DLI-DMXL Series 20W

Whole Family: DLI-020W070-DMXz-T (z=S/L/F) [20W 40W 60W 100W]

c UL us LISTED E495946 | FC | CE | UKCA | ENEC 15 | ICES-005 | SAA | Class P | TYPE HL | IP66 SELV | RoHS | Reach | NFC



Features

Output:	Constant Current
Range:	100-277VAC
PFC design:	Built-in active PFC function
Efficiency:	Up to 81%
Protections:	Short circuit/ Over load/ Over temperature/Over voltage
Heat dissipation:	Cooling by free air convection
Waterproof performance:	IP66(EU); for dry, damp and wet locations(US)
Design features:	DMX signal-end isolation, Driver parameters can be adjusted by NFC APP.
Dimming function:	DMX dimming, RDM dimming, flicker free
Min load:	Min load is 12V 70mA.
Dimming range:	(0.5%-1%) -100% (under the maximum current state)
Application:	Suitable for the application of LED lighting
Warranty:	5 years warranty
Other:	Flicker-free dimming

Specification

Model		DLI-020W070-DMXL-T
Certificate		UL/FCC/CE/UKCA/ENEC/ICES-005/SAA/Class P/TYPE HL/SELV/ROHS/Reach
Output	On-load voltage range	12-54V
	Output Current Setting(loset) Range	70-700mA
	Output Current Setting Range with Constant Power	370-700mA
	Rated power	20W(Max)
	No Load Output Voltage	60V(Max)
	Current Tolerance	700mA±5%
	Total Output Current Ripple	20mA(Imax)
	Startup Overshoot Current	9%(Max)
	Line Regulation	<0.5%
	Load Regulation	<0.5%
Input	Voltage Range	100-277VAC
	Frequency Range	50 / 60Hz
	Power Factor(Typ.)@ full load	>0.9
	Standby power (Max)	<0.5W
	THD(Typ.) @ full load	<10%@100-277VAC
	Efficiency(Typ.) @ full load	82%@120VAC 82%@230VAC 82%@277VAC
	AC Current (Max.)	<0.3A@120VAC <0.22A@230VAC <0.15A@277VAC
	Standby power	≤0.5W
	Inrush Current (Typ.)	17.5A, 50%, 29.1us @120VAC; 33.6A, 50% 864us @277VAC 40.4A, 50% 26us @277VAC
	Leakage current	<0.5mA
Protection	Short Circuit	Constant current mode, recovers automatically after fault condition is removed
	Over Load	105%~110% Constant current mode,recovers automatically after fault condition is removed
	Over temperature	Ambient temperature over 55℃±5℃ to reduce output to 50%; The ambient temperature drops to 45℃ ±5℃and automatically recovers. Ambient temperature over 75℃±5℃ to reduce output to 0%; The ambient temperature drops to 45℃ ±5℃and automatically recovers.
Environment	Working TEMP. (Ta)	-40~+50℃ (see below derating curve)
	Case Temperature (Tc)	70℃
	Working Humidity	20 - 95%RH non-condensing
	Storage TEM.,Humidity	-40 - +80℃,10 - 95% RH non-condensing
	TEMP.coefficient	±0.03%/℃(0 - 50℃)
	Vibration	10~500Hz, 5G 12min./1 cycle, period for 72min. each along X,Y,Z axes
Safety & EMC	Safety standards	EN61347-1; EN61347-2-13 UL8750; CAN/CSA-C22.2 No.250.13
	Withstand voltage	I/P-O/P:3.75KVAC I/P-FG:1.88KVAC O/P-FG:0.5KVAC (EU) I/P-O/P:1.88KVAC I/P-FG:1.88KVAC O/P-FG:0.5KVAC (US)

	Isolation resistance	I/P-O/P: 100MΩ/ 500VDC/ 25℃/ 70% RH
	EMC Immunity	EN61547; EN61000-4-2,3,4,5,6,11 FCC/ICES do not request this test.
	EMC Emission	EN55015; EN61000-3-2,3 CFR47 FCC Part 15 Subpart B:2020; ICES-005 Issue 5; ANSI C63.4a-2017
	Surge Immunity Test	AC Power Line:Differential Mode 2 kV, Common Mode 4 kV
Others	Net Weight	0.385KG
	Dimension	238*38.5*23.6mm(L*W*H)
	Packing	310*285*210mm 30pcs /CTN
Notes	1. All parameters NOT specially mentioned are measured at 100VAC input, rated load and 25℃of ambient temperature. 2. Default states: Output Current Setting is Maximum value. The dimming curve is a logarithmic curve. 3. The power supply is considered as a component that will be operated in combination with final Equipment. Since EMC performance will be affected by the complete installation, the final equipment manufactures must be-qualify EMC Directive on the complete installation again. 4. To extend the driver's using life , please reduce the loading at lower input voltage.	

