

Sensors

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Sensors: Considerations

- Analog or Digital
- RS232, RS485, I2C, SPI, CAN, USB
- Accuracy typically varies with price
- Some need warm-up, others need calibration
- Power requirements vary widely
- Wrong data can be worse than no data at all!

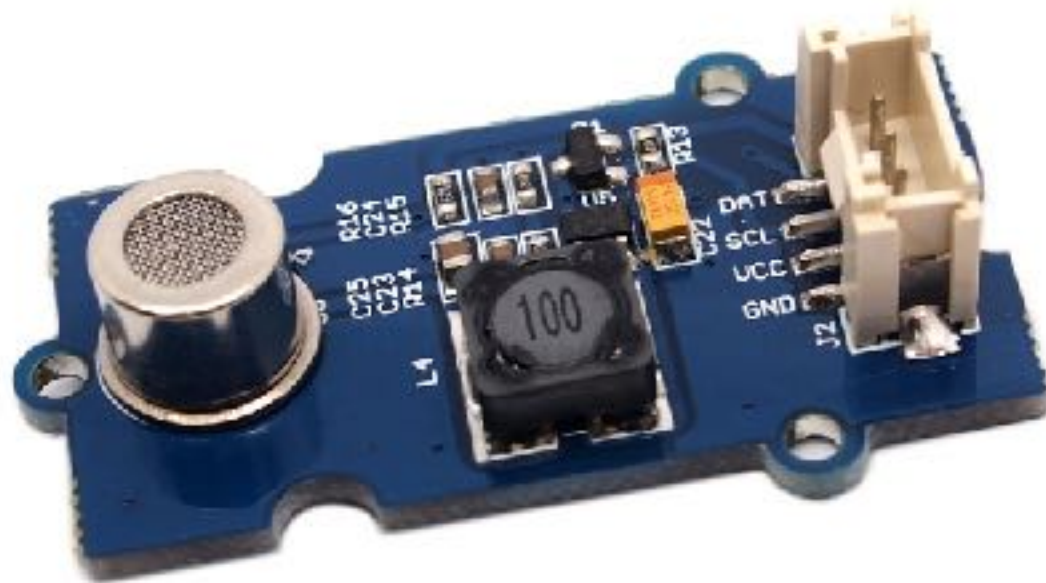
Accelerometer



Air Quality Sensor



Alcohol Sensor



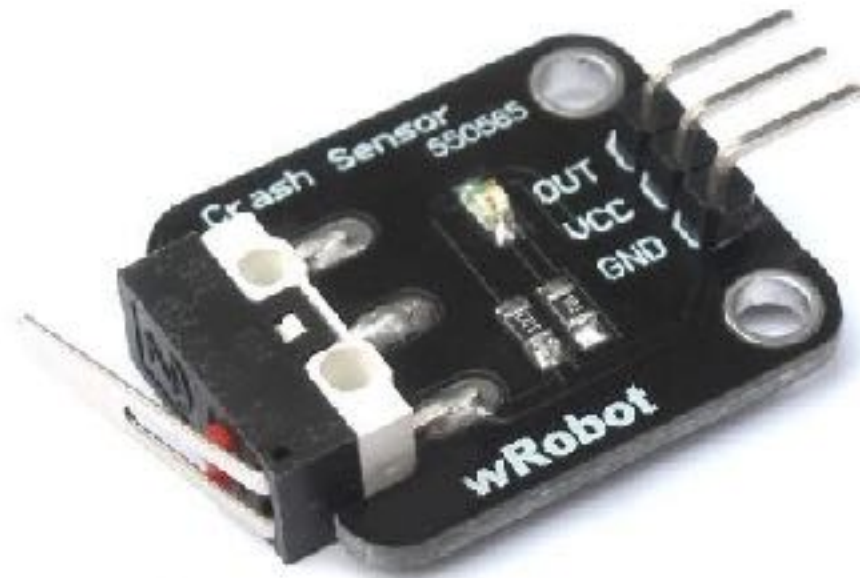
Barometric Pressure



Camera



Collision Sensor



Colour Sensor



Compass: Digital



Formaldehyde Sensor



Galvanic Skin Response



