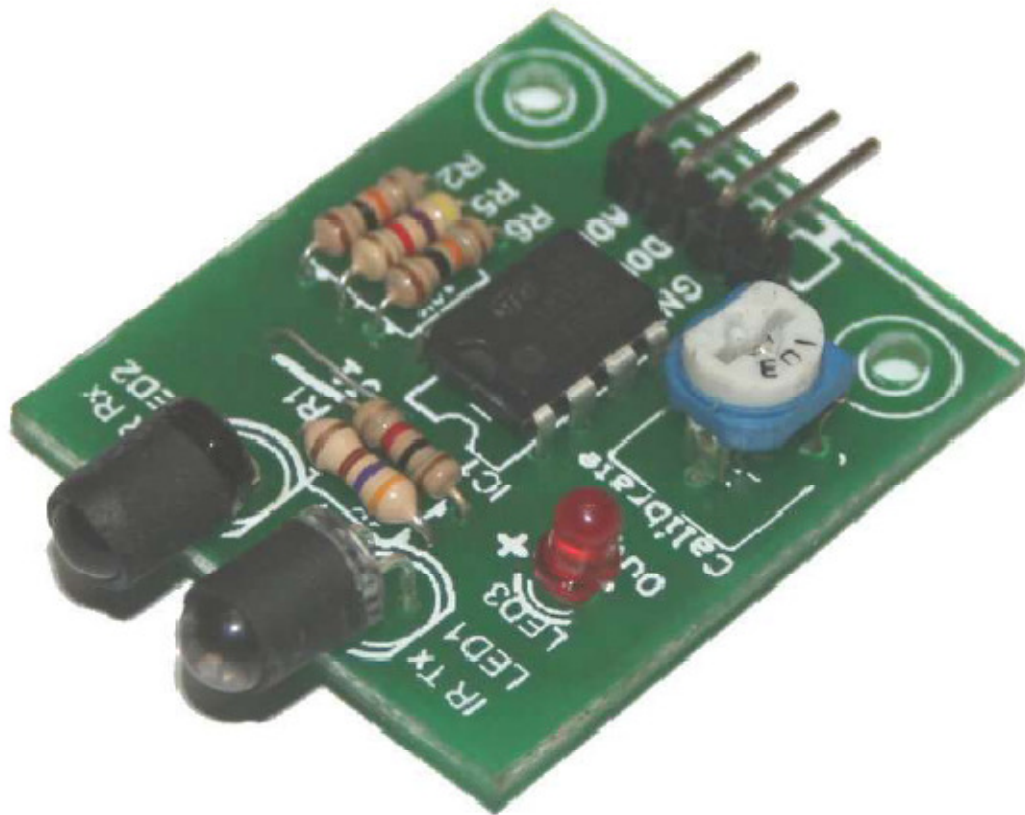


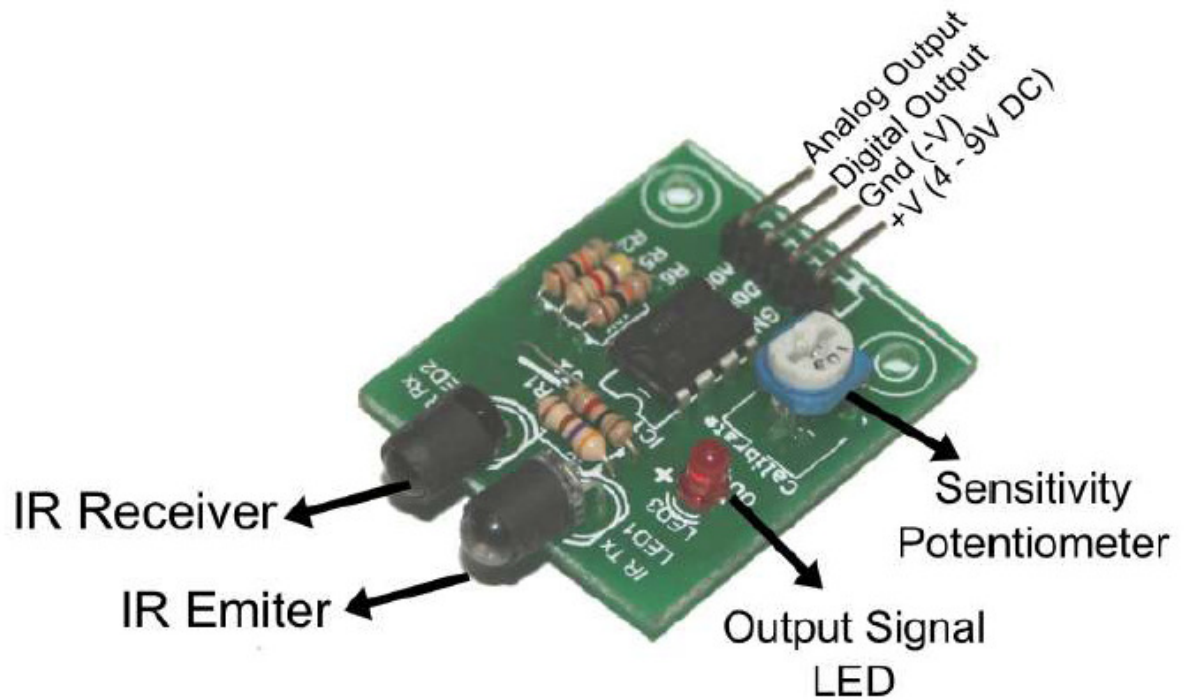
# IR Multipurpose Sensor Starter Guide



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## 1. Overview



## 2. Features

This is a multipurpose infrared sensor which can be used for obstacle sensing, color detection (between basic contrasting colors), fire detection, line sensing, etc and also as an encoder sensor. The sensor provides a digital and an analog output. The sensor outputs a logic one (+5V) at the digital output when an object is placed in front of the sensor and a logic zero (0V), when there is no object in front of the sensor. An onboard LED is used to indicate the presence of an object.

The sensor outputs an analog voltage between 0V and 5V, corresponding the distance between the sensor and the object at the analog output. The analog output can be hooked to an ADC to get the approximate distance of the object from the sensor. IR sensors are highly susceptible to ambient light and the IR sensor on this sensor is suitably covered to reduce effect of ambient light on the

sensor. The sensor has a maximum range of around 40-50 cm indoors and around 15-20 cm outdoors. Operating voltage: 3 to 9V (Range maximum for 9V)

- Range of 50 cm for white objects and 35 cm for black objects (varies with surrounding light conditions)
- Comes with a highly useful analog output along with an easy to use digital output
- Sensor comes with ambient light protection
- The sensor has 2 holes of 3mm diameter for easy mounting.

## 3. Using the sensor

The sensor has a simple 4 pin interface → +V(5V), Gnd, Digital Out and Analog Out. The sensor can operate within an operating voltage of 4 to 9V. The input power should be provided to the +V (Vcc) and the Gnd pin. The digital output of the sensor is provided on the third pin – Dout. The analog output of the sensor is provided on the third pin – Aout.