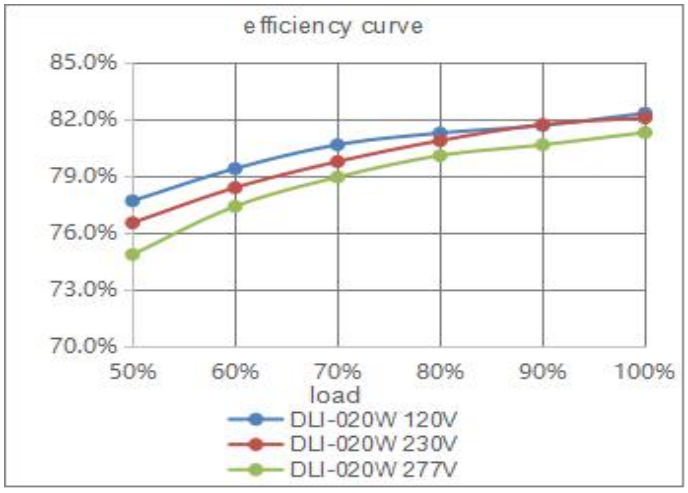
MCB recommendation

When the input voltage is 120Vac,the number of LED Driver matched by circuit breakers is as follows:		
MCB Type	Level	The number of LED Driver
C type(breaking capacity:6KA)	10A	20
	13A	26
	16A	32
	20A	40
	25A	50
When the input voltage is 230Vac,the number of LED Driver matched by circuit breakers is as follows:		
MCB Type	Level	The number of LED Driver
C type(breaking capacity:6KA)	10A	27
	13A	35
	16A	44
	20A	55
	25A	69
When the input voltage is 277Vac,the number of LED Driver matched by circuit breakers is as follows:		
MCB Type	Level	The number of LED Driver
C type(breaking capacity:6KA)	10A	40
	13A	52
	16A	64
	20A	81
	25A	91

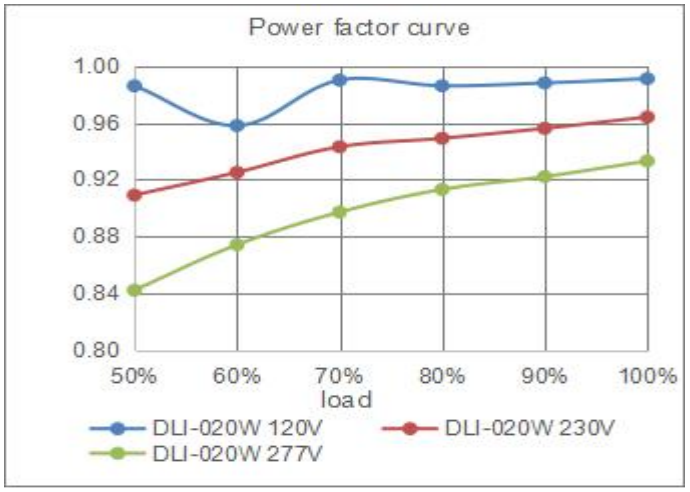
Note:

1. The above quantities of the led drivers connected on the Type C is recommended base on the maximum ambient temperature is 50 ℃.
2. The breaker should be selected according to the input rated voltage, input rated current, ambient temperature, and trip characteristic curve.

