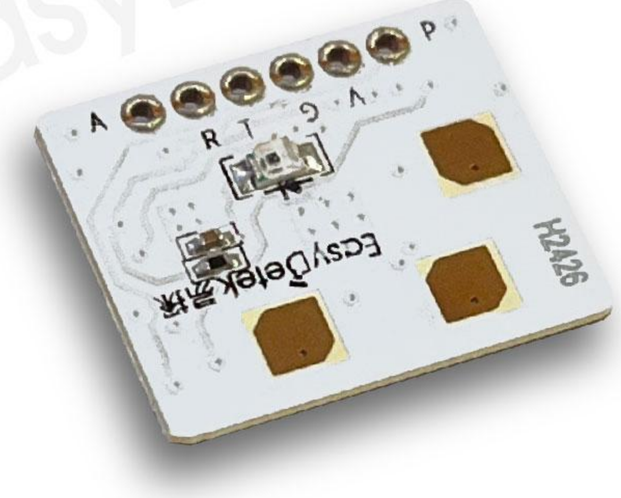
深圳市易探科技有限公司
Shenzhen EasyDetek Technology Co.,Ltd

EDQ15K 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

Electrical Parameters

Input voltage	3.3V & 5-8Vcompatibility
Operating current	30-45mA
Output voltage	3.0-3.6V
Output signal	UART/IO
Power consumption	＜ 0.5W

Functional Parameters

Motion Sensing Radius ①	4 - 6m
Sensing radius of micromotion presence ①	4 - 6m
Hanging height	3m
Delay time	10s
Distance Precision	±20cm
Number of targets identified	2-3people

Output Parameters

operating frequency	24-24.25GHz

Environment & Lifespan

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

Remarks:

① The test distance range is based on the sensor indoor installation environment, hanging height 3m test, the tester height 170cm, weight 65-75kg, walking speed 1m/s, different scenes may cause the installation range changes, to the actual test shall prevail.