Once the sensor is powered up, you will have to calibrate the sensor for the specific environment it will be used in. To calibrate the sensor, you will have to set the potentiometer by turning its knob by hand or a screw driver. You will have to power the sensor and rotate the knob of the potentiometer until the output of the sensor changes from high to low.

## 4. Troubleshooting and Getting Help

We are committed to ensure that our customers' projects, designs and research go as efficiently and as smoothly as possible. And for this we promise and provide an excellent after-sales support facility.

Due to the nature of the products we sell, we are sure to receive a lot of request for support. In anticipation of this, we have created a separate section, "Resources" , where we have many tutorials covering how to use our products. Your first step to seek support from us would be to surf through the "Resources" section for answers to your query.

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If our "Resources" section doesn't address your query, mail us directly at [sales@ilabzelectronics.com](mailto:sales@ilabzelectronics.com) in for further support.

When you contact us for support, please keep the following things in mind -

- you will have to provide us with the invoice information(order no., date of purchase, etc.)
- provide us with all the required details(operating system being used, compiler beingused, etc)
- do not ask us questions or doubts about products we do not sell
- do not contact us 2 days before a project deadline for any sort of immediate or urgent support
- do not mail us a rephrased version of your project
- contact us only if you know what you are doing, do not expect any sort of help from our side otherwise