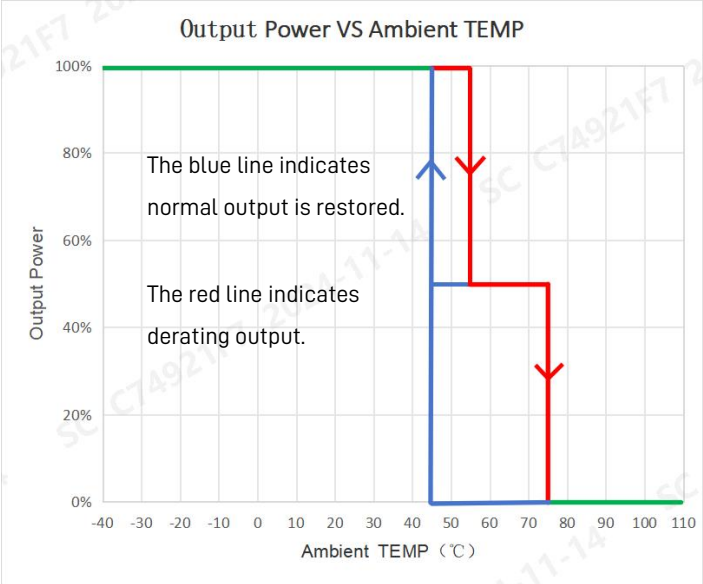
Efficiency Curve (efficiency vs output load)



Power factor curve(Power factor vs output load)

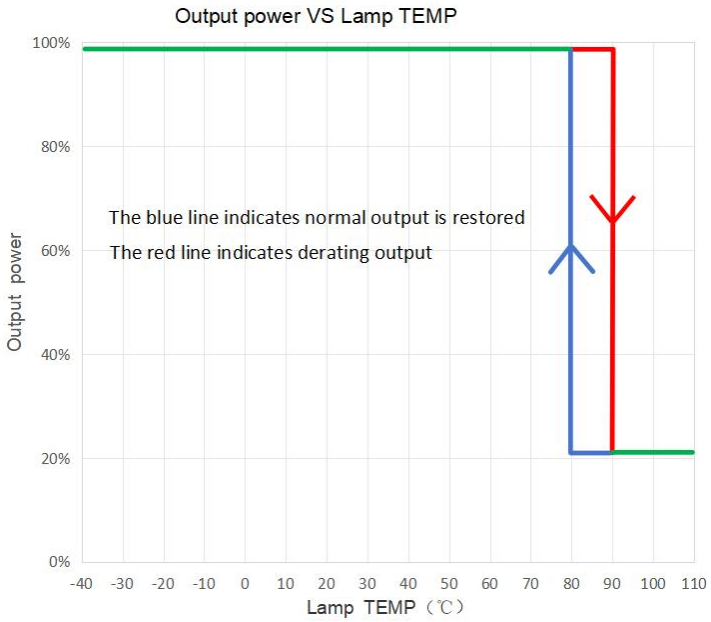


Derating Curve (Output power VS Ambient TEMP)



