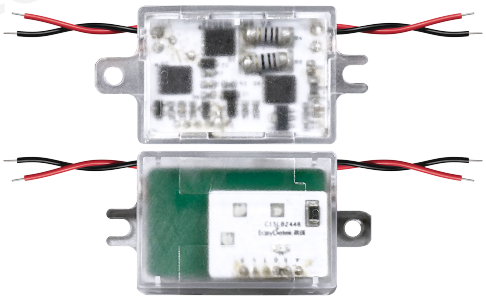
EDQ21H Specification

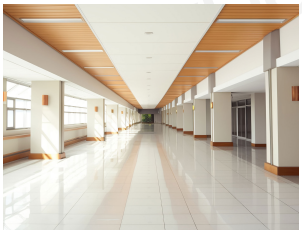
24GHz Sensor Dimmer



Product Features

- High-sensitivity design supports detection of small movements such as shaking head, waving, typing, and turning pages, with a detection range of 3~5m.
- Easy to install, directly across the power supply and load.
- Support 20%~100% brightness dimming.
- WeChat small program/app control.
- OTA upgrades are available via Bluetooth.

Application Scenarios/Products

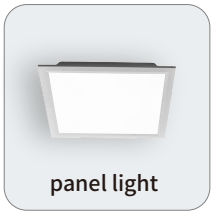


corridors

office lighting

elevator shaft

flight of stairs

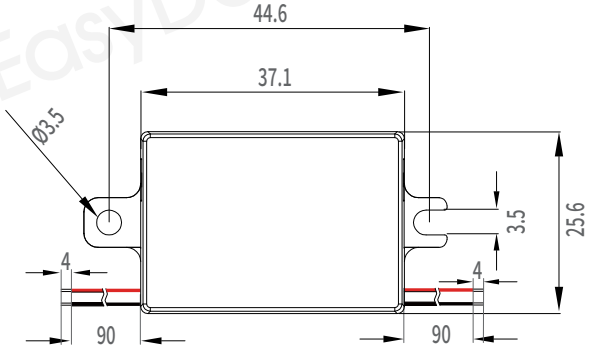


panel light

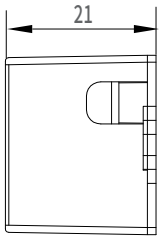
celling light

Product Dimension Drawing

Size unit：mm

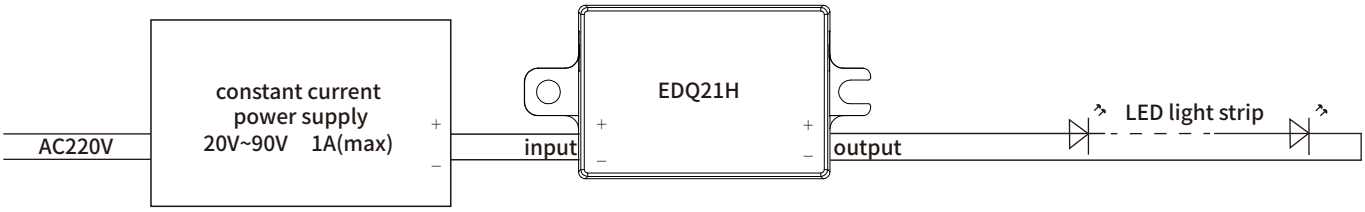


Tolerance of external dimensions ±0.2mm



Lead wire size tolerance ±2mm

Wiring Description



Input and output lead wire gauge: 22AWG

Pin Description

Pin	Description
INPUT + (red)	The positive pole of the power input is connected to the positive pole of the constant current power output
INPUT - (black)	Power input negative terminal, connect to constant current power supply output negative terminal
OUTPUT + (red)	Dimming output positive, connected to the positive terminal of the LED load
OUTPUT - (black)	Dimming output negative terminal, connect to LED load negative terminal

Electrical Parameters

Constant current input	0.2A~1A
Input voltage ①	20V~90V
Dimming range	20%~100% brightness
Average power consumption	＜0.8W
Operating frequency	24GHz

Functional Parameters

Conventional sensing radius ②	5m Max
Hanging height	recommended 3m
Delay time	5s~1800s adjustable
Fade time	1s~10s adjustable
Dimming time	1s~100s adjustable

Output Parameters

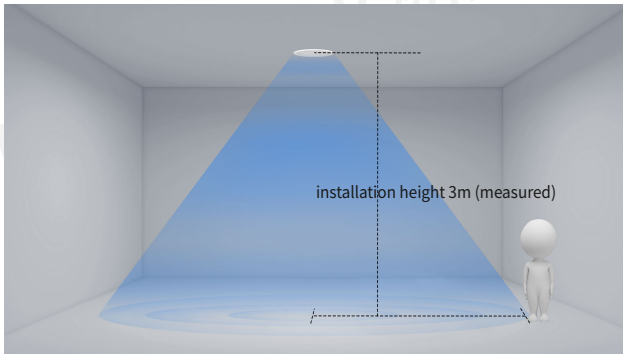
Output Voltage	20%~100% input current
Output Signal	DC constant current output

