

# EDQ152K Specification

## 24GHz Universal Series Modules



### Product Features

- 0-10V dimming output, smooth and stable brightness transition
- Micromotion/presence detection: enables micromotion detection for typing, etc.
- Interference filtering: able to filter out false positives caused by curtains and vibrations
- Auto-learning function: it can automatically learn according to the environment and filter out the surroundings fixed interference from the environment

### Electrical Parameters

Input Voltage	12V DC
Operating Current	100mA
Output Voltage	0-10V DC
Power Consumption	<0.5W

### Functional Parameters

Motion Sensing Radius <sup>①</sup>	4m can be customized
Sensing radius for micro movement presence <sup>①</sup>	4m can be customized
Hanging height	Regular 3m
Delay Time	30s can be customized
Second-order brightness	20%
Second order brightness delay time	5min can be customized

### Output Parameter

Operating Frequency	24GHz-24.25GHz
Operating Frequency	79.8° (XZ plane) 72.7° (YZ plane)

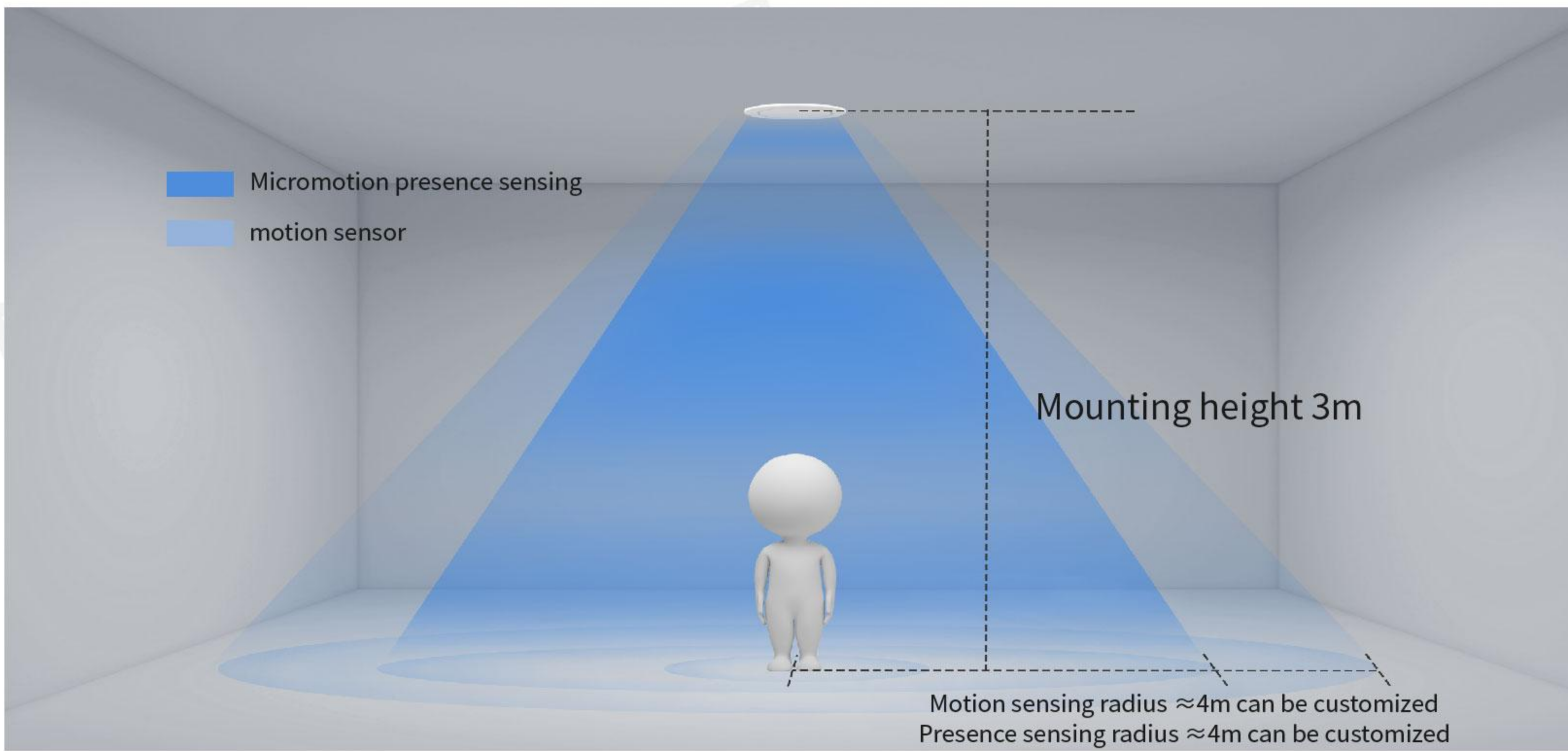
### Environment & Lifespan

Operating Temperature	-30~+60°C
Storage temperature	-35~+85°C

Remarks:

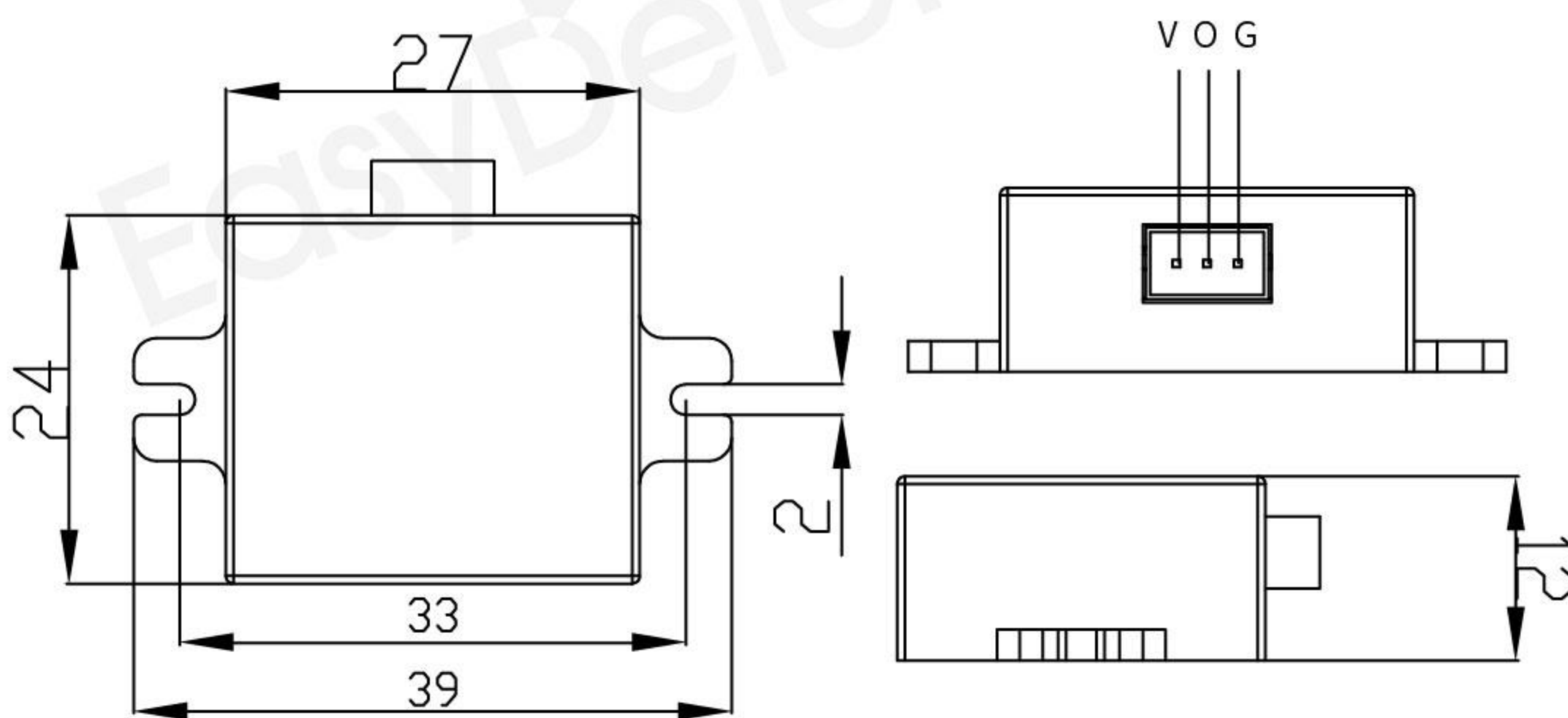
- ①The test distance range is based on the sensor hanging height of 3m, indoor installation environment test, the height of the test person 170cm, weight 65-75kg, walking speed of 1m/s, the test person's height 170cm, weight 65-75kg, walking speed 1m/s. Different scenarios may cause changes in the range of installation, subject to the actual test.

