



Infrared (IR) Proximity/line follower/Obstacle Detecting Sensor Module

Support

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SKU: PH_IMP_09

Price: ₹100.00 Original price was: ₹100.00. ~~₹50.00~~
Current price is: ₹50.00.

Stock: instock

Categories: [Components & Spares](#), [Sensors & Modules](#)

Tags: [Arduino accessory](#), [DIY electronics](#), [Engineering project component](#), [Infrared communication](#), [Infrared sensor](#), [IR module](#), [Robotics module](#), [Science activity tool](#)

Product Description

IR Sensor module has great adaptive capability of the ambient light, having a pair of infrared transmitter and the receiver tube, the infrared emitting tube to emit a certain frequency, encounters an obstacle detection direction (reflecting surface), infrared reflected back to the receiver tube receiving, after a comparator circuit processing, the green LED lights up, while the signal output will output digital signal (a low-level signal), through the potentiometer knob to adjust the detection distance, the effective distance range 2 ~ 10cm working voltage of 3.3V-5V. The detection range of the sensor can be adjusted by the potentiometer, with little interference, easy to assemble, easy to use features, can be widely used robot obstacle avoidance, obstacle avoidance car assembly line count and black-and-white line tracking and many other occasions.

Features of IR Sensor Module:

- When the module detects obstacles in front of the signal, the circuit board green indicator light level, while the OUT port continuous output low-level signals, the module detects a distance of 2 ~ 10cm, detection angle 35 °, the detection distance can be potential adjustment with adjustment potentiometer clockwise, the increase in detection distance; counterclockwise adjustment potentiometer, the detection distance decreased.
 - the sensor active infrared reflection detection, target reflectivity and shape of the detection distance of the key. The black minimum detection range, white maximum; small area object distance is small, a large area from the large.
 - The sensor module output port OUT can be directly connected with the microcontroller IO port can also be driven directly to a 5V relay; Connection: VCC-VCC; GND-GND; OUT-IO.
 - The comparator using LM393, stable.
 - 3-5V DC power supply module can be used. When the power is turned on, the red power LED is lit.
 - With the screw holes of 3mm, easy to install.
 - Board size: 3.1CM * 1.5CM.
 - Each module in the delivery has threshold comparator voltage adjustable via potentiometer, special circumstances, please do not adjust the potentiometer.
-

Interface(3-wire):

- VCC external 3.3V-5V voltage (can be directly connected with the a 5v microcontroller and 3.3v microcontroller).
 - GND external GND.
 - OUT board digital output interface (0 and 1).
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* Product Images are shown for illustrative purposes only and may differ from actual product.



Infrared Based with Goggles

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SKU: PH_IMP_44

Price: ₹500.00 Original Price
Current price is: ₹250.00

Stock: instock

Categories: [Computer](#)
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Tags: [Arduino Eye](#)
[Sensor](#), [Digital Blink](#)
[Module](#), [eye blink s](#)
[Detection Sensor](#), [E](#)
[Sensor](#), [Fatigue Det](#)
[Sensor](#), [Hands-Free](#)
[Sensor](#), [Interactive](#)
[Eye Blink Sensor](#), [IF](#)
[Assistive Sensor](#), [R](#)

Product Description

The **IR-Based Eye Blink Sensor** is an innovative device designed to detect eye movements, specifically eye blinks, using infrared technology. It utilizes an infrared emitter and detector to monitor the presence or absence of a reflection from the eye. When the eye blinks, the reflection changes, triggering the sensor to send a signal. This sensor is ideal for creating hands-free control systems and monitoring applications, such as in assistive technologies or robotics. The IR-based sensor is highly sensitive, lightweight, and easy to integrate into various electronic projects, making it perfect for both beginners and professionals.

Uses:

- **Assistive Technology:** Can be used in communication devices for individuals with physical disabilities, allowing users to control devices like computers or mobile phones with eye blinks.
- **Hands-Free Control Systems:** Ideal for controlling home automation systems, lights, or appliances using eye movements, providing convenience for users with limited mobility.
- **Robotics and Automation:** Integrated into robots or automated systems to detect eye movements for user interaction or safety features.
- **Monitoring and Surveillance:** Used in security systems to detect signs of fatigue or attention loss in drivers, helping prevent accidents.
- **Interactive Games:** Incorporated into gaming systems to detect eye blinks, adding an exciting element to gameplay where players can control the game with eye movements.

