Specification

Product Name: DC Controller(Microwave)

Product Model: MC079D 99 Series

Versions	Release/ change Date	Reason	Publishing
V1.0	2024.01.05		James Guo
V1.1	2024.04.10	Change size	James Guo

【Product Feature】

- Low impedance planar antenna; High-gain
- Thimble interface;Earphone interface; Zhaga interface
- 15 meters maximum installation height, suitable for most warehouses
- Mini Microwave motion detector for High Bay Lights.
- Junction box free design, IP65 waterproof
- Sensor parameters can be adjusted by remote
- The sensing range is adjustable (high sense/low sense) , suitable for different installation environments
- Not affected by temperature, humidity, noise, airflow, dust, light etc.
- Automatic swing structure , easy to plug and play.

| MC079D 99 A | MC079D 99 DI | MC079D 99 Z |

【Parameters】

Input	
Rated voltage	11-13VDC
Working current	<30mA
Ripple voltage	<100mVp-p

output	
Output signal	0 -10VDC dimming signal

Sensor parameters				
Working frequency	5.8GHz ±75MHz, ISM band			
Transmitting power	3mW Max.			
Daylight Sensor	5lux/15Lux/30Lux/50Lux/100lux/150lux/Disable			
Daylight priority	ON	5Lux/15Lux/30Lux/50Lux	100Lux	150Lux
	OFF	150Lux	200Lux	300Lux
Dimming level	10%(1.4-1.6V) 20%(1.9-2.1V) 30%(2.9-3.1V) 50% (4.9-5.1V)			
Detection range (radius)	Ceiling installation 12m high: 0.3m/s≥4m, 1m/s≥3m;			
Installation height	12m (15m Max)			
3db beam angle	82°@XZ plane			
	95°@YZ plane			

Environment	
Working temperature	-35~60℃
Storage temperature	-40℃~80℃, humidity ≤85% (non-condensing)

Certification standards

Certified	CE
Environmental requirements	Comply with RoHS 2.0 , Reach requirements
IP Rating	IP65

Other

Wiring	MC079D 99 A	MC079D 99 DI	MC079D 99 Z
	Thimble interface	Earphone interface	Zhaga interface
Installation requirements	built-in installation		
Packaging requirements	Clapboard + Carton(K=A)		
Net weight	Body: 40.6±5g		
Lifetime	5 years warranty @Ta		

【Function description】

☑ON-OFF function   Stand-by Period be set to "0s"

☑2-step dimming   Stand-by Period be set to "+∞"

☑3-step dimming   Stand-by Period be set to "10s/1min/3min/5min/10min/30min"