## Detection Schematic



## Dimension Drawing / Pinout

Size unit: mm

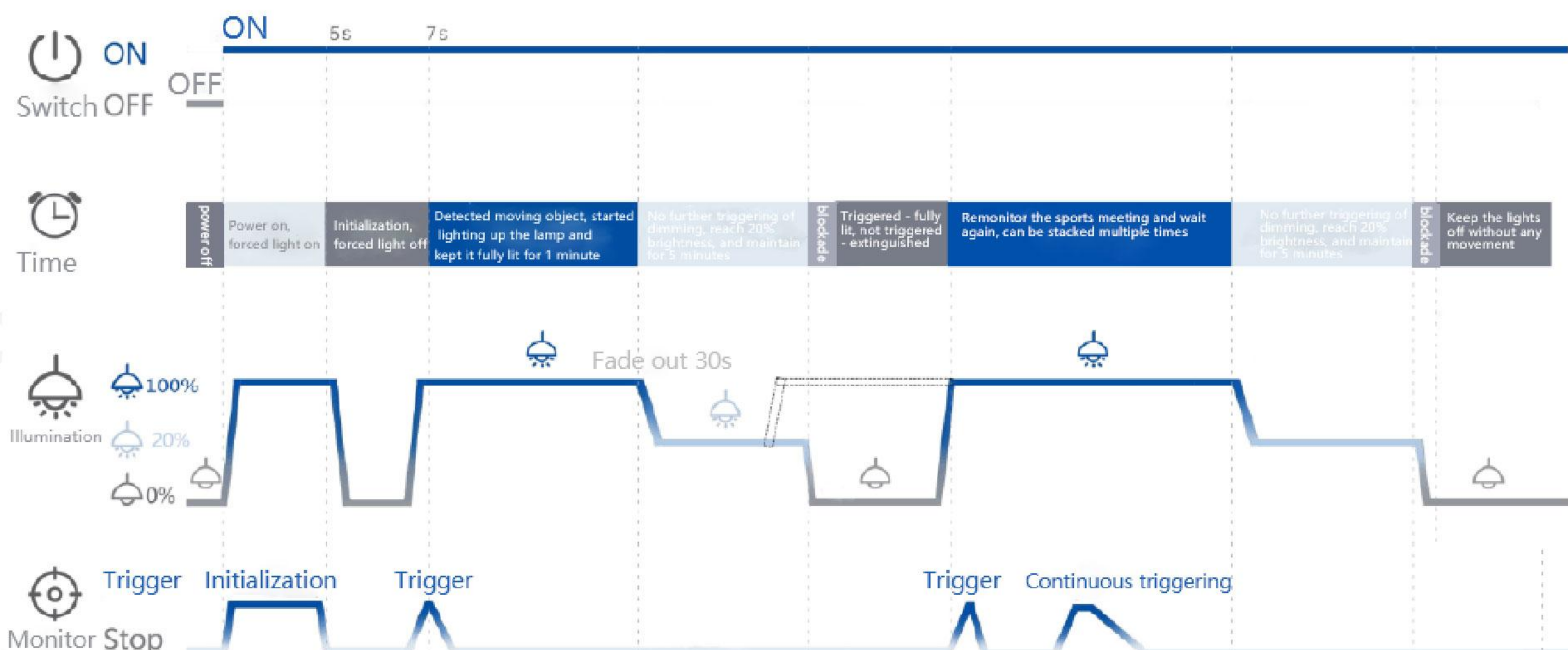


### Pin Description

Pinout	Description
V	+12V power input
O	0~10V voltage output
G	GND Common

EDQ152K Dimensional tolerances:  $\pm 0.2$   
Use PH2.0 3P terminal block for the connection cable.

