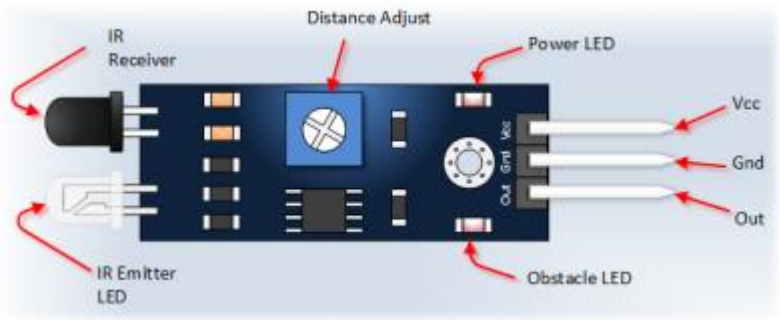
# IR SENSOR

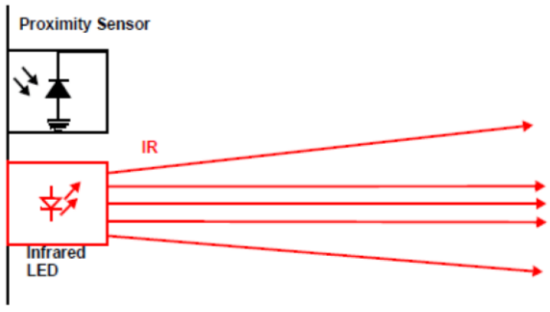
## INFRARED SENSOR:

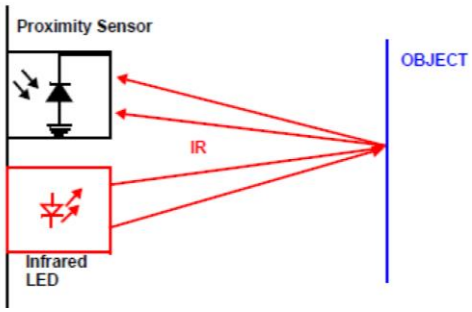
Is the sensor that detect infrared radiation or change in the radiation from outer source or inbuilt source.

## Working:

IR sensor's TX transmits the signal continuously when an object comes in middle then the signal gets reflected to the RX receiver and then it gets activated.

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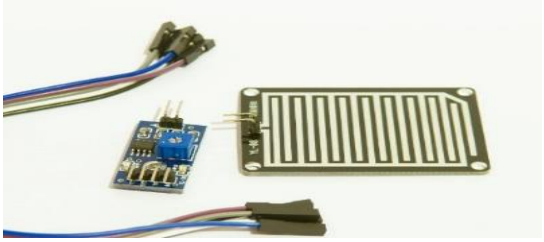
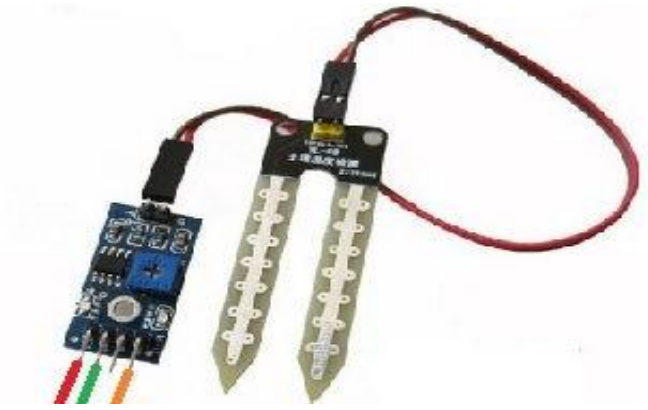
# RAIN SENSOR

- The rain sensor detects water that completes the circuits on its sensor boards' printed leads.
- The sensor board acts as a variable resistor that changes depending upon wet and dry.
- In short, the wetter the board the more current that will be conducted.



# SOIL MOISTURE SENSOR

- The soil moisture sensor works similar to rain sensor as it detects water that completes the circuits on its sensor boards' printed leads.
- The resistance changes depending upon wet and dry condition of soil.
- In short, the wetter the board the more current that will be conducted.
- The circuit gets activated when the soil is wet then it sends the signal as the soil is wet.



# LDR SENSOR

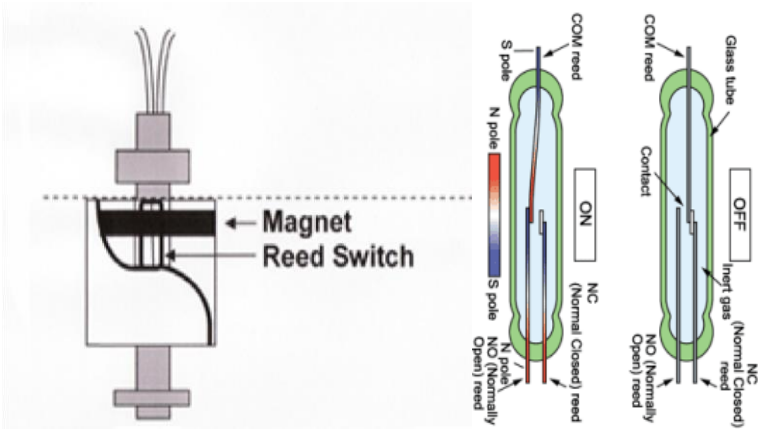
LDR (Light Dependent Resistor): An LDR is a component that has a (variable) resistance that changes with the light intensity that falls upon it. This allows them to be used in light sensing circuits.

This is used in Laser Trip Wire Project for security purpose.

It is also used for automatic ON and OFF for street lights.

# FLOAT SENSOR

FLOAT SENSOR: Is an electronic sensor that is used to measure Water level.




Working:

Float switch contain a reed switch.

- If liquid rises the reed gets activated by magnet inside the float and sends the output signal as 1.
- If the level of water is less the reed switch is deactivated and sends output signal as 0.

# CODE:

```
import RPi.GPIO as GPIO
import time
GPIO.setmode(GPIO.BOARD)
GPIO.setwarnings(False)
GPIO.setup(7,GPIO.IN) #Connect sensor to pin No. 7
GPIO.setup(8,GPIO.OUT) #Connect output (LED) to pin No.8

while True:
      if GPIO.input(7)==1:
            GPIO.output(8,1)
            print ("ON")
            time.sleep(1)

      elif GPIO.input(7)==0:
            GPIO.output(8,0)
            print ("OFF")
            time.sleep(1)

   GPIO.cleanup()
```

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