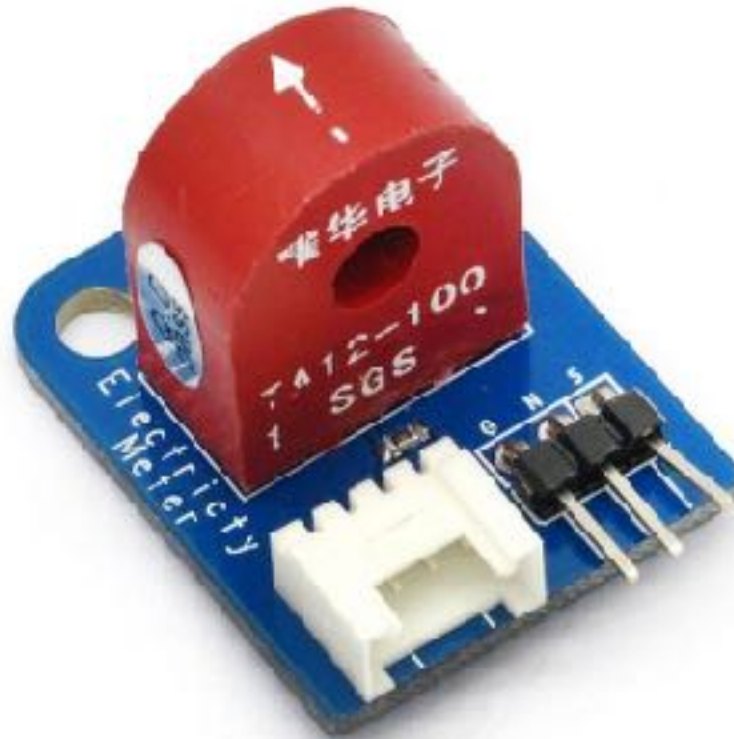
Gas Sensor



Global Positioning System



Electrical Current Sensor



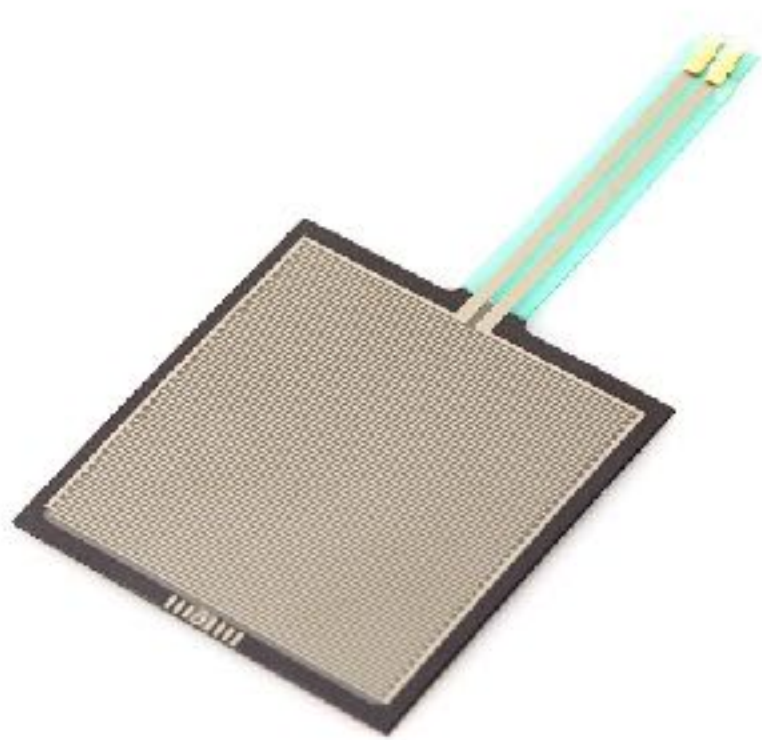
Flow Sensor



Flow Switch



Force Sensitive Resistor



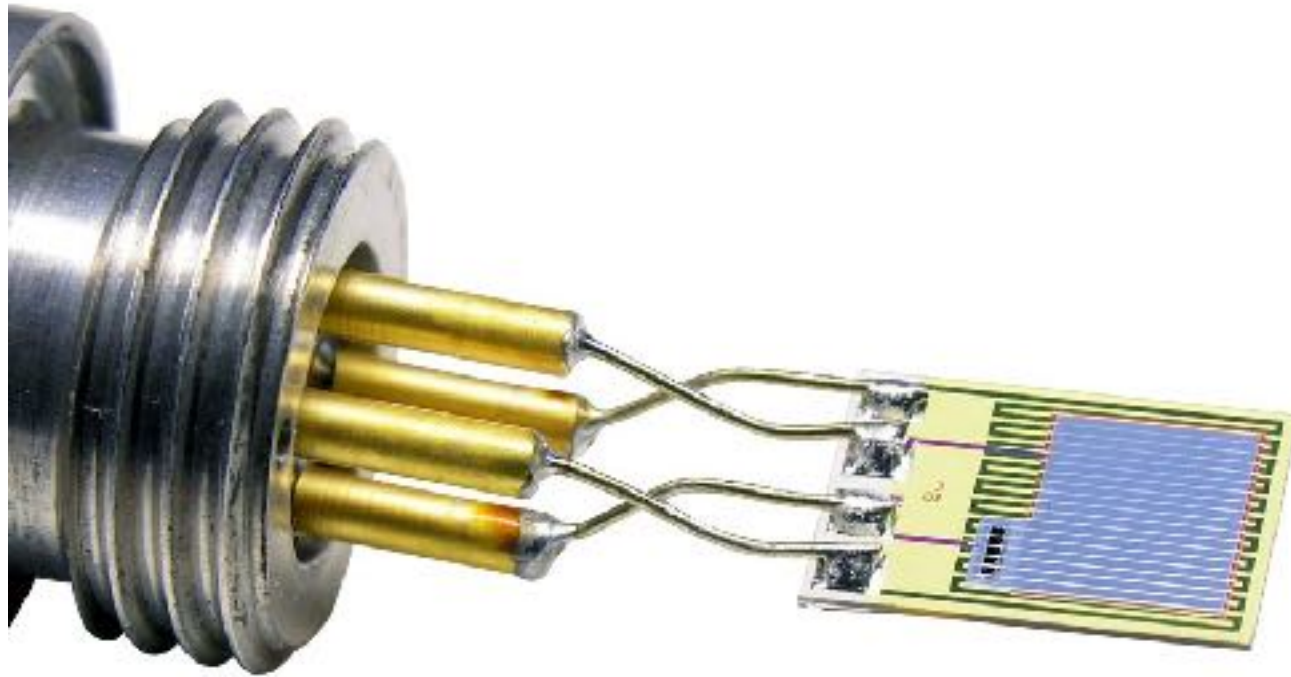
Gyroscope



