Description:
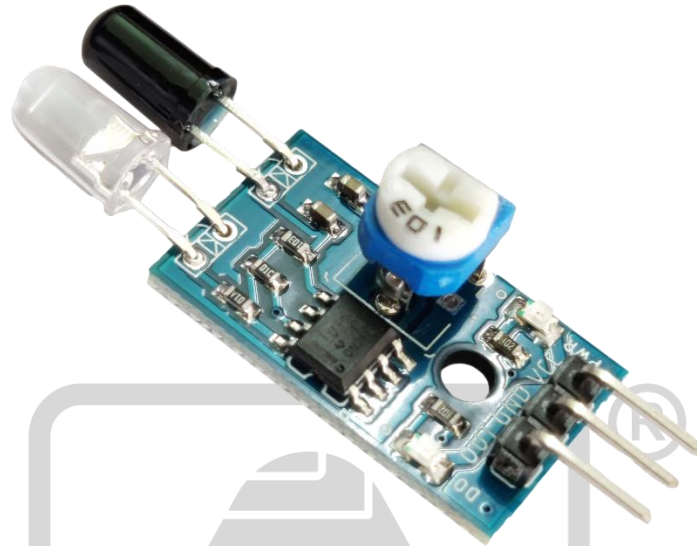
ADIY IR Sensor senses whether there is an object near it or not. The IR stands for Infrared sensor. Infrared is the light out of our visible spectrum. This module can be used in obstacle detection in autonomous robots and cars, in positional feedback for control system, industrial safety system, Wheel encoder etc.
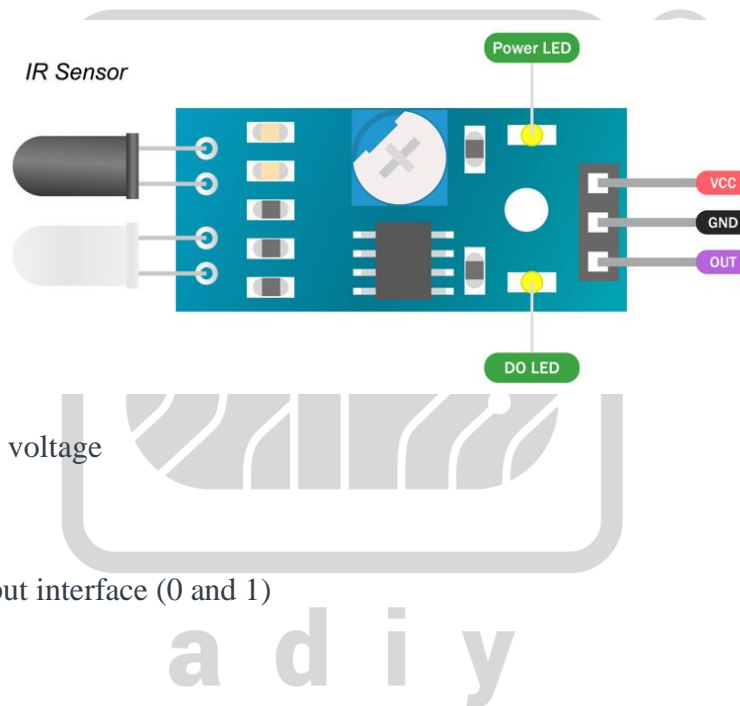
Features:

1. Potentiometer knob to adjust the detection distance
2. Obstacle detection
3. Onboard detection indication
4. Easy to assemble and use
5. Comparator using LM393

Specification:

- Operating Voltage: 3 to 5 VDC

- Measuring Range: 2 to 10 cm

- Detection Angle: 35°

- Current consumption :- 20mA

Pin Configuration:

VCC: 5V external voltage

GND: Ground

OUT: Digital output interface (0 and 1)

How it works:

The white LED here is an IR LED which works as the transmitter and the component next to the IR LED is a photodiode that works as the receiver in the IR sensor. The IR transmitter continuously emits the IR light and the IR receiver keeps on checking for the reflected light. If the light gets reflected back by hitting any object in front it, the IR receiver receives this light. This way the object is detected in the case of the IR sensor.

The blue knob here is a potentiometer. User can control the range i.e. from how far you want to detect the object by changing the value of the potentiometer.

An IR sensor has two small LED indicators – one for power, which is ON the entire time the sensor is ON; the other is the Signal LED which detects the object.

Application:

- Night Vision Devices

- Radiation Thermometers

- Flame Monitors

- Water Analysis

- Rail Safety