INTERNET OF THINGS

TITLE:SMART STREET LIGHT

PROJECT REVIEW

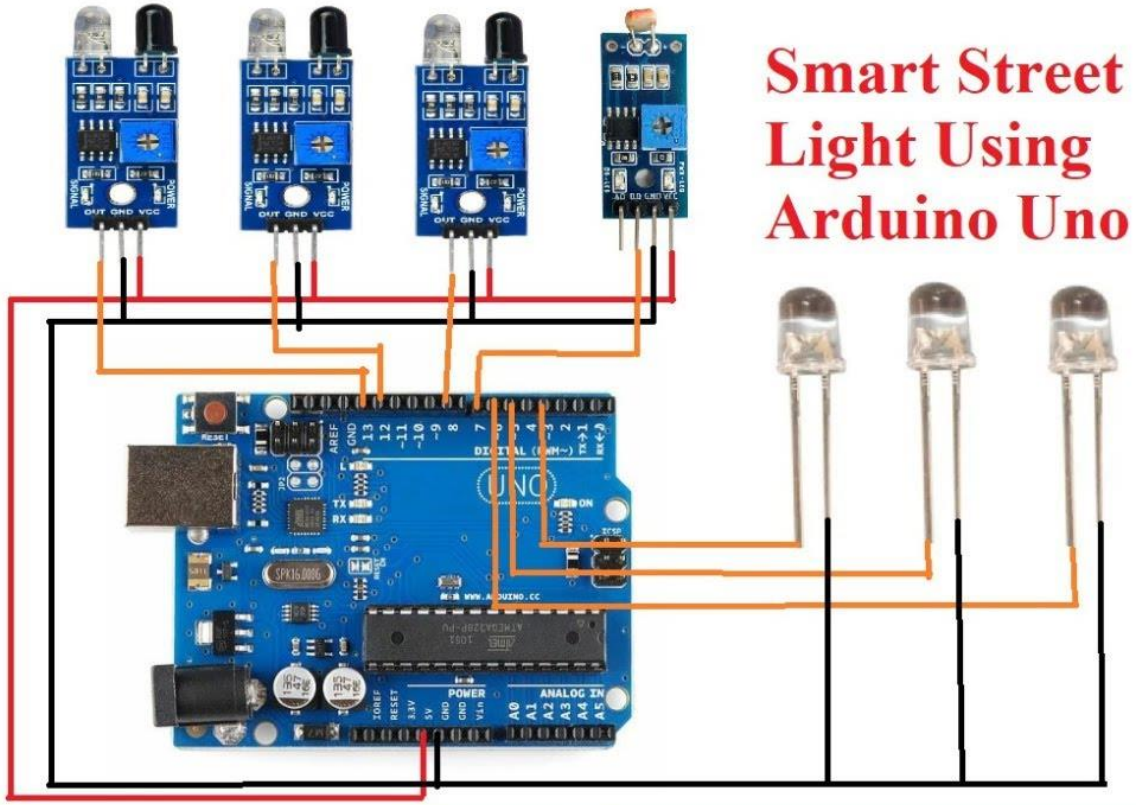
GROUP MEMBERS

1.SWETHA.P - 22BCA0066

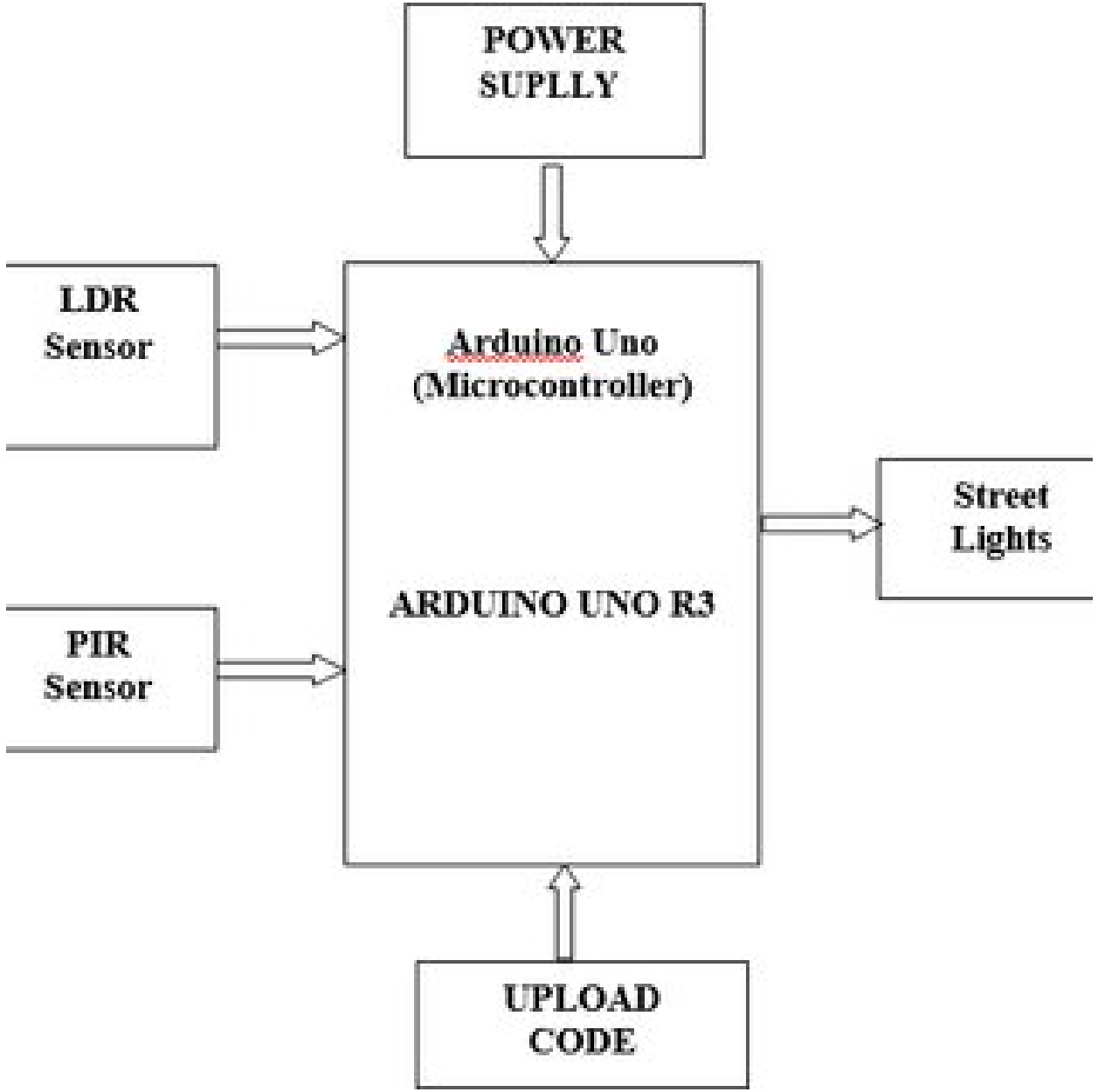
2.RATHISHA.R - 22BCA0068

3.HEMA KALAI SELVI.G - 22BCA0223

ARCHITECTURE OF SMART STREET LIGHT



CIRCUIT DIAGRAM OF SMART STREET LIGHT

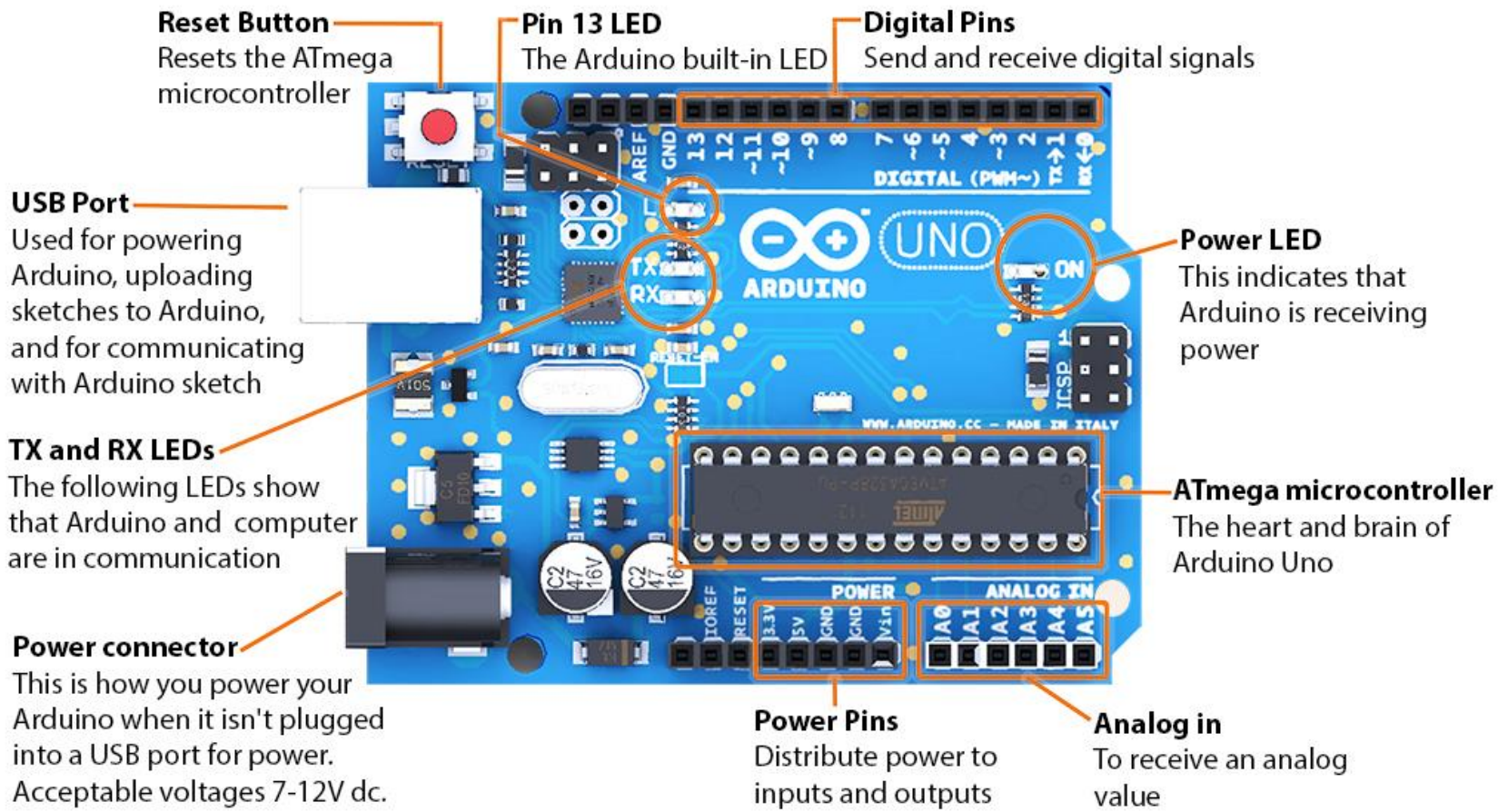


