Specification

Product Name: DC Controller

Product Model: MC079D 99 Z1

Versions	Release/ change Date	Reason	Publishing
V1.0	31th March, 2023		James
V1.1	05th June, 2023	Add Installation Diagram	James
V1.2	19th August, 2023	Modify the remote control	James

【Product Feature】

- Patented low impedance planar antenna; High-gain
- Match Zhaga Book 18 base, plug in design
- 15m maximum installation height, suitable for most warehouses
- With mini sensor detector, which is suitable for high bay light
- Low transmitting power, no harm to human
- Support Remote Control to adjust parameters
- Newly patent design sensor antenna with two detection mode: high sensitivity detection and interference immunity detection. (suitable for installation environments with many metal reflective surfaces)
- Not affected by temperature, humidity, noise, dust etc.

【Parameter】

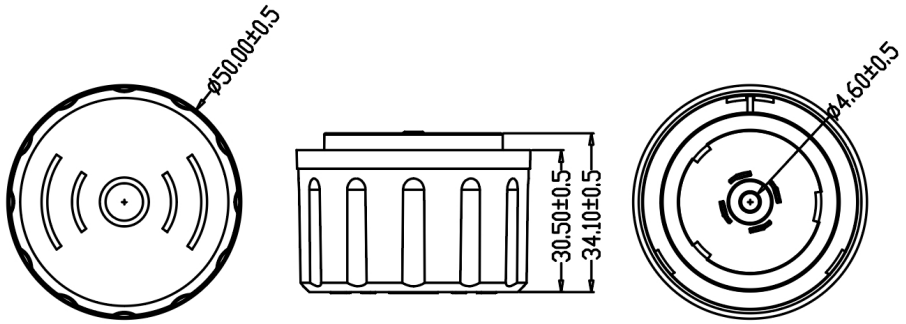
Input				
Rated voltage	11-15VDC			
Working current	25±3mA			
Ripple voltage	<100mVp-p			
Output				
Output signal	0 -10VDC dimming signal			
Sensor parameters				
Working frequency	5.8GHz ±75MHz, ISM band			
ransmitting power	3mW Max.			
Daylight priority	Switch ON	5Lux/15Lux/30Lux/50Lux	100Lux	150Lux
	Switch OFF	150Lux	200Lux	300Lux
Stand-by DIM 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; Test conditions : the product is set to 100% sensitivity.			
Installation height	12m (15m Max)			
3dB beam angle	82°@XZ plane			
	95°@YZ plane			
Environment				
Working temperature	-25~60℃			
Storage temperature	-40℃~80℃, humidity ≤85% (non-condensing)			
Certification Standards				
Certified	RED			
Environmental requirements	Comply with RoHS 2.0 , Reach requirement			
IP Rating	IP65			
Other				
Wiring	Zhaga Book 18 connector			
Installation requirements	built-in installation			
Packaging requirements	Clapboard + Carton(K=A)			
Net weight	40±3g			
Lifetime	5 years warranty @Ta			

【Function】

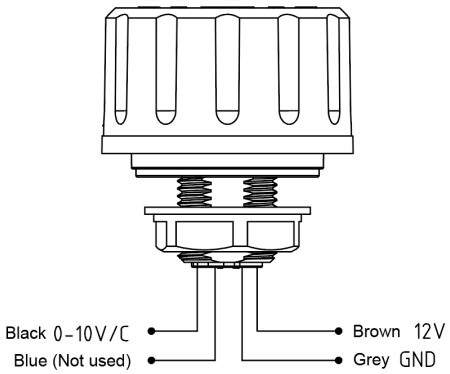
㋡ON-OFF function	Stand-by Period be set to “0s”
㋡2-step dimming	Stand-by Period be set to “+∞”
㋡3-step dimming	Stand-by Period be set to “10s/1min/3min/5min/10min/30min”
㋡Daylight priority	Remote press DH Mode and Daylight Sensor be set to “5Lux/15Lux/30Lux/50Lux/100Lux/150Lux”
◯Daylight harvesting	N/A