☑Daylight priority   Remote set   DH Mode+Daylight Sensor set to
                          "5Lux/15Lux/30Lux/50Lux/100Lux/150Lux" N/A
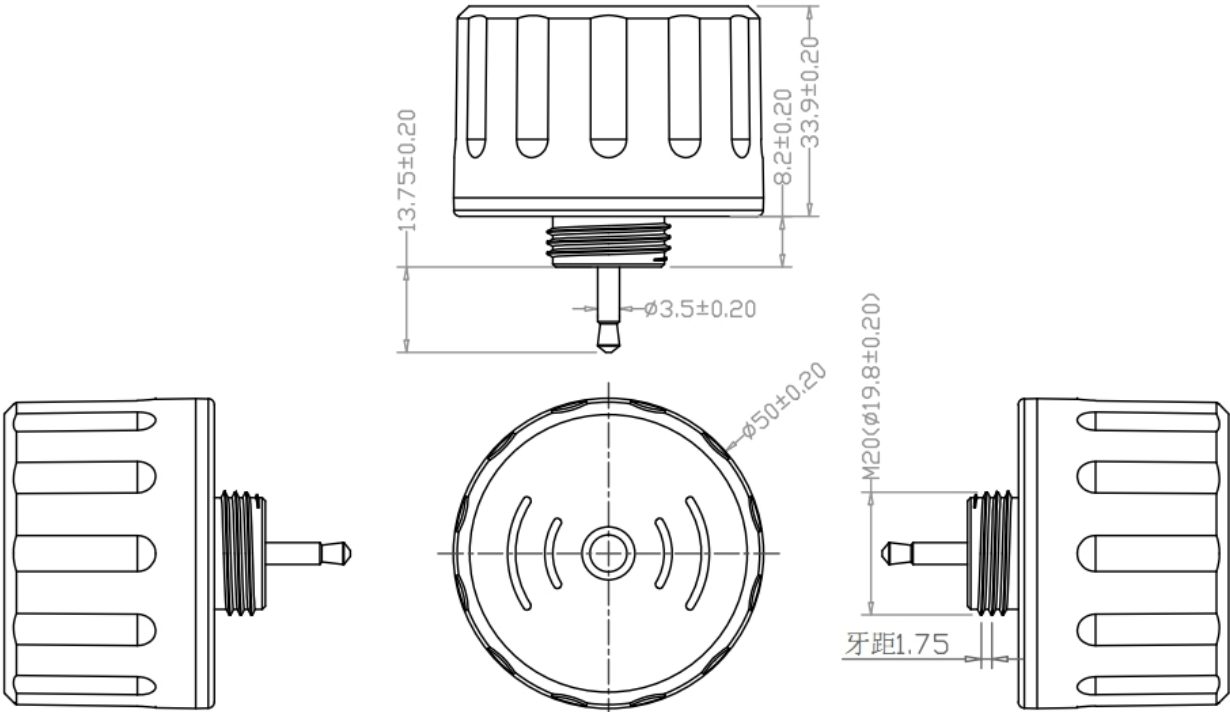
☐Daylight harvesting   N/A
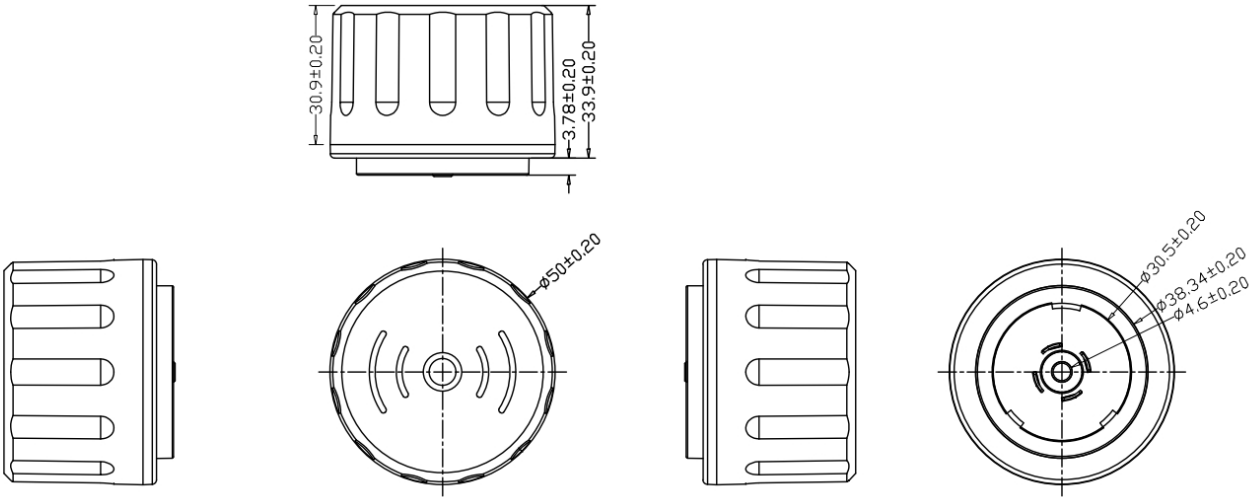