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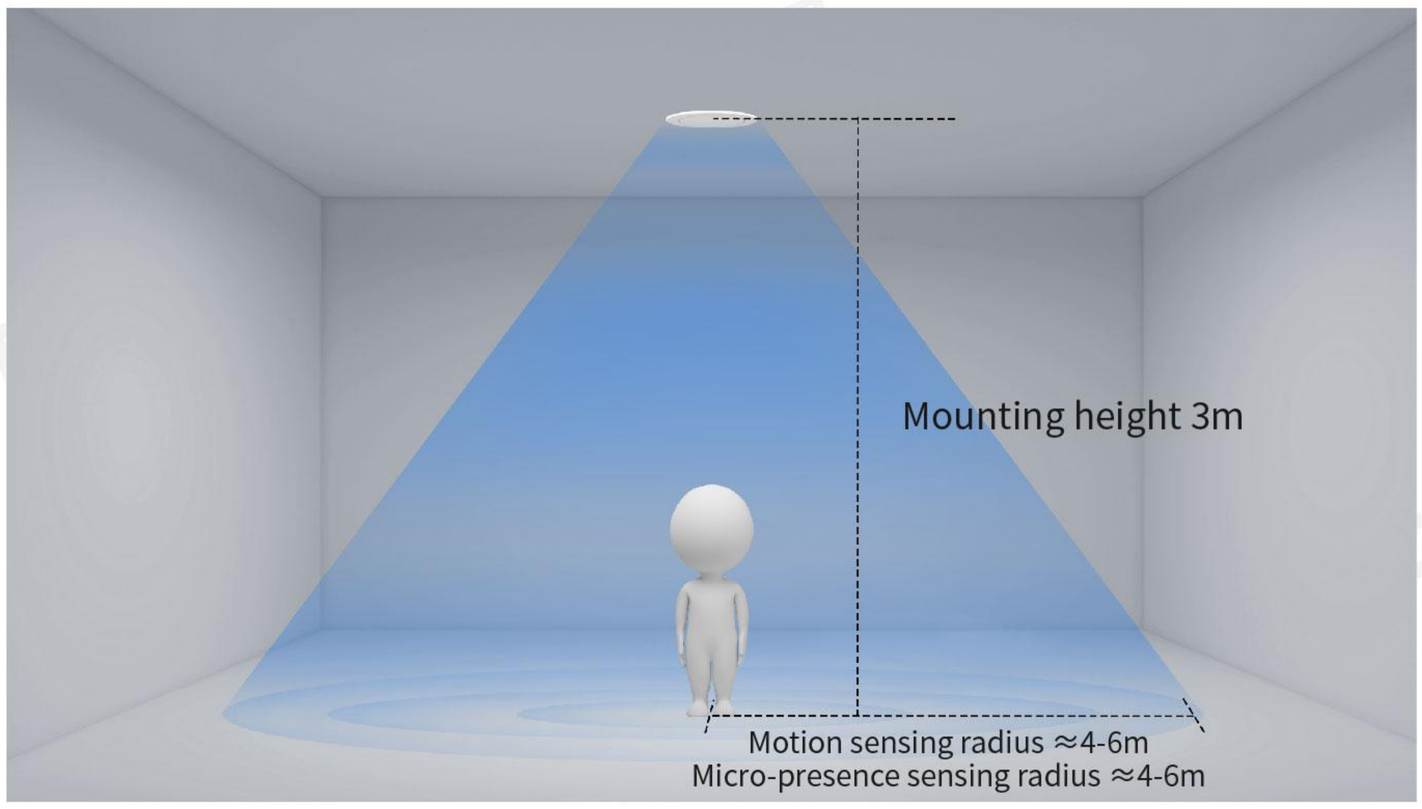
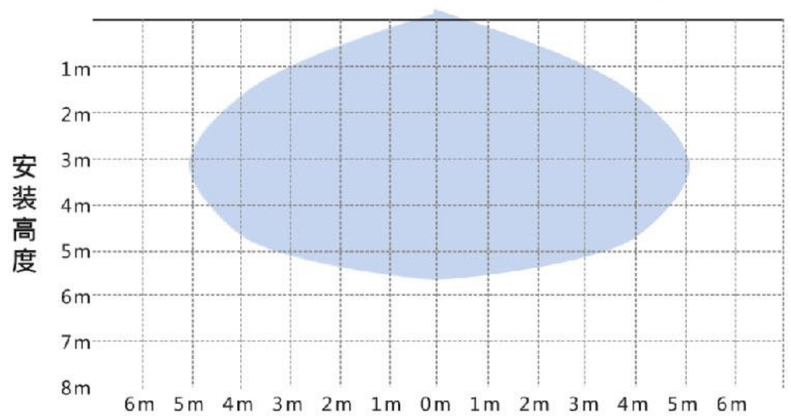
Detection Schematic