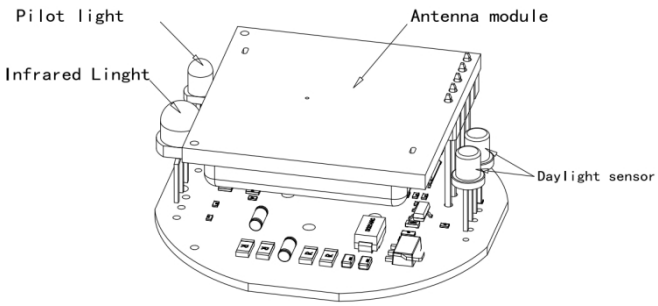
【Product Information】

- Dimension (Unit：mm)

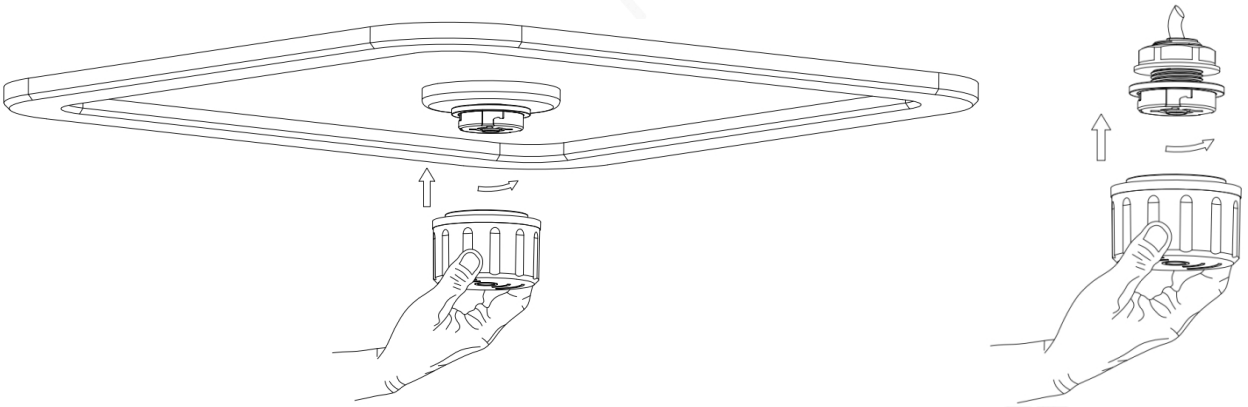


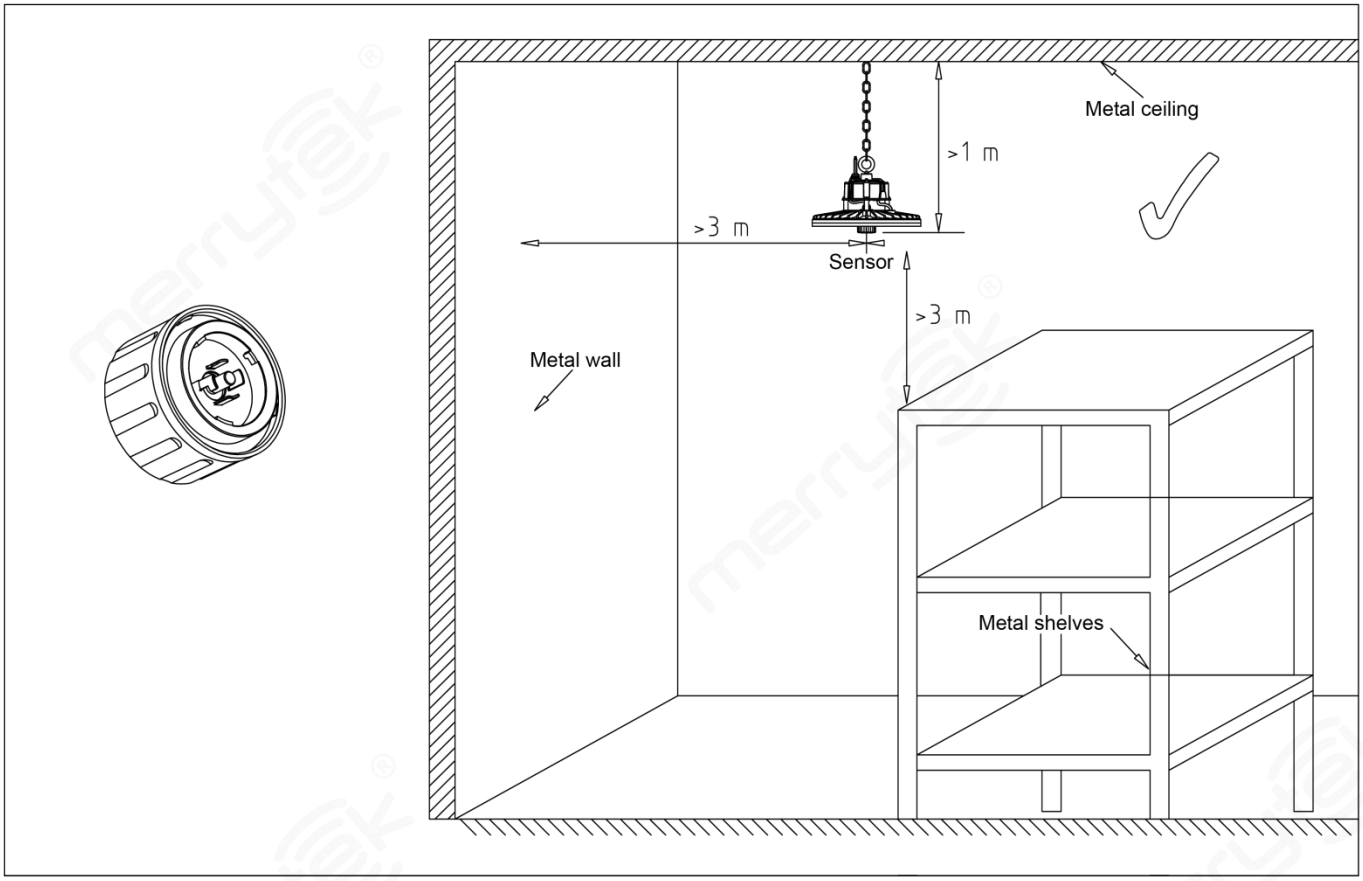
- Wiring、Function





【Installation Instruction】

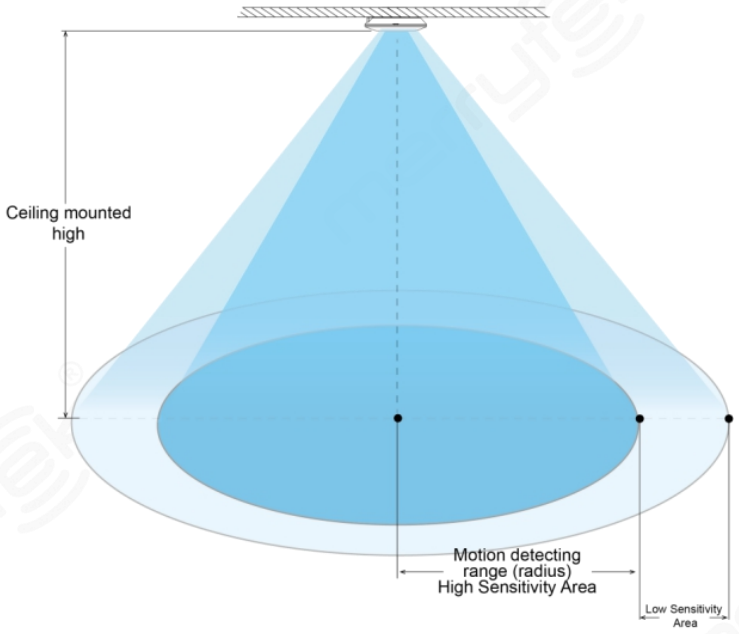




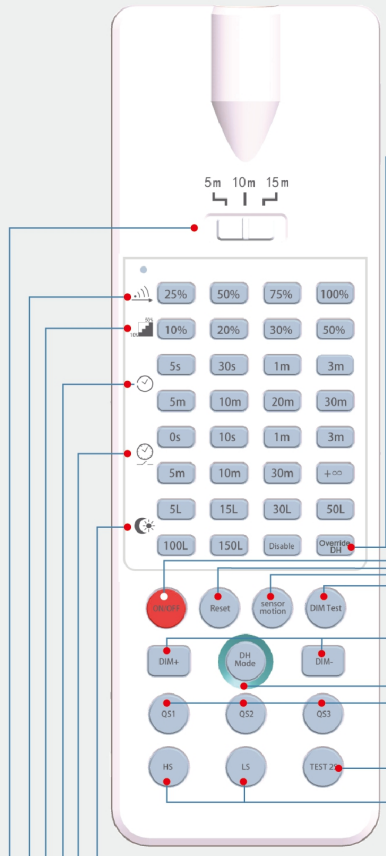
Note

When installing, please attention that the microwave antenna plane should not be covered by metal.

【Detection Range】



【Retome Controller】

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/off mode, the load light enter ON after powering on again.
	Reset	Press "Reset" button, all parameters are same as setting of DIP switch or factory settings. Note: Only the product has DIP switch, it will revert to the current DIP setting.
	Sensor motion	Press "Sensor motion" button, the light quits from the normal on/off mode, and the sensor starts to work. (The latest setting stays in validity)
	DIM Test	Press "DIM Test" button, the 0-10V dimming works to test whether the 1-10Vdc dimming ports are connected properly. After 2s, it returns to the latest setting automatically.
	Override DH	Long Press 3s "Override DH" button to exit the Daylight priority mode or Daylight harvesting mode, and then enter the Daylight Sensor mode. (The latest setting stays in validity)
