



SHENZHEN HAISEN TECHNOLOGY CO.,LTD

# PRODUCT SPECIFICATION

PRODUCT Microwave Motion Sensor For LED Panel And Troffer

MODEL US002-01VR-1,US002-01VR-2

SCOPE OF APPLICATION This specification is applicable to describe the function and use of US002-01VR-1,US002-01VR-2 inductor of Shenzhen Haisen Technology Co.,Ltd

DATE 2020.12.03

APPROVED	CHECKED	APPROVAL

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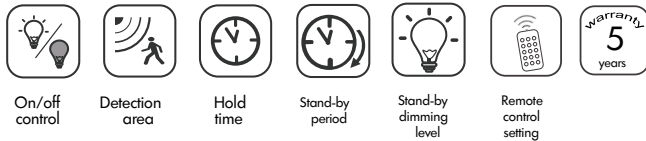
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## DC input Remote control

Model: US002-01VR-1  
US002-01VR-2

- DC input
- Compact sized suitable for ceiling light, troffer , triproof light, LED tube and etc.
- Remote control.
- 5 year warranty.

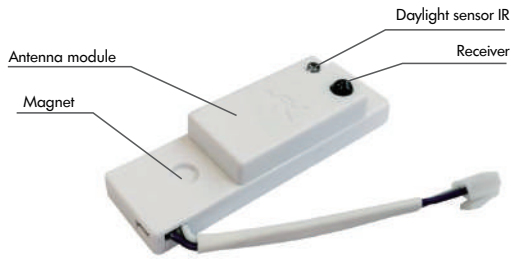


## Technical data

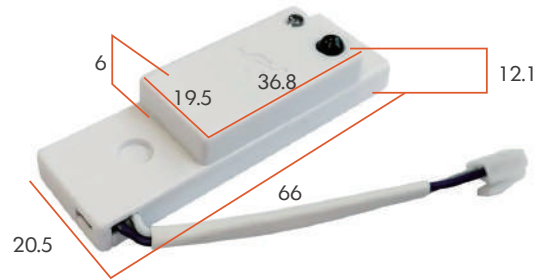
Operating voltage	10.5-15V DC (supply current >50mA)
Operating current	< 30mA
Output	DIM/1-10V
Stand-by power	< 0.5W
Control line	US002-01VR-1 : Cable length 60mm , White 12V, Gray GND/DIM-, Purple DIM+ US002-01VR-2 : Cable length 300mm , Black 12V, Yellow GND/DIM-, Purple DIM+
Detection area	100%/75%/50%/25%
Hold-time	5s/30s/1 min/3 min/5min/10min/20min/30min
Daylight threshold	2lux/10lux/30lux/50lux/80lux/120lux/Disable
Stand-by period	0s/10s/30s/min/5min/10min/30min/+∞
Stand-by dimming level	10%/20%/30%/50%
Microwave frequency	5.8GHz±75MHz
Microwave power	< 0.3mW
Mounting height	Max.6m (ceiling mounted)
Detection range	Radius:2-5m(ceiling mounted)
Detection angle	360°(ceiling mounted); <150° (Wall Mounted)
Operating temperature	-40°C~+80°C
Size	66*20.5*12.1 mm
Warranty	5 years

Note: Different applications and places will make different detection distance, our result is just for your information. Motion sensor setting and dimming setting please refer to remote control HD03R/HD05R.

