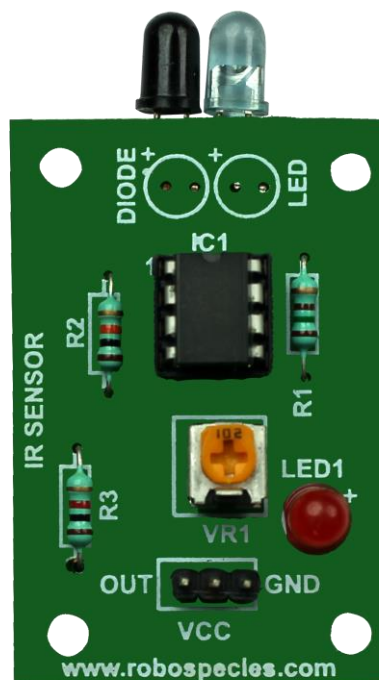


*presents*

## INFRA-RED SENSOR (RS-1003)



*Learn Everything Here*

# GURAMY

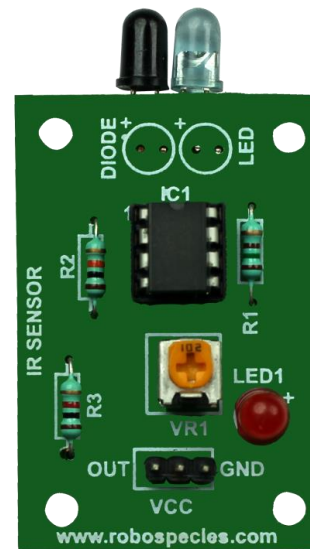
A RoboSpecies Initiative [.com](http://www.guramy.com)

## INFRA-RED SENSOR (RS-1003)

IR (INFRA-RED) sensor is based on LM 358 IC which is an Operational amplifier acting as a comparator. The comparator compares the analog voltages of potentiometer and the voltage generated by the photodiode. The two voltages are applied on the two terminals of the IC and correspondingly it generates a digital output on the output pin that is indicated by a Red Led.

### Technical Specification:-

- ✓ Digital output
- ✓ High reliability
- ✓ High radiant intensity
- ✓ Peak wavelength ~940nm
- ✓ 2.54mm lead spacing
- ✓ Low forward voltage



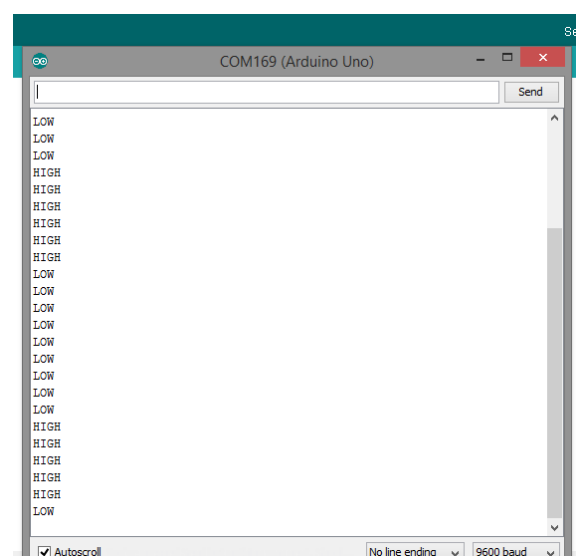
INFRA-RED SENSOR

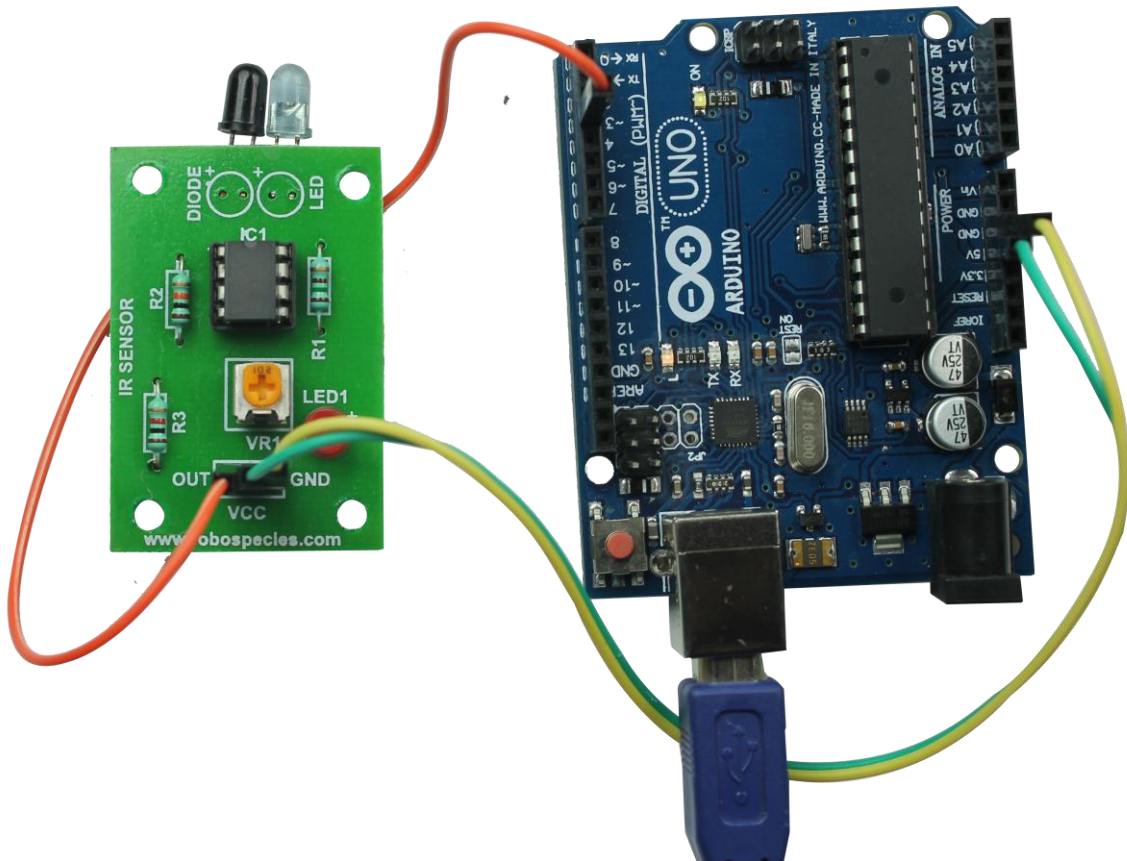
### HOW TO USE INFRARED SENSOR:-

The IR sensor is compatible with various microcontroller boards like 8051, Arduino, pic etc This shield is based on the working of a circuit comprising op-amp, an IR led and photodiode the output generate by the sensor is due the comparator action of the op-amp (LM-358). The IC compares the two voltages that is generated by the photodiode and the potentiometer. When the value of voltage  $V_d$  generated by photodiode is greater than the voltage set on the potentiometer, the output s HIGH and vice versa.

### Sample Program:-

```
void setup()
{ pinMode(2, INPUT);
  Serial.begin(9600);}
void loop()
{
  int i = digitalRead(2);
  if (i == HIGH)
  Serial.println("HIGH");
  else
  Serial.println("LOW"); }
```





## OUTPUT:-

Here INFRARED sensor is connected as a input device whenever it senses something it generates a HIGH output that can be seen on the serial monitor of the Arduino IDE and also on the shield itself the red led will glow.

For detailed explanation and understanding buy our complete Robotics Cook Book- **[“Robotics Made Easy”](#)**.

