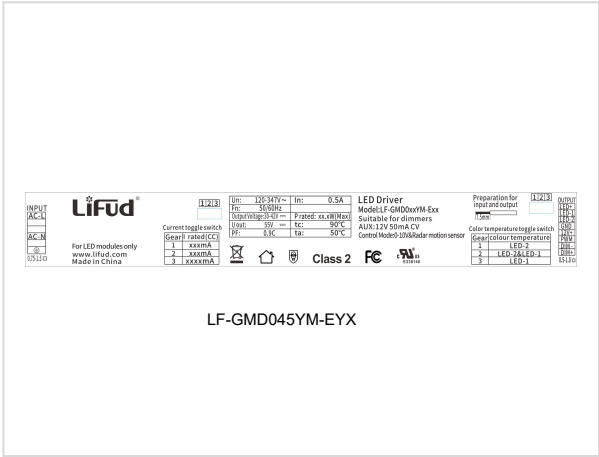
0-10V Dimming Curve



12V+ & PWM Terminal Characteristics

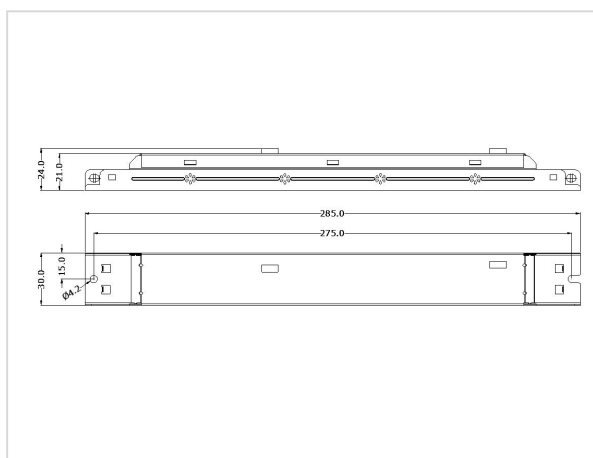
- Maximum load of 12V+ AUX power supply: 50mA
- When 12V+ AUX power supply is loaded or of no load, the current difference of LED output current is 25mA (max).
- 12V+ terminal and PWM terminal share GND terminal together.
- PWM terminal can only be used to enable startup and shutdown control functions.
- Frequency of input signal at PWM terminal: 3kHz, amplitude: 5V
- PWM dimming and 0-10V dimming cannot be used at the same time.

■ Label



■ Structures and Dimensions (unit: mm)

LED Driver's Casing Dimension (L*W*H)	Distance Between 2 Positioning Holes (L)	Diameter of Positioning Hole (D)
285*30*24 mm (±0.5mm)	275 mm (±0.5mm)	4.2 mm (±0.2mm)



■ Packaging Specifications

Model	LF-GMD045YM-XXX
Carton Size	385*285*210mm (L*W*H)
Quantity	8 pcs/layer; 5 layers/ctn; 40 pcs/ctn
Weight	0.21 kg ±5%/pc; 9.2 kg ±5%/ctn

■ Transportation and 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 Tecology Co., Ltd. reserves the right to interpret any contents of this specification.