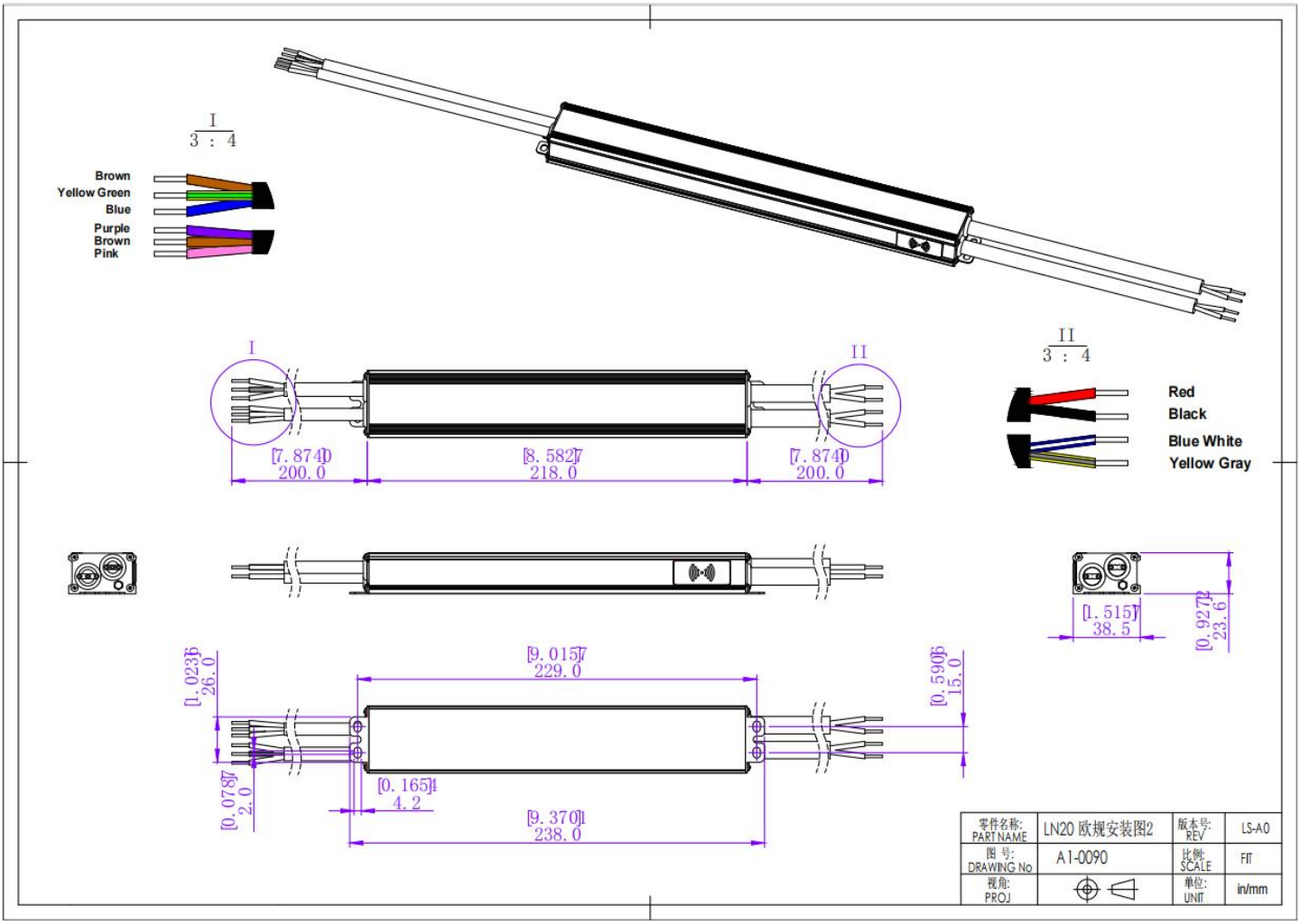
1. To extend their life, please refer to the Derating Curve and derate according to the temperature.
2. The output current of the LED driver should be selected according to the rated current of the lamp and the ambient temperature. Normally, we recommend the power supply to reserve a certain amount of load to extend LED driver's life.