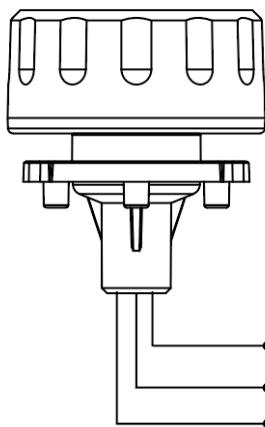## 【Product Information】
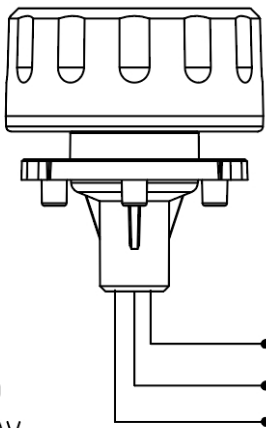
● Dimension (Unit：mm)
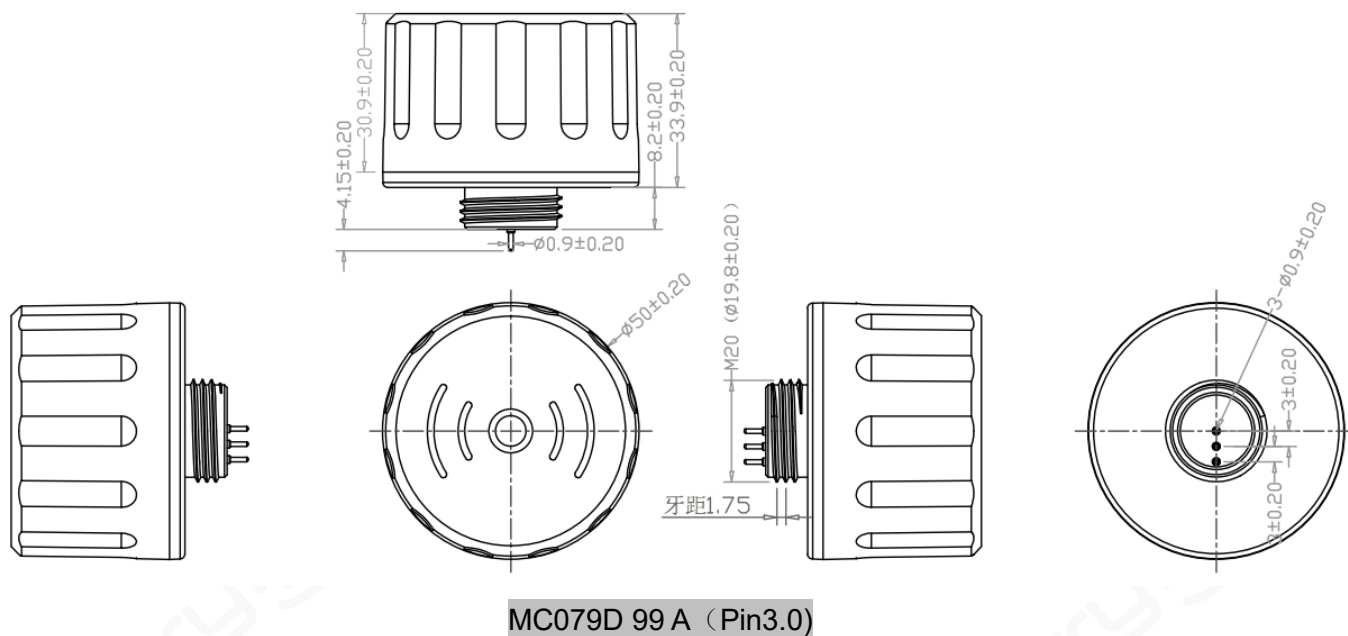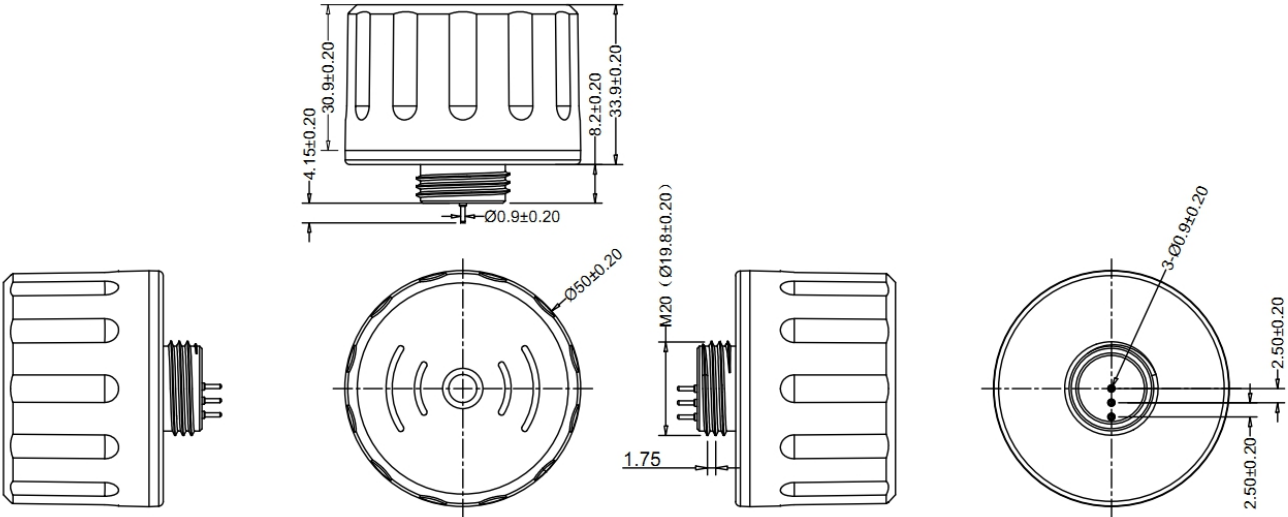
MC079D 99 A （Pin3.0)
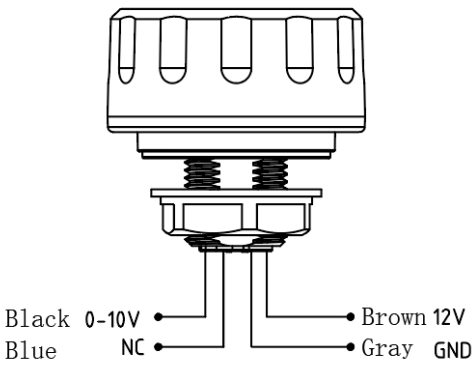
MC079D 99 A(Pin2.5)