## Mechanical structure

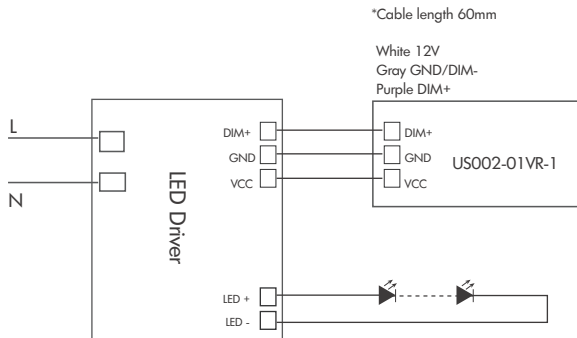


## Dimensions (Unit: mm)

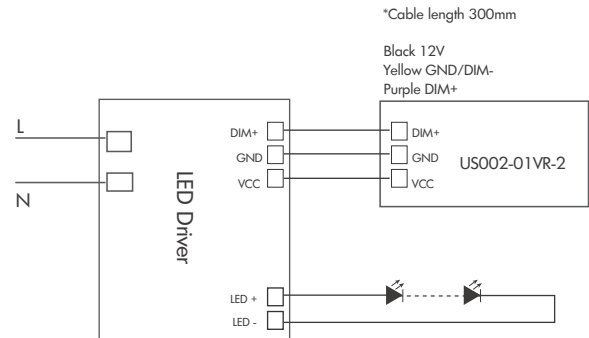


## Wiring diagram

1. US002-01VR-1

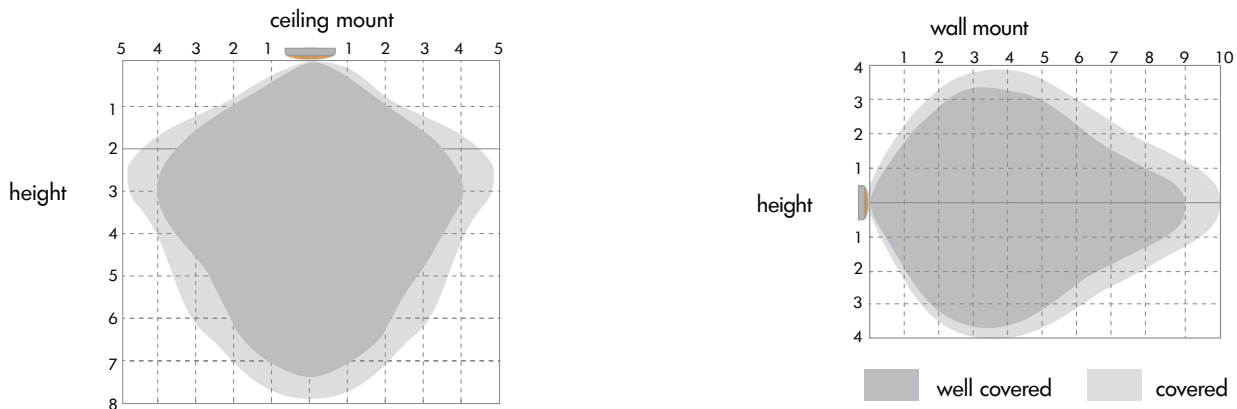


2. US002-01VR-2

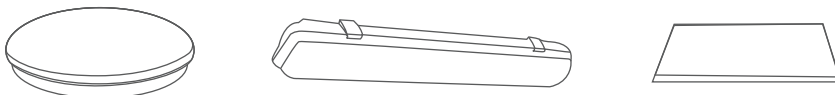
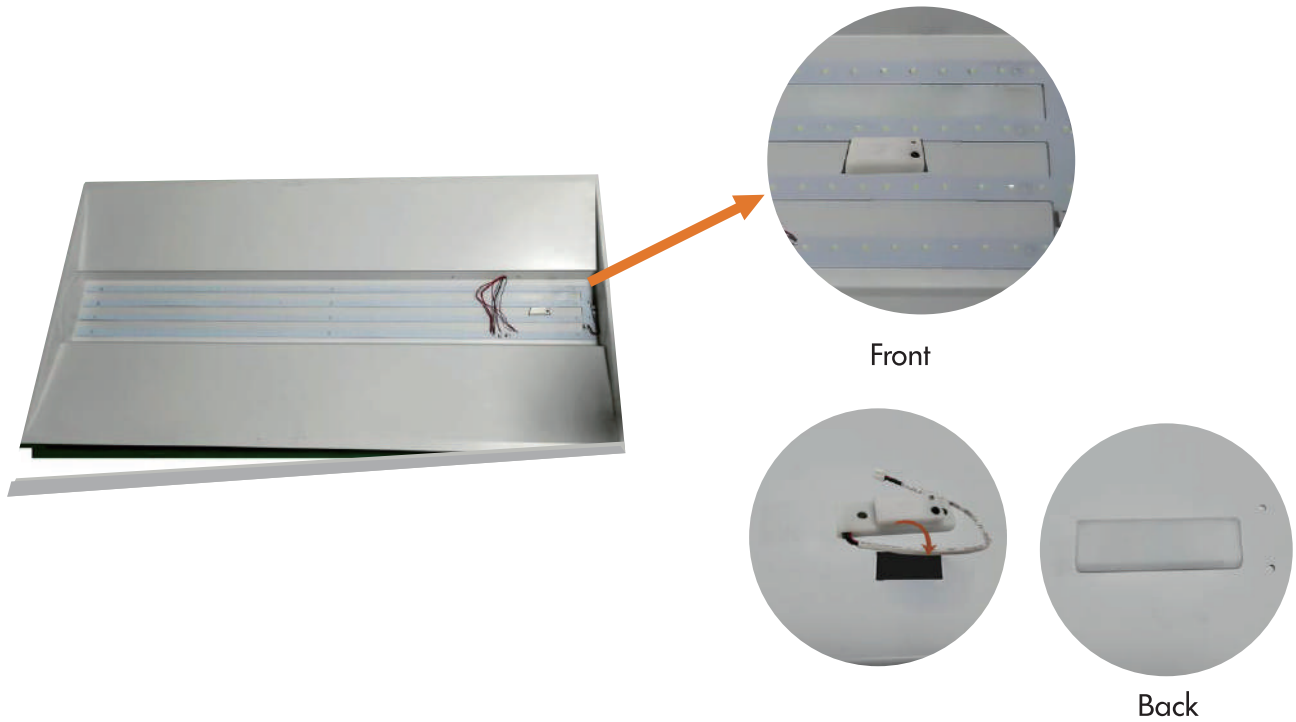