	DIM + DIM -	Short press "DIM+/DIM-" button to set occupancy light level, the brightness of the load light adjusts at 5% per unit. Long press "DIM+/DIM-" button to set occupancy light level, the brightness of the load light adjusts at 5% per unit. Dimming range: 50%-100%. (apply for normal on mode and sensor with daylight harvesting function)
	DH Mode	Long Press 3s to enter the Daylight priority function or Daylight harvesting function. Note: Short press "Disable" button will exit the Daylight priority mode and the Daylight Sensor is uncontrolled.
	QS1 QS2 QS3	Scence Options / Dection Area / Hold Time / Stand-by period / Stand-by dim level / Daylight Sensor / Induction way QS1: 100% / 5min / 10min / 10% / 30Lux / HS QS2: 100% / 10min / 30min / 10% / Disable / HS QS3: 100% / 20min / 30min / 10% / Disable / HS Note: The sensor parameters can be adjusted by pressing the corresponding button. When user press any button to change the sensor parameters, the last setting prevails. If the sensor doesn't have the function of the above parameters, that parameter is invalid. (Stand-by period and Stand-by DIM Level are not applicable to ON-OFF Sensor. Induction way is not applicable to low-mount sensor)
	TEST 2S	Press the "TEST 2s" botton can enter the test mode anytime. At test 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 is disabled. This function only for testing. Quit the test mode by pressing "RESET" or any other function buttons. This mode has no memory function. After powering on again, the parameters are restored to the last setting. Note: If the sensor have the wireless networking function, the botton provides the functions is entering the distribution network mode.
	HS LS	Press "HS" botton to set the detection area to high sensitivity. Press "LS" botton 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 Daylight Sensor: 5Lux/15Lux/30Lux/50Lux/100Lux/150Lux/Disable
		Stand-by period Set up Stand-by period: 0s/10s/1min/3min/5min/10min/30min/+∞ Note: Stand-by period is not applicable to ON-OFF Sensor.
		Hold time Set up Hold time: 5s/30s/1min/3min/5min/10min/20min/30min
	50% 10%	Stand-by dim level Set up stand-by dim level: 10%/20%/30%/50% Note: Stand-by DIM Level is not applicable to ON-OFF Sensor.
		Detection Area Set up Detection Area: 25%/50%/75%/100%
	5m 10m 15m	Remote Distance Toggle bottom can set the remote distance of remote control and sensor.