MC079D 99 DI

● Wiring

Red 12V
Black GND
White 0-10V

MC079D 99 A

Red 12V
Black GND
White 0-10V

MC079D 99 DI

Black 0-10V   Brown 12V
Blue NC   Gray GND

MC079D 99 Z

● Function

VCC
GND
0-10V

MC079D 99 A

0-10V
VCC
GND
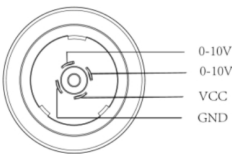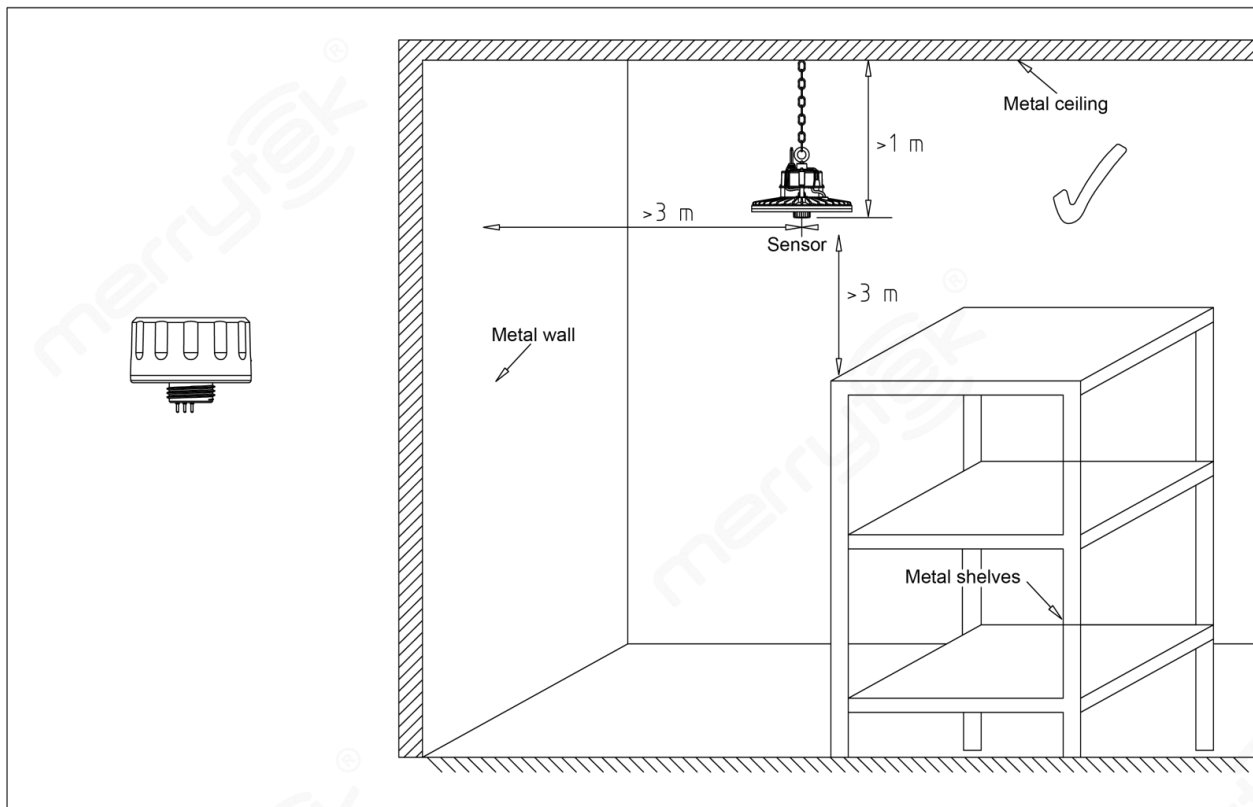
MC079D 99 DI