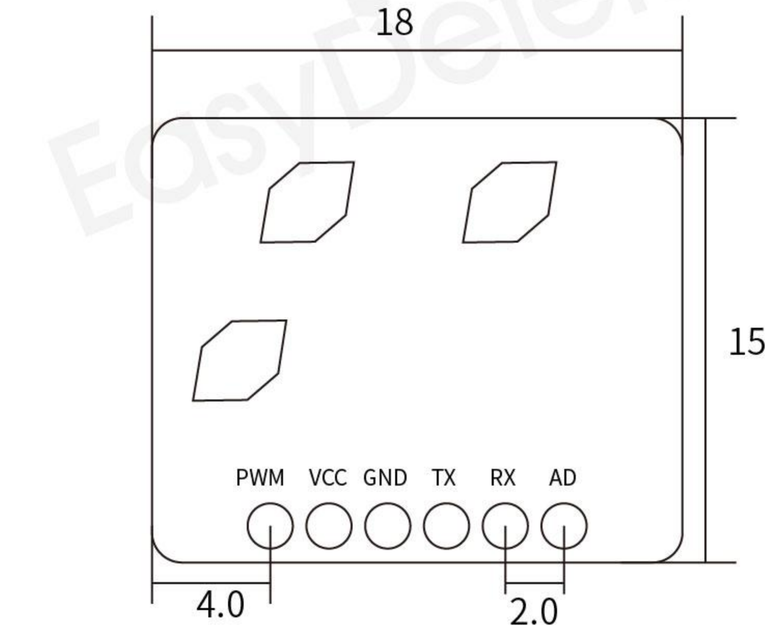
雷达感应示意图



Motion sensing radius ≈4-6m
Micro-presence sensing radius ≈4-6m

Dimension Drawing / Pinout

Dimensions in mm

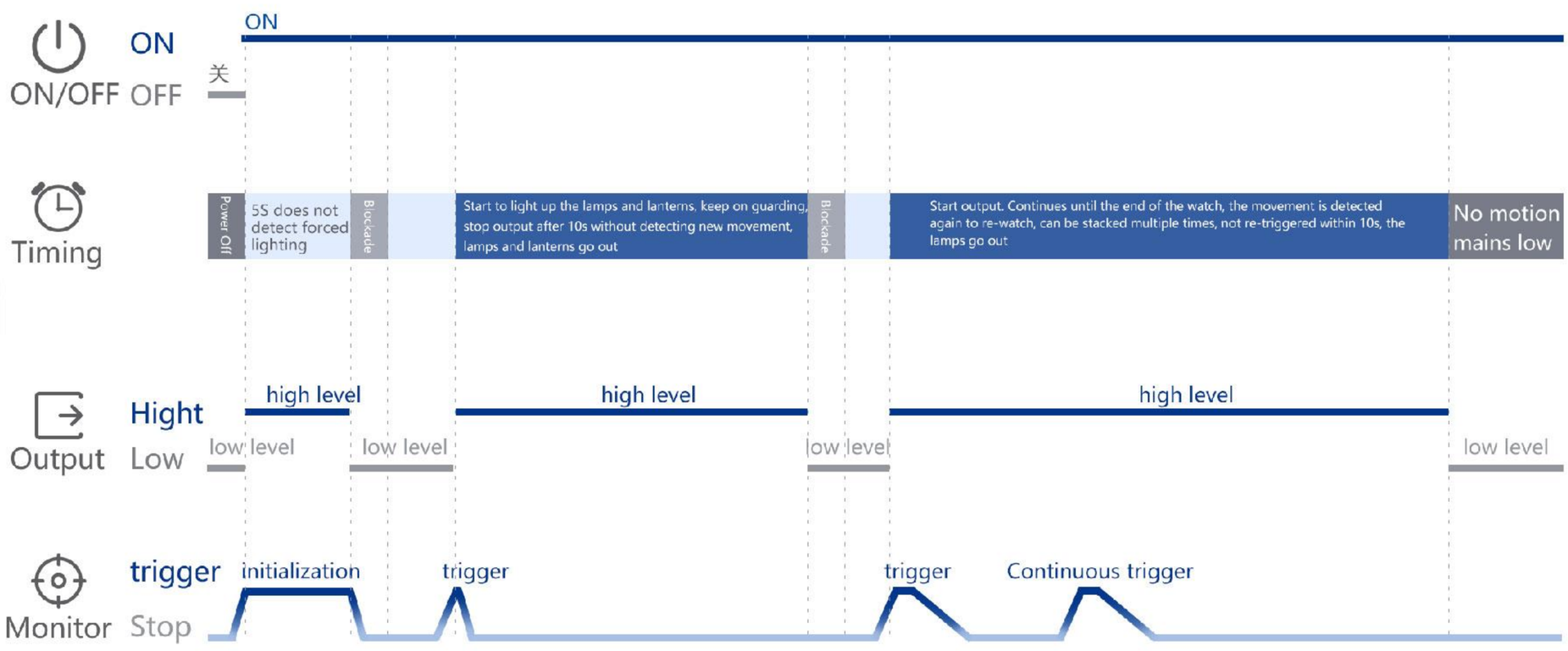


EDQ15K Dimension Tolerance: ±0.2
Pin Welding Hole: ϕ0.8

Pin Description

Pin	Description
PWM	Reserved PWM output port
VCC	Module power supply port
GND	Module Ground Pin
TX	Default IO output, configurable as Serial output UART_TX
RX	Serial port receive UART_RX
AD	ADC sampling interface reserved for expansion of external photosensitive or dialing functions

Timing Diagram



Application Scenarios/Products

restrooms

bathroom

studyroom

office lighting

panel light

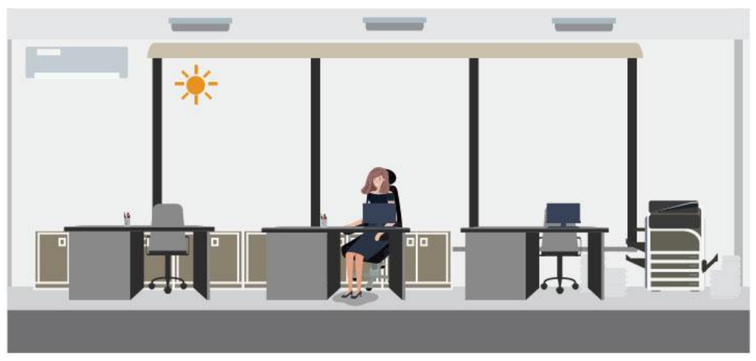
ceiling lamp

T-tube lamp

Educational Lighting

Functional Description

Note: Due to the spectral characteristics of photosensitive devices, thresholds are uniformly tested under natural light conditions.



After initialization is complete, when the ambient light is sufficient, the sensor detects a moving object, the light will not come on automatically.

When the ambient light is not sufficient The sensor detects a moving object and the light comes on automatically.

The moving object leaves.
After the preset delay time has elapsed, the light goes out automatically.

Product Naming Law

ED	Frequency Band	Product Categories	Product Subdivision	Product Number	Delay Time	Serial number
ED	Q	1	5	K	Y	
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 No.】: EDQ15K-10Y-02 (Input voltage 5-8V) / EDQ15K-10Y-03 (Input voltage 3.3V)

【Hardware】:

【Software】:

History Revision Record

Versions	Time	Description	Note
V1.0	2024-07-31	First Edition	-
			-

Precautions

