

EDQ15K-10Y-03S

specification

24GHz High Performance
 Series Modules

Product Features

- Conventional high mounting, long detection range
- Accurate distance measurement function with low detection error
- High sensitivity, supports motion, micro-motion, presence body detection
- High resolution, capable of recognizing multiple targets
- Radar firmware supports serial upgrades

Application Scenarios/Products



toilet



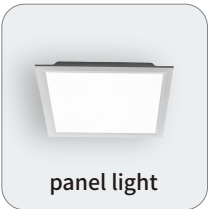
Kitchen



study (room)



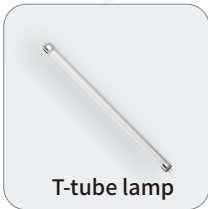
office lighting



panel light



Ceiling light



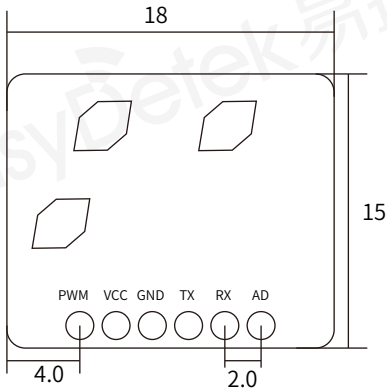
T-tube lamp



Educational light

Product Dimension Drawing

Size unit:mm



EDQ15K Dimension tolerance: ± 0.2
 Welding hole of the row of pins: $\phi 0.8$

Pin Description

Pin	Description
PWM	Reserved PWM output port
VCC	Module power supply port
GND	GND ground
TX	Default IO output, configurable as Serial output UART_TX
RX	Serial port receive UART_RX
AD	Reserved ADC sampling interface, which can be used to expand the external photosensitive or dialing function

Electrical Parameters

Input Voltage	3.3V
Operating Current	30~45mA
Operating frequency	24~24.25GHz
Consumption	0.25W

Functional Parameters

Motion sensing radius ^①	4 ~ 6m
Micro motion presence sensing radius	4 ~ 6m
Hanging height	3m
Delay Time	10s
Distance accuracy	±20cm
Multi-target recognition	support 2~3 targets