0-10V
0-10V
VCC
GND

MC079D 99 Z

【Installation Instruction】
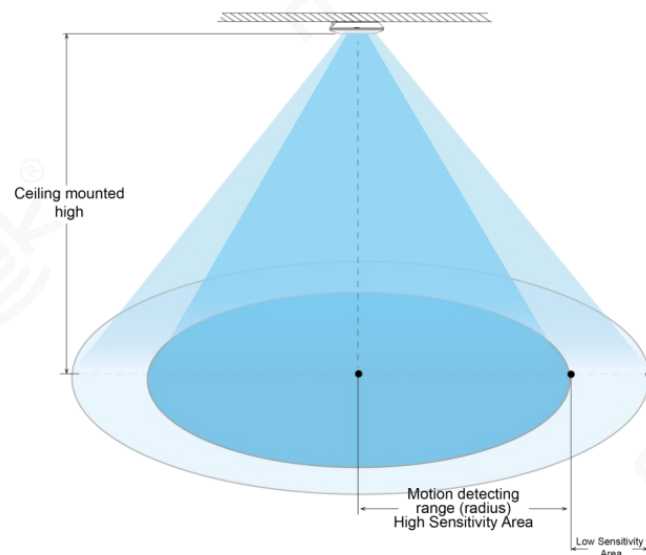
Installation environment

Note

When installing, please pay attention to the distance between the microwave antenna and the metal frame.

【Detection Range】

merrytek®

MH10
Instruction

Remote Control Setting	Button	Remarks
	ON/OFF	Press the "ON/OFF" button, the load light enters the normal on/off mode, and the sensing function is disabled. In the normal on/off mode, the "DIM+/DIM-" function can be used to maintain the load light brightness after powering on again. In the normal on mode, the load light enter ON after powering on again. If the load light is OFF, the load light enter ON after powering on again
	Reset	Press "Reset"button, all parameters are same as factory settings.
	Sensor motion	Press "Sensor motion" button, the light quits from the constant on/ off mode, and the sensor starts to work (The latest setting stays in validity)
	DIM Test	Press"DIM Test" button, the 1-10 V dimming works to test whether the10Vdc dimming ports are connected properly. After 2s, it returns to the latest setting automatically.
	DIM + DIM -	Short press to transmit a dimming signal, and the brightness of the lamp will be adjusted with +/-5% each time; dimming range:50%-100 %. (Only available for daylight priority function sensor)Note: In normal ON/Sensor motion mode, the maximum brightness can be set using this button.
	DH Mode	Long press" DH Mode" >3s to enter the daylight priority function; Press "Reset" quit the daylight priority function

Scence Options	Detection Area	Hold Time	Stand-by period	Stand-by dim level	Daylight Sensor	Induction model
QS1	100%	5min	10min	10%	30Lux	Hs
QS2	100%	10min	30min	10%	Disable	Hs
QS3	100%	20min	30min	10%	Disable	Hs