Remote controland code setting conversion

1.DIP switch setting convert to remote control

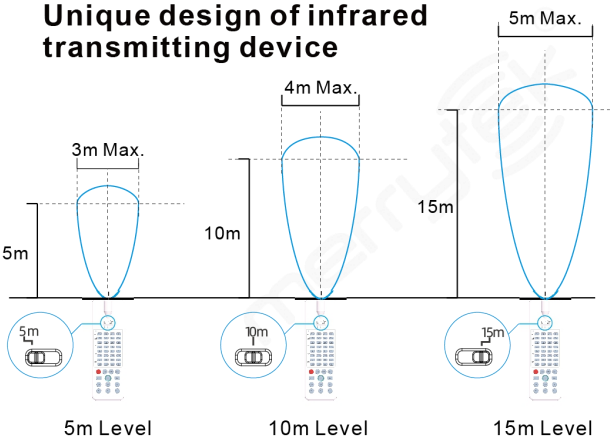
Press any bottom except "RESET" on the remote control, and the sensor settings convert to the function currently selected by the remote control. (No function button settings invalid)

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



【Initialization】

● Switch function / 3-step dimming function: the light will be turned on 100% brightness by the initial energizing sensor, and will be turned off after 10 seconds. During initialization, no external motion sensing signal will be detected.

● Two-phase dimming function: the light will turn on 100% brightness in the initial energizing sensor, and turn to low brightness 10 seconds later (the brightness set by stand-by dim level). During initialization, no external motion sensing signal will be detected.

【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.

● Microwaves cannot penetrate metal. Do not place product in a closed or a half-closed metal lamp. Neither metal nor glass is not allowed to cover above the product. If antenna needs to pass through the metal plate, please ensure that the top of sensor is close to the metal plate.

● Sensitivity area is related to moving speed of objects, size of moving objects, mounting height, mounting angle, working environment, reflecting materials and etc.. Given detecting area is typical value that was measured by 165cm high testers in an indoor open environment.

● The detection distance of the sensor in the wall installation will be greatly increased compared with that in the ceiling installation. If wall installation is used, please reduce the sensitivity or contact us to confirm the use settings. The daylight thresholds are measured on a sunny day without shadow and in an ambient light diffuse reflection status. Different environment and climate cause different brightness values that daylight sensor measures.

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

● The installation spacing between sensors is recommended to be greater than 3m, and the installation spacing between sensors and routers is recommended to be greater than 2m.

● The installation height of the sensor product cannot exceed 15 meters, and the optimal height is 12 meters.

● Sensor is for indoor use only. The waterproof effect for outdoor or half-outdoor use will be affected. Wind, rain, and moving objects may cause false triggering.

● Vibration signals will be regarded as moving signals to trigger sensor. Installing sensor should be away from the object that vibrates for a long time, such as large metal equipment, pipes, air conditioning outlets, exhaust vents, smoke exhaust machine ports, shaking fans, etc. Pets in detecting area may cause false trigger.

● The antenna surface of microwave module should be away from input AC, output DC, rectifier bridge, transformer, switch tube and other high-power devices to avoid high frequency signals affecting the normal operation of microwave sensor’s antenna.

● Sensor with different 0-10V driver, low light effect may 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 first install and test 5pcs prototypes before bulk installation.