## Detection coverage (Unit: ft)

The Diagram as below shows the detection radius under 100% of detection range



## Installation Method



### Suitable fixtures:

ceiling light, troffer, triproof light, batten light, linear light, LED tube and etc.

## Application

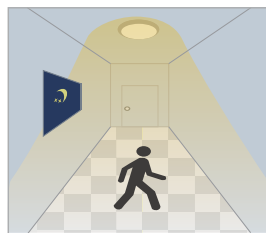
### 1. Automatically ON/OFF function:

The Stand-by period is set to "0s".

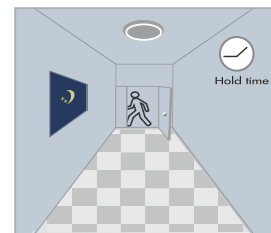
Light on when detect movement and off after people leave at night. Applications: Corridor, Staircase.



With sufficient daylight, even when motion detected, light remains OFF.



With insufficient daylight, when motion detected, light ON.



After the last detection and the present hold time elapsed, light OFF.

## 2. No daylight function

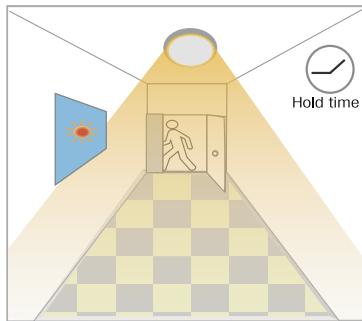
The daylight threshold is set to "Disable".

Light on when detect movement, After people leave, Light off after stand-by period.

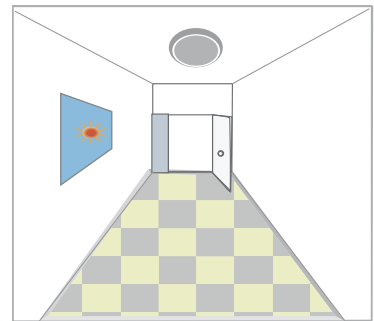
Applications: Dim places such as Basement Parking, Underpass.



When motion is detected, the sensor will switch on the light to 100% brightness.

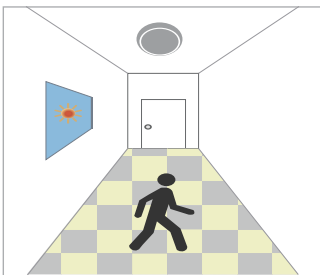


After people leave the detection area, light remains 100% brightness within hold time.



After the last detection and the present hold time elapsed, light OFF.

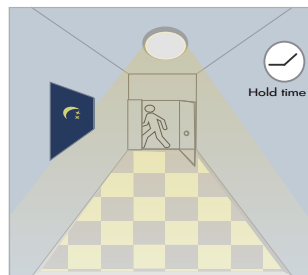
## 3. Function Demo - Dimmable control/Corridor function



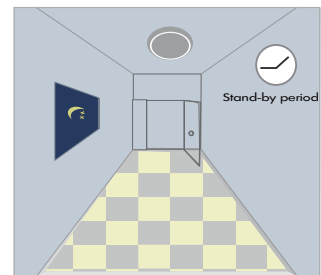
With sufficient daylight, even when motion detected, light remains OFF.



With insufficient daylight, when motion detected, light ON.



After last detection, the light will be dimmed down to the stand-by dimming level (10%,20%, 30%,50%) after holdtime.



After the stand-by period, light OFF.

## Attention

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1. Please read the instructions carefully before using this product and keep it we for all users to read at any time.
2. The sensor should be installed by qualified electrician and ensure power is o before the installation.
3. We reserve the right to modify any incorrect text, image and necessary technic parameters.
4. Any unauthorized modification is forbidden, otherwise all guarantees will immediately invalid.