Examples:

[1. Anti Sleep alarm with driver safety using UNO SMD](#)

[2. Anti sleep Alarm with vibrator using IC 358](#)

[3. Smart Vehicle for Driver Safety Using Multiple Sensors](#)

[4. Alcohol & Eye Blink Sensing based Vehicle Accident Prevention System using Arduino UNO & LCD](#)

For More Examples Visit Our YouTube Channel [Project Hub](#) .

Specification Details

Technology Used Infrared (IR) Sensor

Detection Method Eye Blink Detection via Infrared Reflection

Operating Voltage 3.3V - 5V

Sensor Type Passive Infrared (PIR) or Active IR (Emitter and Detector)

Sensitivity High sensitivity to eye blink detection

Output Type Digital Output (High/Low or Logic Level)

Response Time Fast response (milliseconds) for quick eye blink detection

Power Consumption Low power consumption (ideal for battery-powered projects)

Detection Range 5cm to 30cm (depending on the ambient light and setup)

Mounting Type Surface mount, small footprint for easy integration

Size Compact and lightweight for portability

Operating Temperature -10°C to 50°C (depending on the model)

Applications Assistive technology, hands-free control systems, robotics, gaming

Integration Compatibility Compatible with microcontrollers like Arduino, Raspberry Pi, etc.

Response Action Detects eye blink as a trigger for control or monitoring actions

Output Interface Digital (GPIO) or Analog (depending on the sensor version)

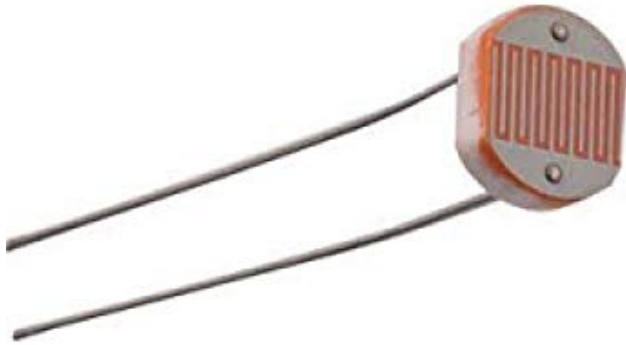
Accuracy Detects blink with high accuracy and minimal false triggers

Reliability Long-lasting with minimal wear (due to no mechanical parts)

Ease of Use Easy to integrate into projects with basic wiring and programming

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LDR - Light Dependent Resistor, Photo Resistor



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SKU: PH_COM_191

Price: ₹20.00 Original price was: ₹20.00. ~~₹8.00~~ Current price is: ₹8.00.

Stock: instock

Categories: [Analog Sensor](#), [Basic Components](#), [Components & Spares](#), [Resistors](#), [Sensors & Modules](#)

Product Description

Ultrasonic Distance Sensor Module - HC-SR04



Support

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SKU: PH_IMP_10

Price: ₹200.00 Original price was: ₹200.00. ~~₹85.00~~ Current price is: ₹85.00.

Stock: instock

Categories: [Components & Spares](#), [Sensors & Modules](#)

Product Description

Ultrasonic Distance Sensor provides very short (2CM) to long-range (4M) detection and ranging. The sensor provides precise and stable non-contact distance measurements from about 2cm to 4 meters with very high accuracy. It can be easily interfaced to any microcontroller.

Description:

This ultrasonic sensor module can be used for measuring distance, object sensor, motion sensors etc. High sensitive module can be used with microcontroller to integrate with motion circuits to make robotic projects and other distance, position & motion sensitive products. The module sends eight 40Khz square wave pulses and automatically detects whether it receives the returning signal. If there is a signal returning, a high level pulse is sent on the echo pin. The length of this pulse is the time it took the signal from first triggering to the return echo.

Features:

- Sensor Type: Ultrasonic
 - Output: Digital Sensor
 - Voltage: 5VDC
 - Detection distance: 2cm-400cm (0.02M - 4.0M)
 - Static current: < 2mA
 - Level output: high-5V
 - High precision: up to 0.3cm
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