COMPONENTS USED

1.ARDUINO UNO

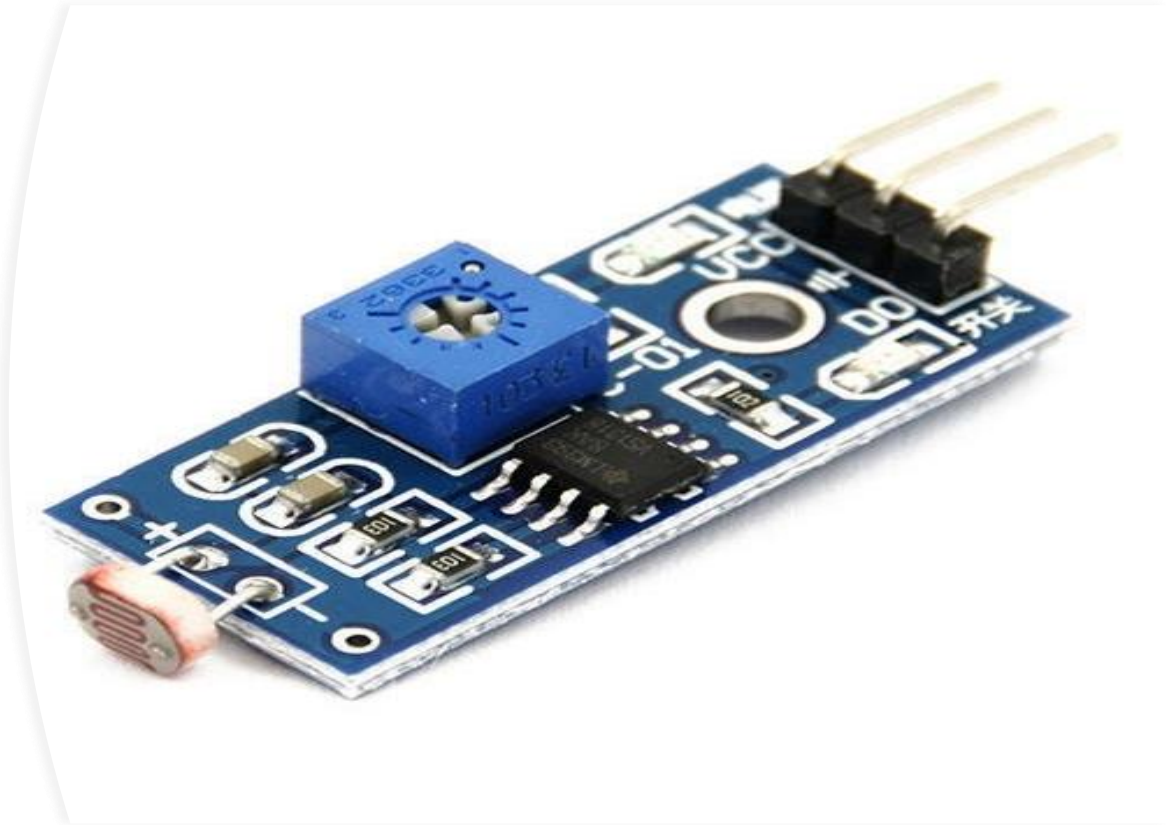
Arduino is widely used in IoT applications for collecting sensor data, processing it, and transmitting it to the cloud for analysis and control, enabling the development of smart and connected devices and systems.

ARDUINO UNO


Reset Button
Resets the ATmega microcontroller
Pin 13 LED
The Arduino built-in LED
Digital Pins
Send and receive digital signals
USB Port
Used for powering Arduino, uploading sketches to Arduino, and for communicating with Arduino sketch
Power LED
This indicates that Arduino is receiving power
TX and RX LEDs
The following LEDs show that Arduino and computer are in communication
ATmega microcontroller
The heart and brain of Arduino Uno
Power connector
This is how you power your Arduino when it isn't plugged into a USB port for power. Acceptable voltages 7-12V dc.
Power Pins
Distribute power to inputs and outputs
Analog in
To receive an analog value
DIGITAL (PWM~)
POWER
ANALOG IN
UNO
ARDUINO
ON