## Installation precautions

1. Microwave sensor can be installed in any lamp except the one with full metal shell.
2. The detected surface cannot be shielded by metal object.
3. Make sure the microwave module is completely exposed outside.
4. The detection surface of the sensor module shall be installed facing the detection area.
5. Should be kept away from the driver to avoid interference generation and lamp flashing.
6. Wiring must be strictly in accordance with the wiring diagram to avoid short circuit.

## Application Environment

- 1.Suitable for indoor installation because outdoor factors such as rain pouring, wind blowing or tree swing will trigger the sensor.
- 2.Shall not be installed close to operating machines such as ventilator/ceiling fan to avoid trigger by vibration.
- 3.Shall not be installed in the small places or those with metal shelter.
- 4.Shall not be stand-alone ceiling-mounted.

## User Notes

- 1.Microwave can penetrate different materials suggested to be thinner than 20mm, except metal.
- 2.The driver working with the sensor should stay stable voltage and floating less than 10%.
- 3.Detection area/distance will be affected by movement speed, mounting height and angle and etc.
- 4.Lux test was delivered in sunny days without lampshade, it could be different in real applications.

## Remote for dimmable sensors with memory function

### HD03R

**ON/OFF**

- "ON/OFF" key only functions as a switch of the light.
- If press this button to turn off the lamp before it's short-circuited, the lamp will remain off after power-on again.

**Auto Mode**

Press "Auto Mode" button, the sensor starts to work and all settings remain the same before the light gets switched on/off.

**Reset**

- Press "Reset" button, change brightness to max level.
- Press "Reset" button, products with DIP switch will be controlled by DIP switches; otherwise all the setting will be just initial, that is 100% detection range, hold time 5S, no stand-by time and daylight threshold disabled.

Flick after press any button

Flick only after press "Apply" button

**+/-**

- To adjust brightness 10-100% in on/off mode.
- To adjust highest brightness 60-100% in sensor mode.

**Start**

Press "Start" to customize scene, users can change detection range, daylight threshold, holdtime, standby dimming level and standby period.

**Memory**

- Press "Memory" to save all the settings.
- The settings remained as the last time if not get reseted values.

**Apply**

- Press "Apply" to deliver the saved setting.
- Press "Apply" without "memory" will make all the setting one-time operation.
- Settings should be done within 30S, otherwise it exits memory mode.

Detection area (Press to define detection area 100%/75%/50%/25%.)

Hold time (Press to define holdtime 5s/30s/1min/3min /5min/10min/20min/30min .)

Stand-by dimming level (Press to define stand-by dimming level 10%/20%/30%/50%.)

Stand-by period (Press to define stand-by period 0s/10s/30s/1min/5min/10min/30min/+∞.)

Note: "0s" means no standby period; "+∞" means unlimited standby period.

Daylight threshold (Press to define daylight level 2Lux/10Lux/30Lux/50Lux/80Lux/120Lux/Disable.)

Note: Disable means light will be turned on once sensor detects movement, regardless of the ambient lux.

**Test (2s)**

The button "Test (2s)" is for testing purpose after commissioning. Pressing this button, the sensor goes to test mode (hold time is only 2s)

## HD03R Instruction

### Memory & Apply Mode

1. Press "ON/OFF button" to turn on the light or off.
2. To reset the parameters, Please follow the steps as below:  
Step 1 - Press ON, to turn on the light if it was off at the start.  
Step 2 - Press "Start" to the well-setting sensor.  
Step 3 - Press the button of Detection range, Hold time, Stand-by dimming level, Stand-by period and Daylight threshold one after the other in sequence.  
Step 5 – Press "Memory" to memorize the settings.

**Note: The interval of each parameter setting shall be controlled within 30s.**

3. To programme other lights in the array that have similar sensors to the same programme.  
Step 1 - Press "ON" to the second sensor  
Step 2 - Press "Apply"

### Isolated Setting Mode

1. Press "ON/OFF button" to turn on the light or off. Press "Auto Mode", the remote will activate settings that were saved last or remain at the factory default settings.
2. To reset the parameters, Please follow the steps as below:  
Step 1 - Press ON, to turn on the light if it was off at the start.  
Step 2- Press any button of "Auto Mode", "Reset" , Test" and "Apply" to begin the sensor detection mode.  
Step 3 - Press the button of Detection range, Hold time, Stand-by dimming level, Stand-by period and Daylight threshold one after the other in sequence.

### Notes:

1. Settings will be saved automatically and remain until you press reset again.
2. Light will flicker when setting each parameter.