Temperature derating curve of lamp



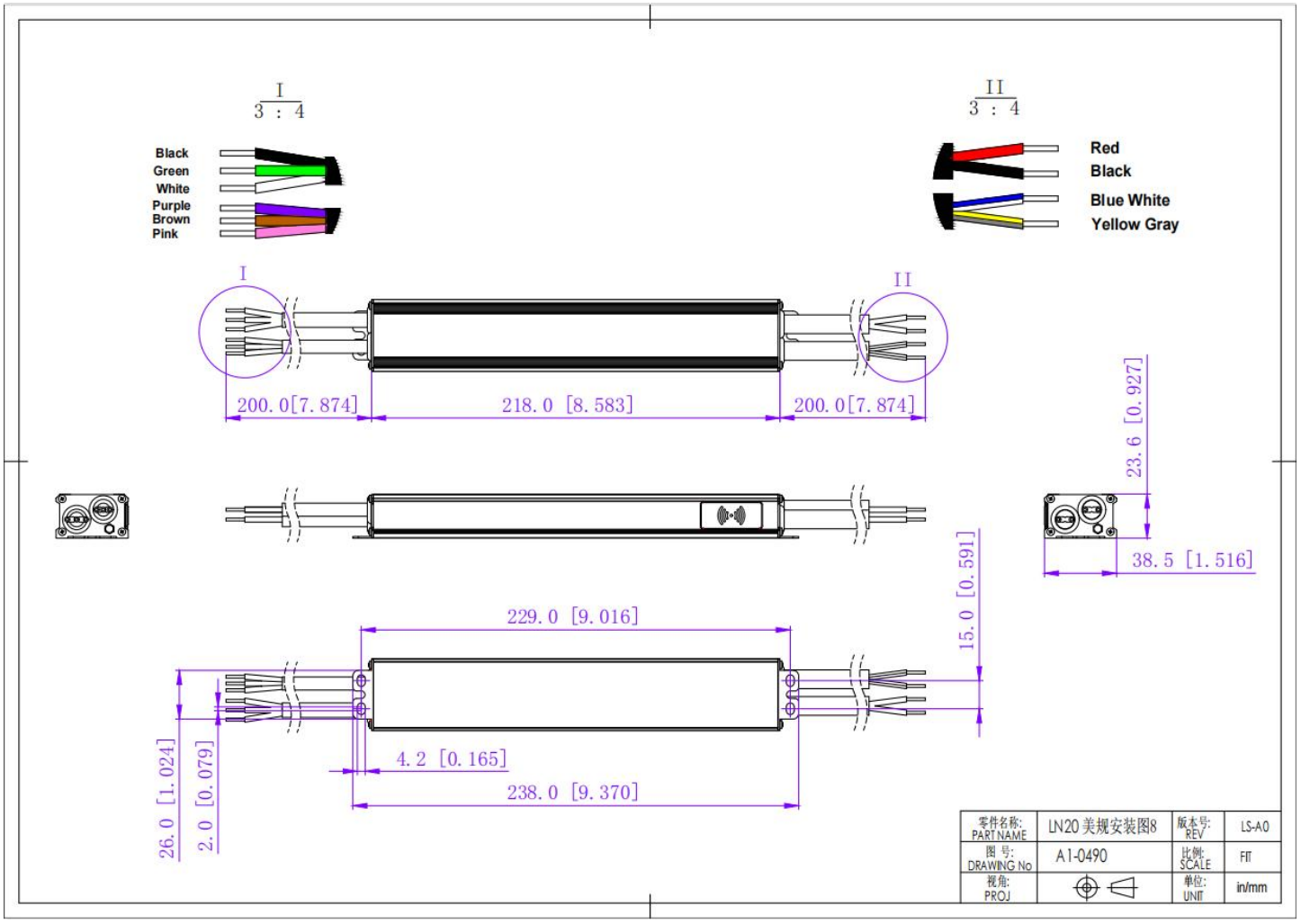
1. This figure shows the protection curve when the recommended model of the lamp temperature sensor is NCP18XH103J03RB(muRata) and the external temperature protection parameters on the APP are factory default.
2. If the models of thermistors are is not NCP18XH103J03RB(muRata) , Please check the relevant parameters of lamp temperature protection on the APP.
3. If the lamp temperature sensor is not connected, please keep the parameters of the lamp temperature protection section on the APP as default and keep cables away from live bodies.

Mechanical Specification (For European Market)



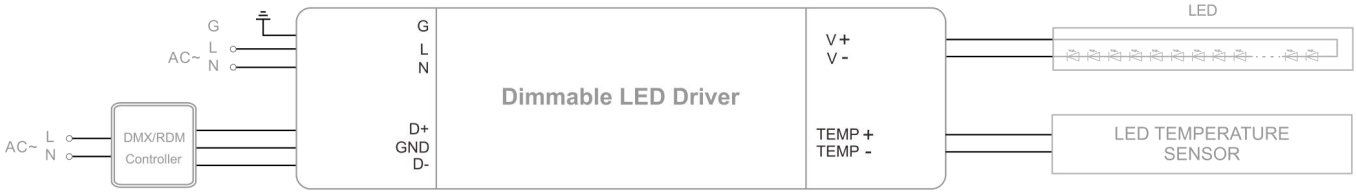
European wire gauge	
LN20	
Input wire	Brown(L) Blue(N) Yellow Green(G)(3*1.0mm²)
Output wire	Red(V+) Black(V-)(2*0.824mm²)
Dimming wire	Purple(DMX+) Pink(GND) Brown(DMX-)(3*0.824mm²)
External temperature wire	Yellow gray(TEMP+) Blue white(TEMP-)(2*0.824mm²)
Remarks：Please make sure you connect these correctly otherwise your product will not function correctly and could be damaged.	