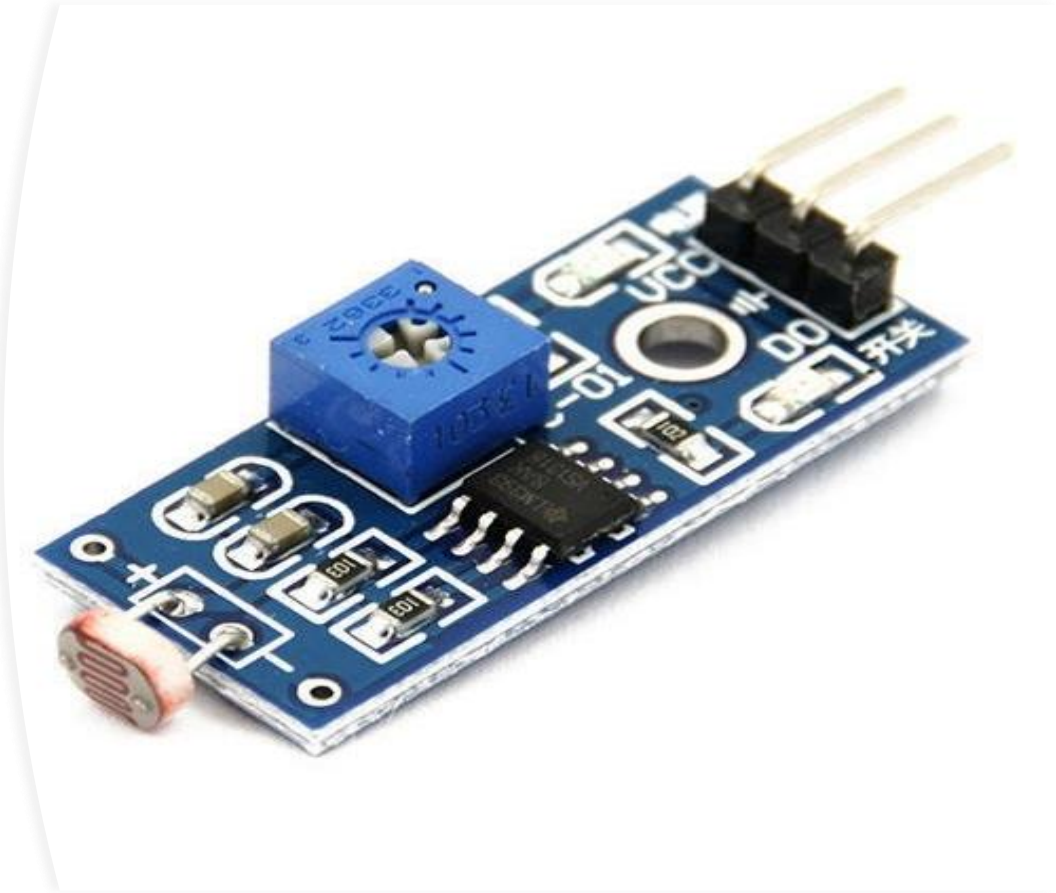
2.LDR SENSOR

- Light-dependent resistor
- Detects ambient light
- Converts light to resistance
- Low-cost sensing
- Detects absence/presence