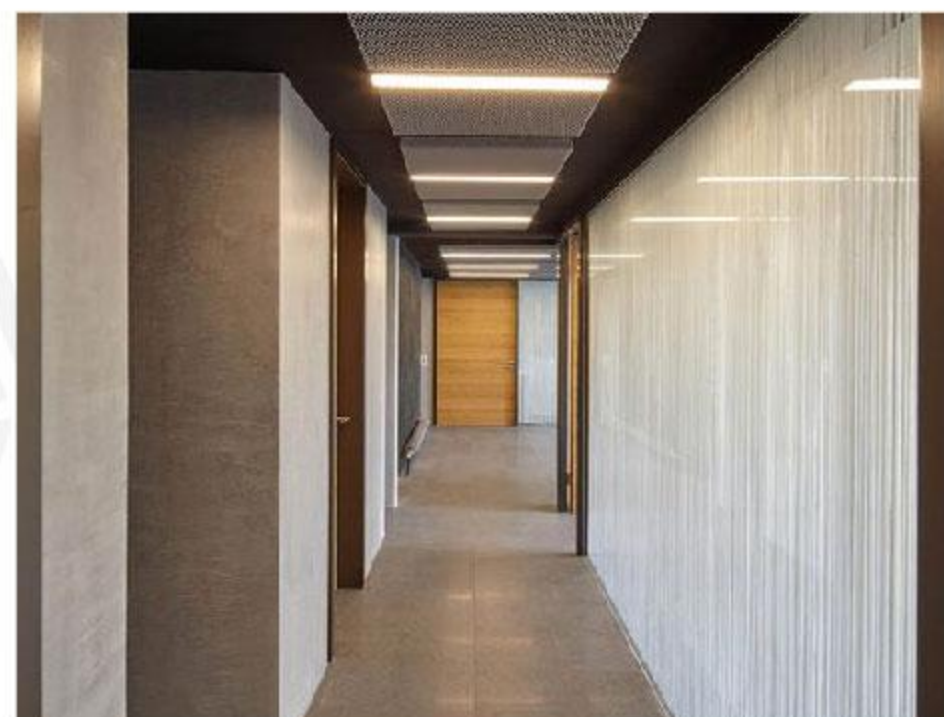
## Timing Diagram



## Application Scenarios/Products



office



corridors



elevator shaft



flight of stairs



chandelier



panel light

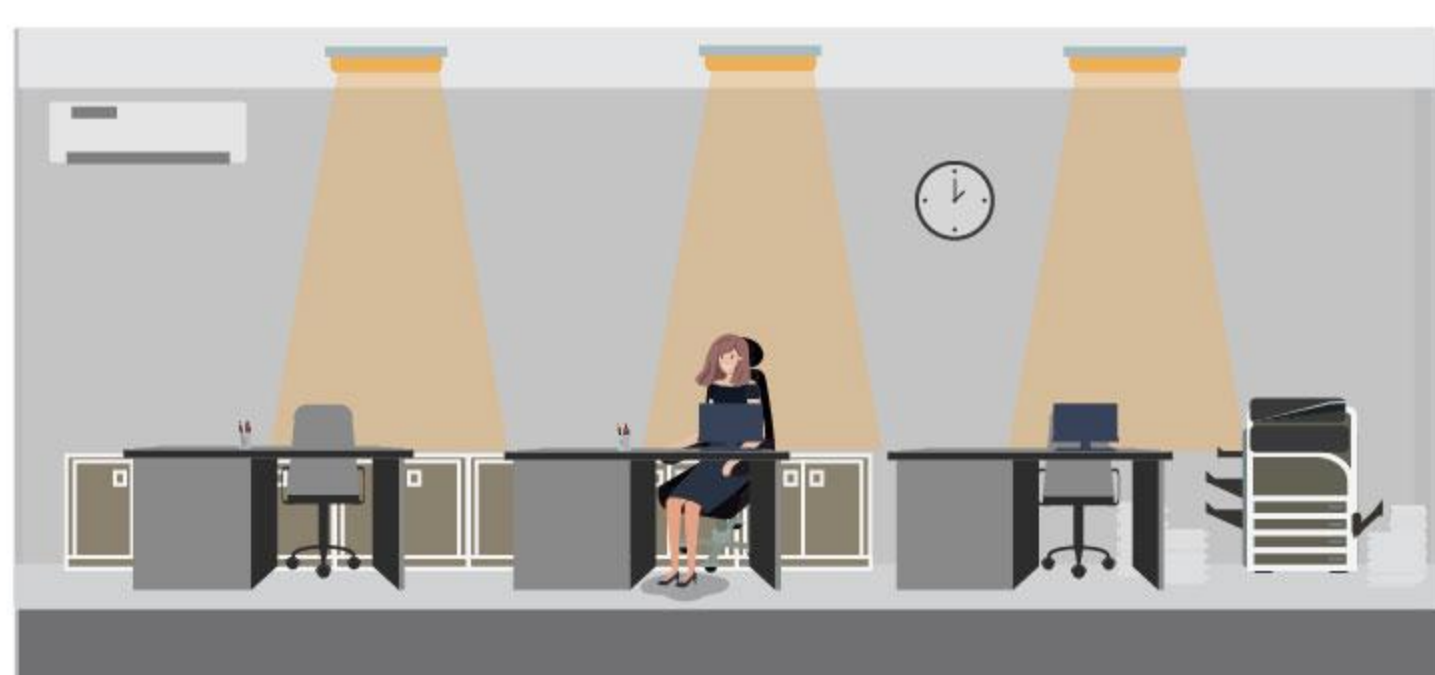


ceiling lamp

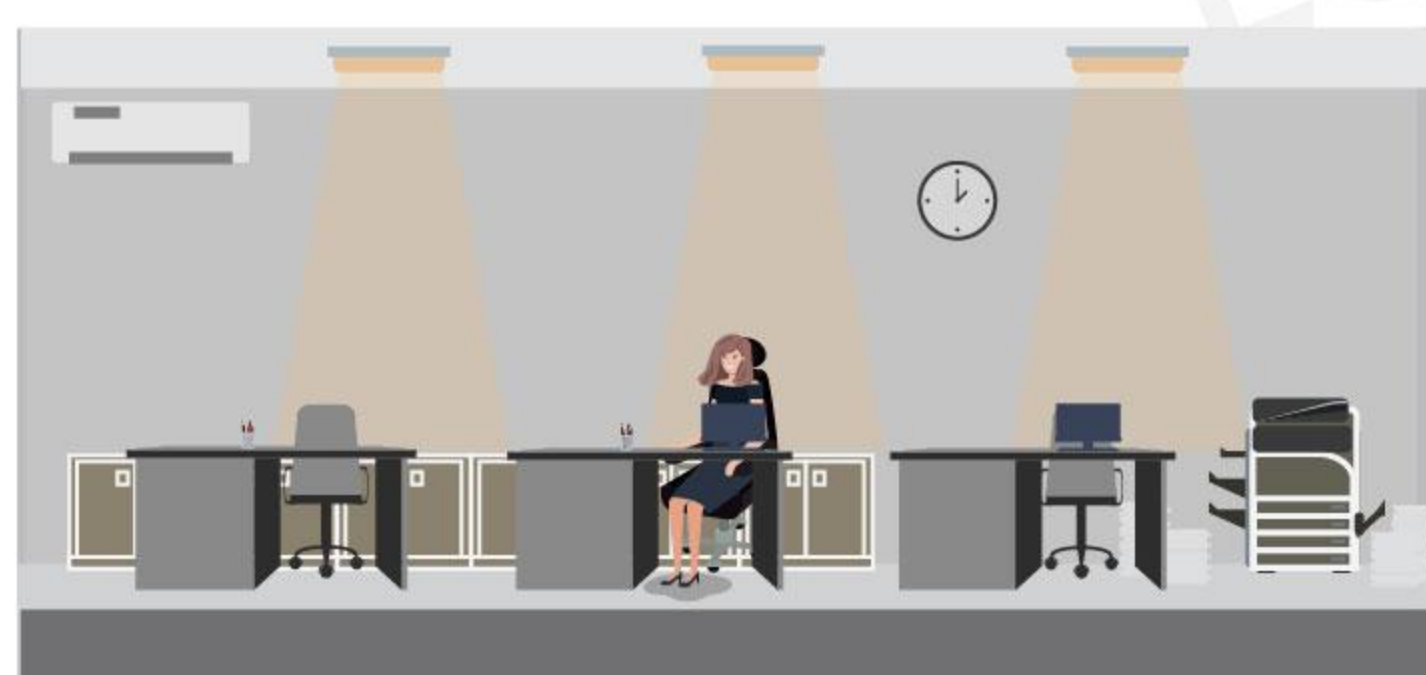


T-tube lamp

## Functional Description



When the sensor detects a moving object, the light automatically lights up at 100% brightness and enters the set delay time



After the delay time, when the sensor cannot detect moving objects, the light fixture enters 20% brightness



Luminaire goes out when no moving object is present for a long period of time

## Product Naming Law

ED	Frequency Band	Product Categories	Product Subdivision	Product Number	Delay Time	Serial number
ED	Q	1	5	2K		
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】:EDQ152K-N-02

【hardware】:

【software】:

## Historical Revision Record

versa	Time	description	Note
V1.0	2024-10-28	first edition	-
V1.1	2024-12-23	modify product parameters and dimensions	-
V1.2	2024-12-27	modify product parameters and timing diagrams	-

## Precautions

### Precautions for Product Driver Circuit Design

1. The voltage of the power supply should meet the product requirements, and it is recommended to control the ripple within 100mV;