Mechanical Specification (For North American Market)



American wire gauge	
LN20	
Input wire	Black(L) White(N) Green(G)(3*18AWG)
Output wire	Red(V+) Black(V-)(2*18AWG)
Dimming wire	Purple(DMX+) Pink(GND) Brown(DMX-)(3*18AWG)
External temperature wire	Yellow gray(TEMP+) Blue white(TEMP-)(2*18AWG)
Please make sure you connect these correctly otherwise your product will not function correctly and could be damaged.	

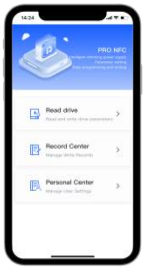
Dimming Operation and Connecting Diagram



Note:

1. The model name DLI-020W070-DMXL means that there is no auxiliary power supply and temperature control, so there is no corresponding wiring for the LED driver.
2. The model name DLI-020W070-DMXL-T means that there is no auxiliary power supply but there is temperature control, so the LED driver has no auxiliary power wiring.

NFC Function



ProNFC APP



NFC Handheld devices

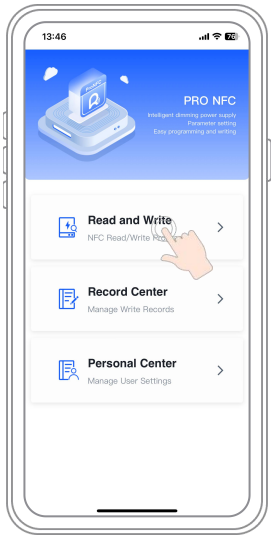
IOS Download

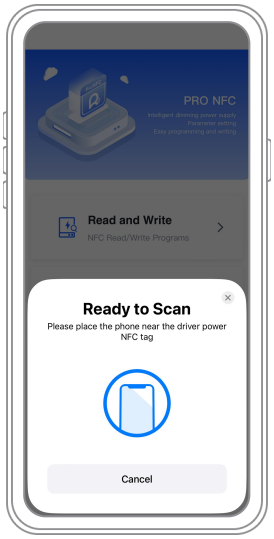
Android Download

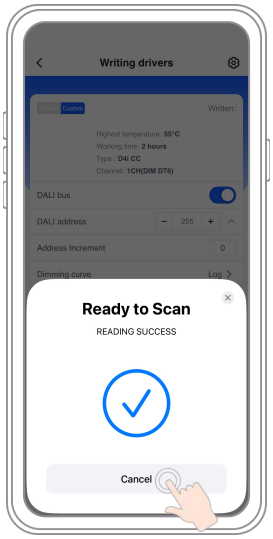
Open the ProNFC APP, Click on the "Read and Write"

Use the phone's NFC sensing area close to the driver's NFC marking area

Wait for the successful reading







Setting address

1. **Setting address:** Set address parameter of the power. **(Figure 1)**
2. **Address Increment:** Next to the address, there is an arrow symbol that can be clicked to collapse or expand the address auto-increment setting below, enter the value 0~10 to automatically perform the address auto-increment operation after a successful write, and 0 to turn off the auto-increment. (Example: Set self-add 1, address is 2, then the address will be changed to 3 automatically after successful writing) **(Figure 2)**