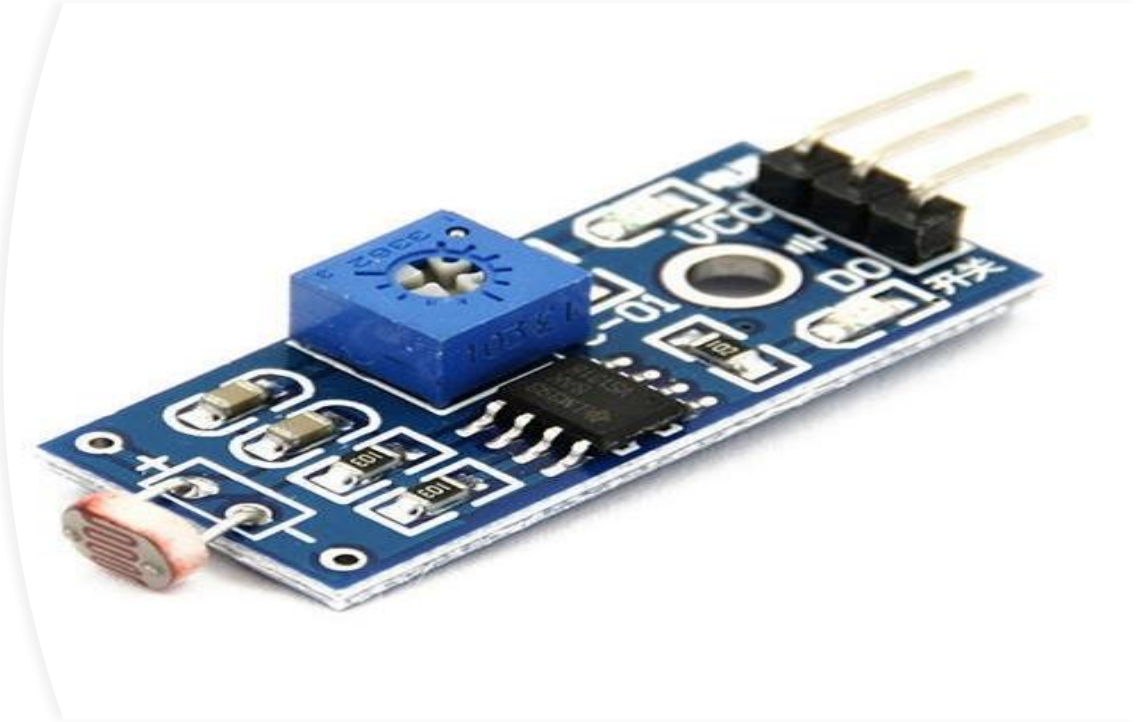
APPLICATIONS OF LDR SENSOR

- Smart Home Lighting
- Ambient Light Control
- Traffic Signal Control
- Streetlight Automation
- Solar Tracking Systems
- Environmental Monitoring



ADVANTAGES OF LDR SENSOR

- Long-Distance Detection
- Wide Detection Range
- Low maintenance
- Cost-Effective
- Quick Response Time
- Easy Integration



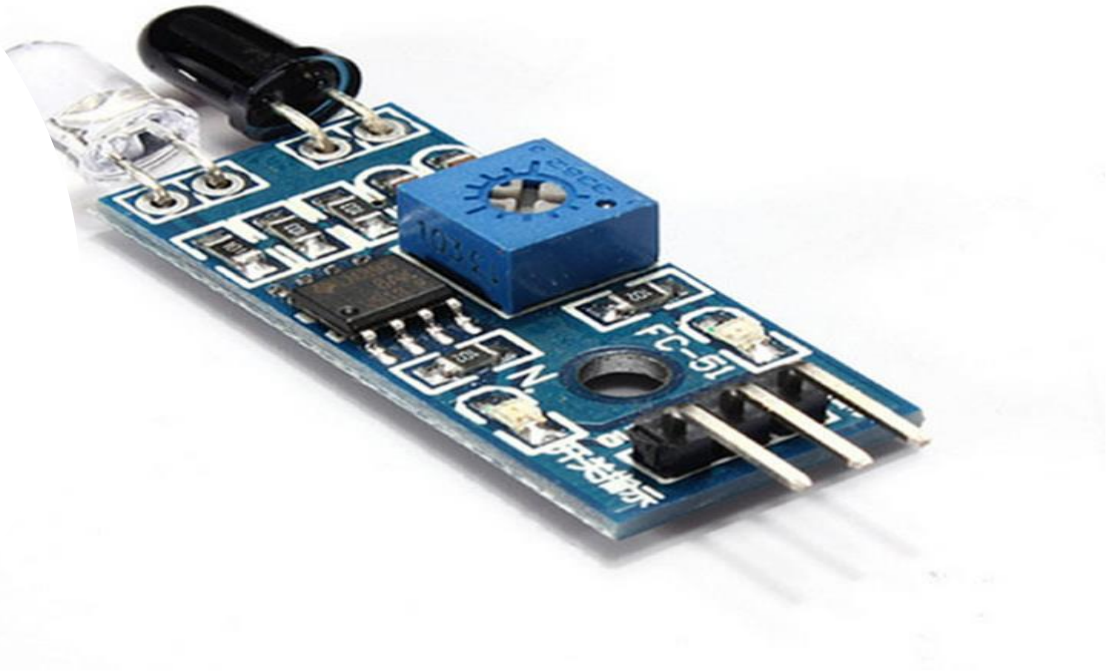
3.INFRARED(IR) SENSOR

- An electronic device, that emits the light in order to sense some object of the surroundings.

- An IR sensor can measure the heat of an object as well as detects the motion.

APPLICATIONS OF IR SENSOR

- Temperature Measurement
- Distance Measurement
- Proximity Sensing
- Motion Detection



ADVANTAGE OF IR SENSORS

IR(LIGHT DEPENDENT RESISTOR)