Environment & Lifespan

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

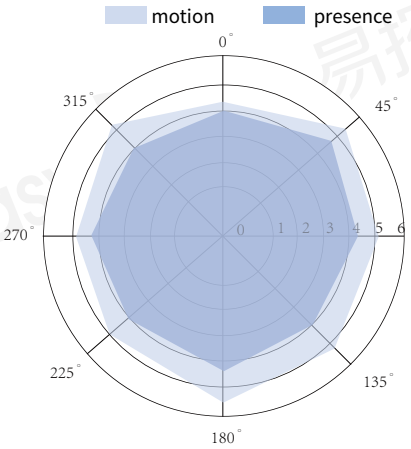
① Notes:
1. Module input voltage: 20V to 90V, current input: 0.2A to 1A. This input voltage range refers to the maximum output voltage of the constant current power supply.
2. Due to the characteristics of constant-current power supplies, the actual input voltage during load dimming may be lower than this range. The minimum output voltage of a constant-current power supply should be lower than the full-load terminal voltage of the load (lamp) × 0.2. Corresponding relationship: 90V > maximum supply voltage > load voltage (LED lamp voltage) > 20; load voltage (LED lamp voltage) × 0.2 > minimum supply voltage.
3. For example: If the full-load voltage of the load (lamp) is 40V, the maximum output voltage of the constant-current power supply should be between 41V and 90V, and the minimum output voltage should be lower than 8V (40V × 0.2 = 8V). Thus, the output range of a constant-current power supply is: 1. Minimum output voltage < 8V, 2. Maximum output voltage between 41V and 90V.
4. This product is best used with a dimmable power supply without an auxiliary power supply. For example:
   Brand: Igor
   Model: FLS-12-330, FLS-44-1050
   Brand: Liford
   Model: LF-AAA040B, LF-AAA020B
   These power supplies are compatible

Detection Schematic



Schematic of sensing range②

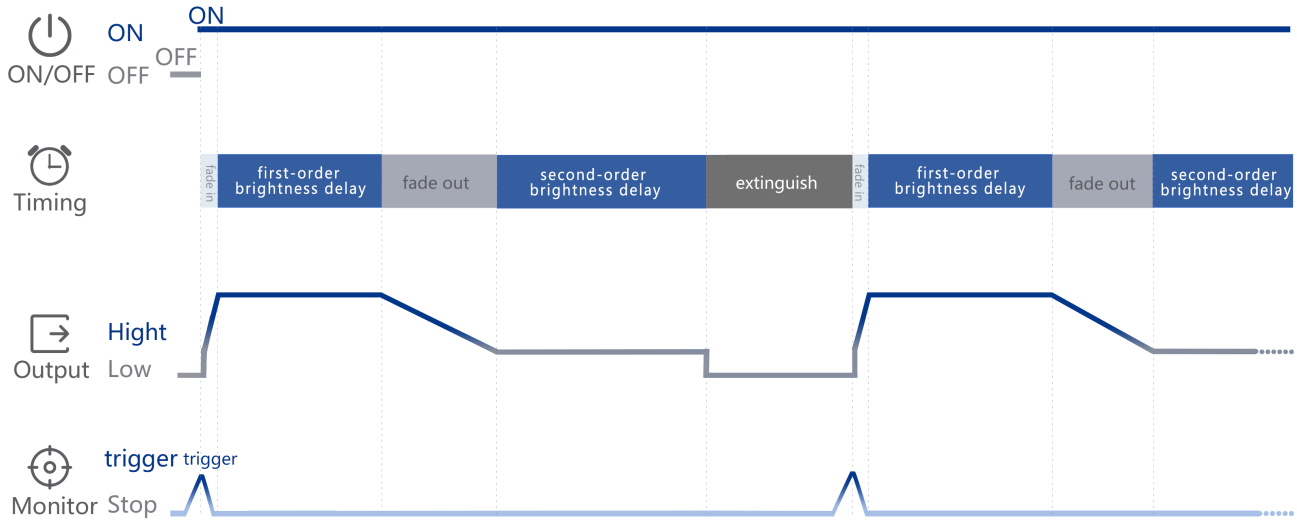
unit： m　　hanging height 3m (measured)



Notes:

② The test distance range is based on an indoor installation environment with the sensor hanging at a height of 3m.
The tester is 170cm tall, weighs 65-75kg, and walks at a speed of 1m/s.
The range may vary depending on the installation scenario; actual testing is subject to change.

Timing diagram



Small program interface

Support small program and APP control

Link to instructions on how to use the WeChat app:
"https://www.easydetek.com/document/EDQ21H微信小程序使用说明.pdf"

Product Naming Law

ED	Frequency Band	Product Categories	Product Subdivision	Product Number	photosensitive	Serial number
ED	Q	2	1	H	N	01
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】:EDQ21H-N-01

【PCB version number】:EDQ21H-PWR-VA

【Software version number】:0xF656

Historical revision record

Version	Time	Description	Note
V1.0	2025-05-14	First edition	-

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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