2. The radar antenna surface should avoid facing directly towards the driving power supply and be as far away as possible from high-power components such as rectifier bridges, transformers, and switch tubes of the driving power supply to avoid false alarms caused by power frequency signal interference or affecting the induction range;
3. The radar antenna surface should avoid high current circuit coverage to prevent false alarms or changes in sensing range caused by electromagnetic fields generated by the loop.

### Product installation precautions

1. Radar signals have good penetration through glass, wood, and plastic, but there may be some reflection and penetration attenuation, which reduces the sensing distance;
2. Electromagnetic waves have poor penetration and reflection on metal materials, which can easily cause false alarms or changes in sensing distance in radar reception. Our products have passed internal laboratory metal environment testing and can withstand the impact of metal reflection under certain conditions;
3. Metal casing and large-area copper-clad PCB board have shielding and blocking effects on electromagnetic waves; The module installation should not be closely attached to the metal plane to avoid abnormal radar operation. It is recommended to control the distance between the antenna panel and the metal plane at 6-12mm;
4. For radar modules installed on surface mount, it is recommended to lay copper on the PCB surface for hollowing out treatment;
5. When installing the product, it should be avoided to install it on the same installation plane as regular mechanical vibration equipment, as the regular vibration of the radar itself can easily generate false alarms;
6. When installing the product, it should be kept at a certain distance from surrounding micro moving devices (such as drainage pipes, fire pipes, ventilation pipes), and regular vibrating or swinging objects (such as fans, swinging green plants, fluttering curtains) should be kept at a certain distance; Suggest that the speed of moving objects within a radius of 0.5m be less than 10mm/s;
7. When multiple products of the same type are applied in the same site, installing them too close may cause false alarms. It is recommended that the installation distance of 24G products be greater than 2m;
8. When the 5.8G radar is used in conjunction with wireless communication modules (NB, Bluetooth, WIFI), a distance should be maintained to avoid signal interference and false alarms. It is recommended to install at a distance of more than 2 meters or adjust the antenna direction of the wireless communication module appropriately;

During the product installation process, live working should be avoided to avoid endangering personal safety or damaging the product due to misoperation.