1、When the product is installed, it is recommended that the antenna plate keep a distance of 5-12mm from the metal plane, and can not be close to or touch the metal plane.

2、Products on plastic, wood material penetration effect is better. It is recommended not to install metal, glass, ceramic in front of the antenna, so as not to affect the actual induction effect.

3, power supply, please use a small ripple power supply, to avoid interference with the sensor and false alarms, it is recommended that the power supply ripple is guaranteed to be within 50mV-100mV.

4, more than one radar sensor in the same site application, recommended product installation distance greater than 2m, the installation distance is too close to individual sensors may occasion-ally false alarms.

5, the antenna radiation surface to avoid high current circuit coverage, so as not to interfere with the normal radiation antenna, resulting in false alarms or change the induction range.

6, such as microwave sensors and wireless communication modules (NB, Bluetooth, WIFI, 2.4G module) coexisting applications, should be spaced apart. Recommended installation and routers, wireless hotspots and other high-power wireless communication equipment to maintain a distance of 1m or more.

7, the light-sensitive threshold is in a sunny environment, no shadows, ambient light diffuse reflection conditions of the test value.

8, microwave sensor antenna surface should avoid facing the drive power supply, while trying to drive away from the power supply rectifier bridge, transformer, switching tubes and other high-power devices, so as not to trigger false alarms.

9, Eprobe is committed to providing customers with high quality and better experience of radar sensors. Product version updates and iterations without notice.