|	Button	Remarks
	Q1 Q2 Q3	Note: Users can press any button to adjust parameters, subject to the last setting. When the sensor does not have the above parameter function, the parameter setting is invalid. Hold time, dim level are not applicable to ON/OFF sensor, Sensor mode is not available for low installation sensor.
	TEST 2S	Press the "RESET" and then Press the "TEST 2S" bottom can enter the test mode any time At the mode the sensor parameters as below:Detection Area is 100%, Hold Time is 2s.Stand-by Dim Level is 10%,Stand-by Period is 0s, daylight sensor disable This function only for testing. Quit the mode by pressing "RESET"or any other function buttons.
	HS LS	Press "HS" bottom to set the detection area to high sensitivity. Press "LS" bottom to set the detection area to low sensitivity. The Induction mode is adjusted at the setting detection area. Note: This button is invalid for low-mount sensor.
		Daylight Sensor Set up daylignt thereshold: 5Lux/15Lux/30Lux/50Lux/100Lux/150Lux/Disable
		Stand-by period Set up stand-by time:0S/10S/1min/3min/5min/10min/20min/30min/+∞
		Hold time Set up hold time:5S/30S/1min/3min/5min/10min/20min/30min
		Stand-by dim level Set up stand-by dim level:10%/20%/30%/50%
		Detection Area Set up detection area: 25%/50%/75%/100%
		Remote Distance Toggle bottom can set the remote distance of remote control and sensor。

Remote control and code setting conversion

1.DIP switch setting convert to remote control Press any bottom except "RESET" on the remote control, and the sensor settings convert to the function currently selected by the remote control.
(No function button settings invalid)

2 remote control convert to DIP switch setting
a. Press the "RESET" button on the remote control, and all settings return to the DIP switch settings of the sensor.
b. Turn off the power, toggle any DIP switch,connect to the power, and all settings return to the DIP switch settings when supply power again.

Unique design of infrared transmitting device

3m Max.
5m

4m Max.
10m

5m Max.
15m

5m Level   10m Level   15m Level

![merrytek logo]
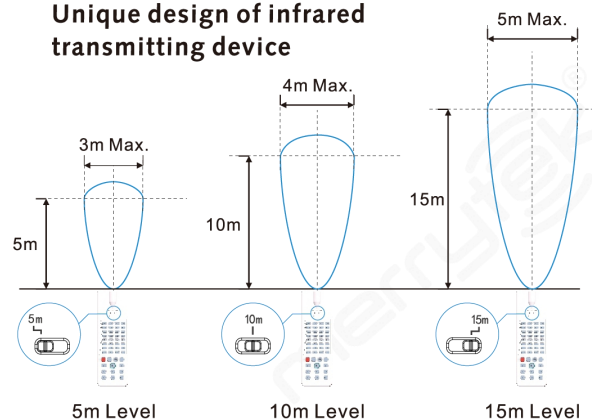
【Initialization】

● On/Off function / 3-Step dimming function: the sensor turns on the light at 100% brightness, and will be turned off after 10 seconds. During initialization, the sensor is not able to detect movement.

● 2-Step dimming function: the sensor turns on the light at 100% brightness. After 10 seconds, it dims the light to low light level (the brightness set by stand-by dim level). During initialization, the sensor is not able to detect the movement.

【Default setting】

Sensitivity: 100%, Hold time: 5s, Daylight sensor: Disable, Stand by period: 0s, Stand by DIM level: 10%

【Application Notice】

● Sensor should be installed by a professional electrician. Please turn off power before installing, wiring.

● The distance　is related to factors such as the moving speed of the moving object, the size of the moving object, the installation height, the installation angle, whether the installation environment is open, and the material of the reflector. The detection distance given in the specification is a typical value, it is 165cm/65kg people who walks in an open indoor environment

● The daylight threshold is in a sunny environment, no shadows, and ambient light diffuse reflection conditions. In different periods, climates, and environments, the daylight value detected by the light sensor may be different.

● Sensor parameters may need to be reconfigured in different installation environments, please refer to the following instructions or contact the manufacturer

● This sensor is only for indoor use, outdoor use may be false triggered by wind and rain, and surrounding moving objects.

● The installation height of the sensor product cannot exceed 15 meters, and the suitable height is 12 meters; the distance between the two sensors should be greater than 3 meters

● When the sensor is installed in a metal lamp, on a metal reflective surface, or in a narrow closed environment, the microwaves will be reflected multiple times and cause false triggering. Please reduce the sensor sensitivity or contact the manufacturer for technical support.

● Sensor is compatible with different 0-10V driver but dimming effect will be different.

● DC regulated power supply with stable output voltage and low ripple coefficient must be used. The ripple of the power supply should be less than 100mV ; the load current should be greater than 50 mA

● For the new installation environment, it is recommended to test 5pcs samples before installation.