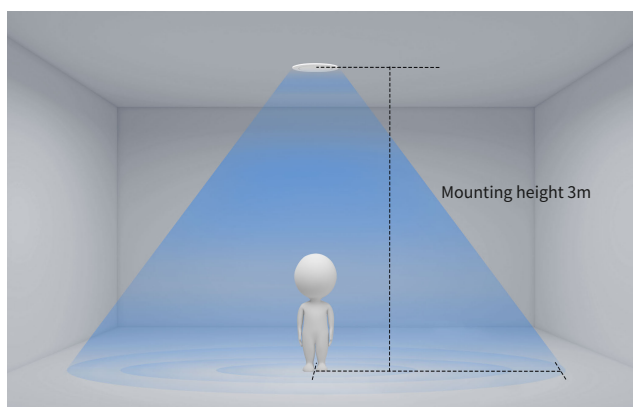
Output Parameters

Output Voltage	3.0~3.6V
Output Signal	Serial port/I/O

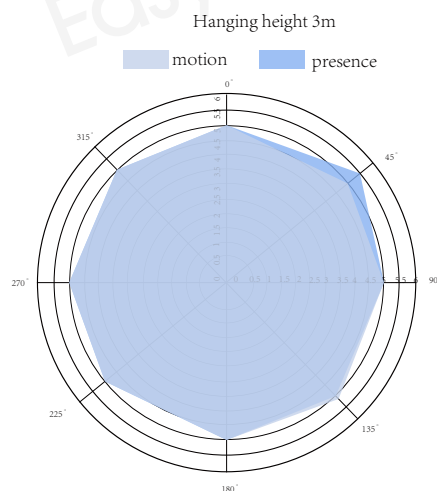
Environment & Lifespan

Operating Temperature	-20~+85°C
Storage Temperature	-20~+105°C

Detection Schematic



Schematic of sensing range^①

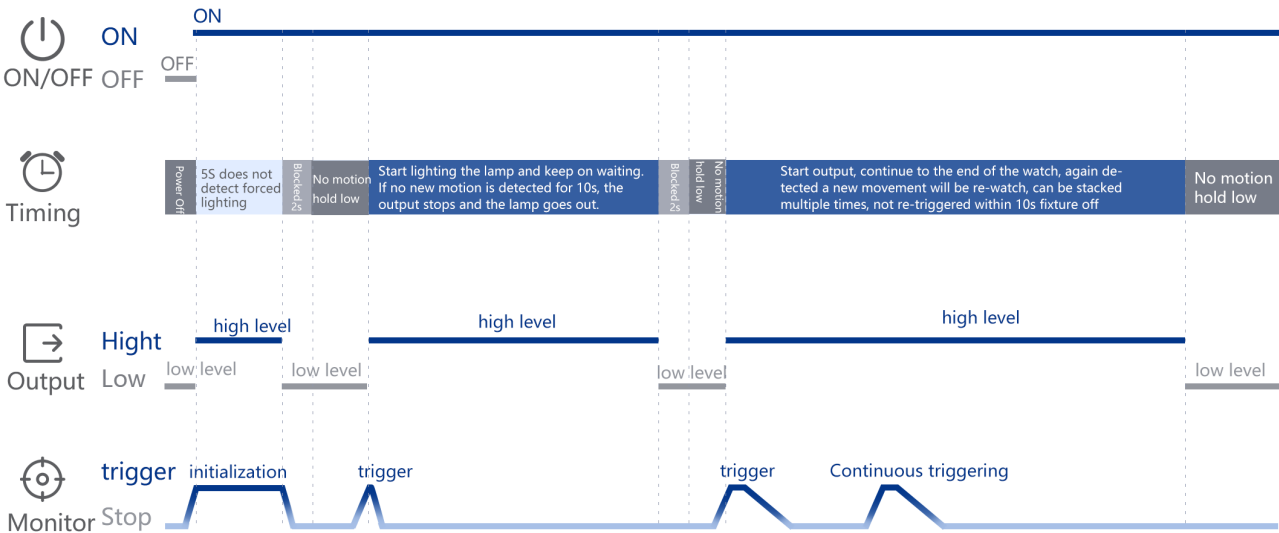


Remarks:

- ① The test distance range is based on the sensor hanging height of 3m, indoor installation environment test, the test person is 170cm tall, weight 65-75kg, walking speed 1m/s.

Different scenarios may cause changes in the range of installation, subject to the actual test.

Timing diagram



Functional Description



After initialization is completed, when the ambient light is sufficient, the sensor detects a moving object and the light will not automatically turn on.



When the ambient light is insufficient, the sensor detects a moving object and the light automatically turns on.



When the moving object leaves, the light will automatically turn off after the preset delay.

Product Naming Law

ED	Frequency Band	Product Categories	Product Subdivision	Product Number	Delay/photosensitive	Serial number
ED	Q	1	5	K	10Y	03
EasyDetek	C 5.8GHz	1 Microwave sensor module	0 Ultra-low-power series	0-9, A-Z	Y Has light sensor	
	X 10.5GHz	2. Microwave radar switch	1 Flagship series		N no light sensor	
	Q 24GHz	3 Radar antenna	2 Short-distance series		P programmable	
	V 60GHz	4 MCU	3 Adjustable series			
	W 77GHz	5 Microwave power supply	4 External antenna series			
		6 IC	5 General Series			
		7 Other	6 To be defined			
		8 Networking	7 To be defined			
			8 Basic series			
			9 High altitude series			

Configuration Version Description

【material number】: EDQ15K-10Y-03

【PCB version number】:EDQ15K-VA

【software version number】:Software ID: 0x54C2; Check Digit: 0x4DBA

Historical Revision Record

Version	Time	Description	Note
V1.0	2024-06-06	First edition	-
V1.1	2024-07-11	Updated sensing radius and detection schematic	
V1.2	2025-10-09	Updated layout, precautions, and sensing range diagram	

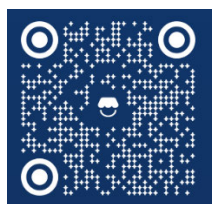
Precautions

1. When installing the radar sensor, if there is an aluminum substrate or other metal plate on the back, it should be raised to a certain height and kept at a distance of more than 5mm from the metal plane. It should not be close to or in contact with the metal plane; there should be no metal shielding or high-current cable covering in front of the radar sensor antenna, avoid facing the driving power supply, and try to stay away from the driving power supply's rectifier bridge, transformer, switch tube and other high-power devices.
2. The radar sensor has a good penetration effect on plastic and wood materials, but cannot penetrate metal or metal-coated materials. If the shell of the user's product is made of special materials such as glass, ceramic, carbon fiber, etc., please refer to the actual measured effect. If necessary, please contact Easydetek Technology's technical personnel for applicability debugging.
3. Excessive power ripple may interfere with the radar sensor and cause false alarms. It is recommended that the power supply ripple should be less than 100mV.
4. When multiple radar sensors are used in the same venue, the installation distance is too close, which may cause individual radar sensors to generate false alarms. It is recommended that the product installation distance is greater than 2m.
- 5.If the radar sensor is used together with a wireless communication module (NB, Bluetooth, WIFI, 2.4G module), the distance should be increased. It is recommended to keep a distance of more than 1m from high-power wireless communication devices such as routers and wireless hotspots during installation.
6. The light threshold of the radar sensor is the test value under the conditions of sunny environment, no shadow, and diffuse reflection of ambient light.
7. Easydetek Technology is committed to providing customers with high-quality and better experience radar sensors. When the product version is updated and iterated, no further notice will be given. If necessary, please contact our sales staff to obtain the latest product information.

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