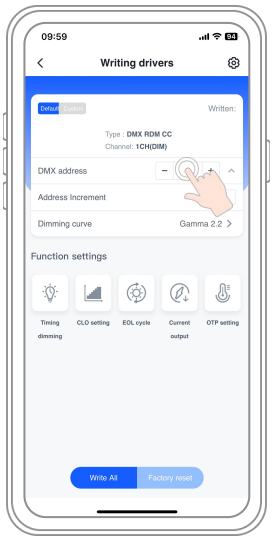


Figure 1

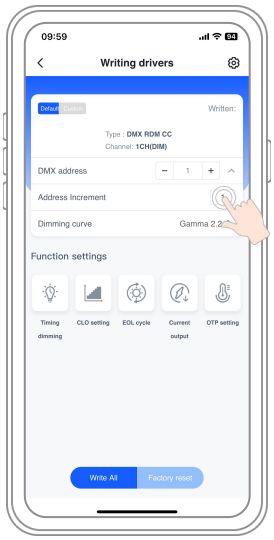


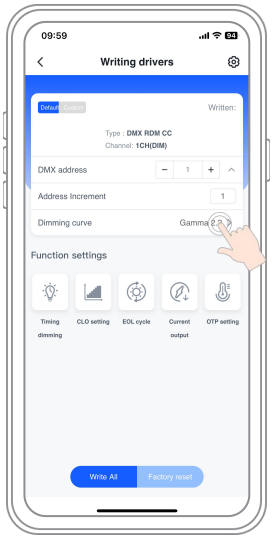
Figure 2

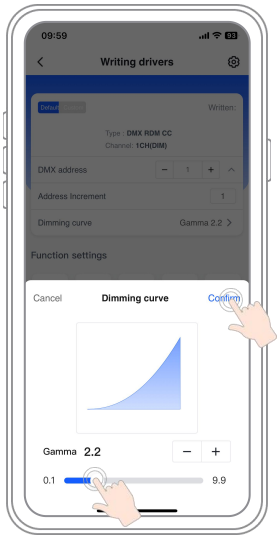
Dimming curve

Adjust the power supply custom Gamma curve.

Drag the slider bar to quickly adjust the curve left or right, while the upper curve image will change according to the value in real time.

Click the + or - sign on the pop-up window page to precisely adjust the value of the Gamma custom curve in steps of 0.1~9.9, with a step of 0.1 each time, while the upper curve image will change according to the value in real time.





Timing dimming

Timing dimming control includes 3 kinds of modes, they are self adapting-midnight, self adapting percentage and traditional timer. Three modes can be set via NFC.

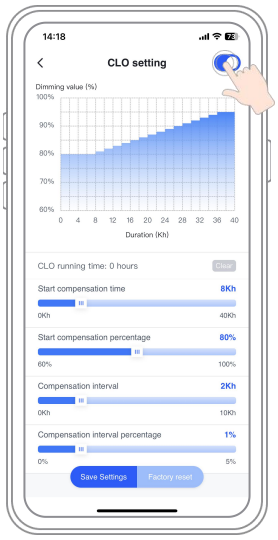


1. **Traditional Timer:** Follows the programmed timing curve after power on with no changes.
2. **Self Adapting-Midnight:** Set the midpoint time of the dimmer curve, the dimmer will automatically adjust the working curve according to the total working time of the past few days, if difference <30 minutes(The midpoint is set at 0 point, the user can set the offset, can be positive and negative offset for 4 hours)
3. **Self Adapting-Percentage:**

   Automatically adjust the working hours according to the last few days (increase or decrease according to the initialization time and effective working time)

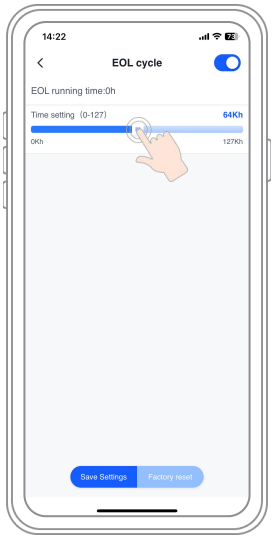
CLO setting (Constant Lumen Output setting)

This function is mainly used to maintain the constant brightness output of the LED. During the life cycle of LED, by gradually increasing the driving current of LED, to compensate for the light decay caused by the long operation of LED, thus ensuring the constant optical flux output of LED.



EOL cycle (End-Of-Life cycle)

Once this function is started, the output current of the LED drive automatically decreases to 1% of the total current and lasts for 1 minute, reminding the user to replace the LED lamp and reaching the service life designed by the supplier.



Current output

Output current function is used to control the brightness and power of LED lights. Users can set the current value on the page, and the system will draw a curve graph in the working area according to the set current value.



(Interface is for reference only and subject to actual reading)

OTP setting (Over-Temperature Protection setting)

During use, if the power supply detects that the external temperature of the luminaire exceeds the preset threshold, it will automatically trigger the over-temperature protection and reduce the power supply current value to avoid the luminaire from overheating and causing damage.



Instructions

1. This driver should be installed by qualified and professional person.
2. Please make sure the driver is installed with adequate ventilation around it to allow for heat dissipation.
3. Ensure that wiring is correct before test in order to avoid light and power supply damage.
4. If driver cannot work normally, don't maintain privately.

Have any questions, please contact Zhuhai Shengchang.

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