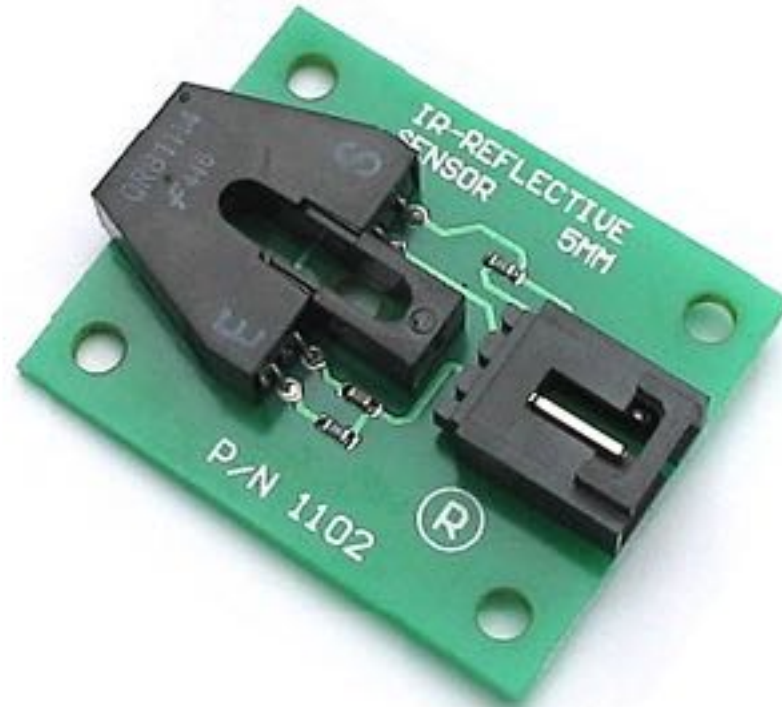
Hall Sensor



Humidity Sensor



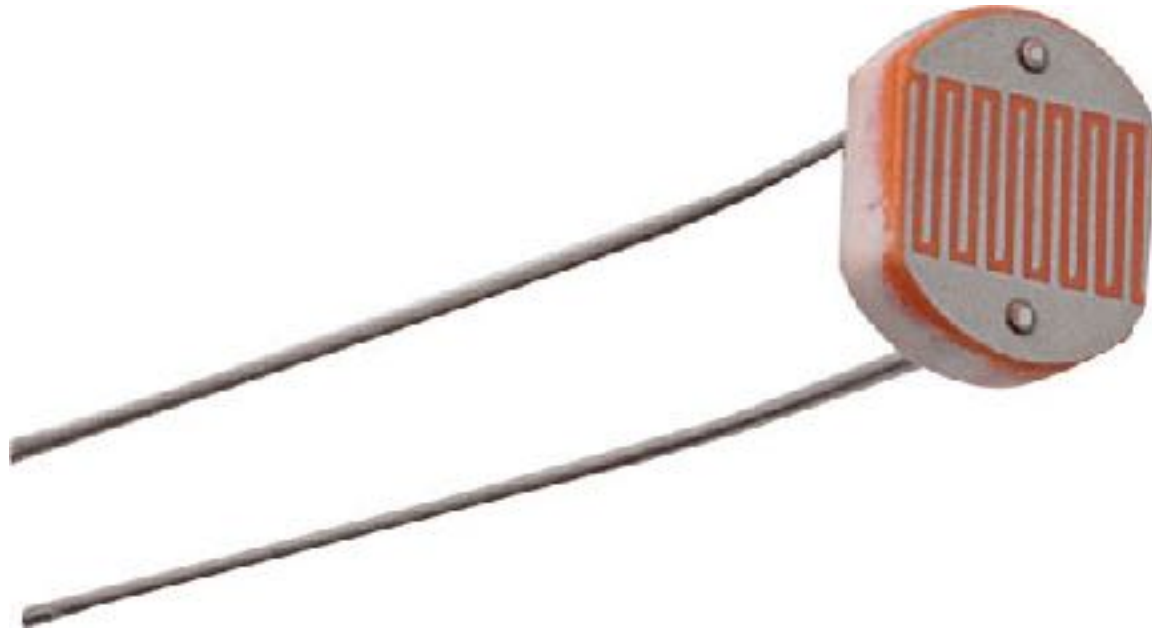
Infrared Reflection



Infrared Sensor: Passive



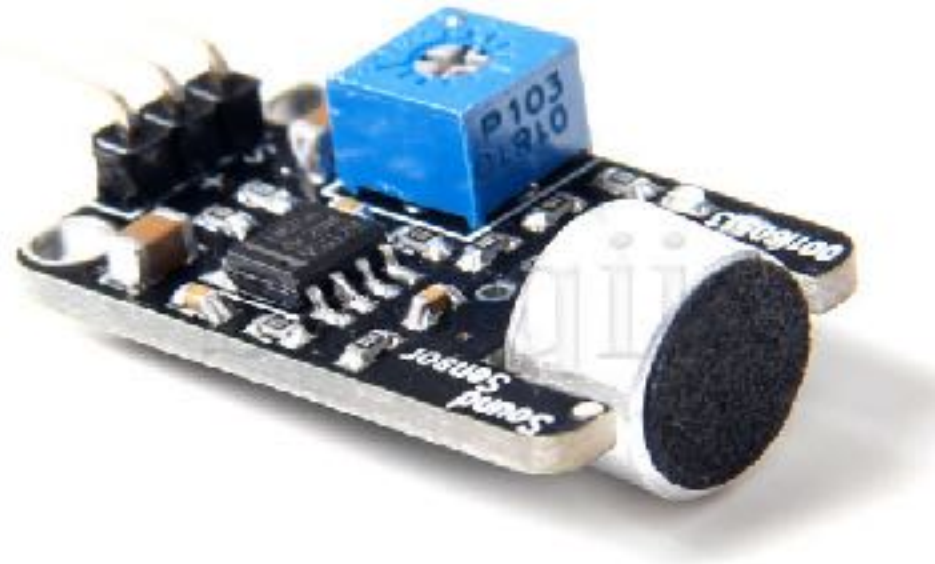
Light Sensor



Load Sensor



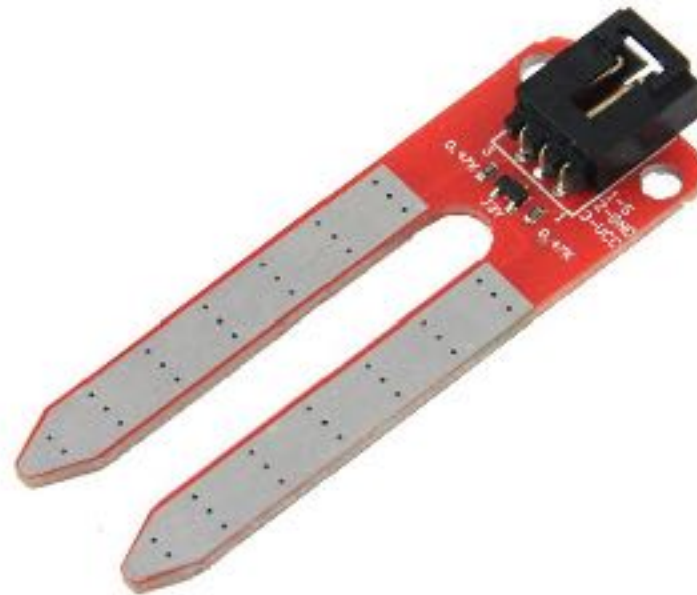
Loudness Sensor



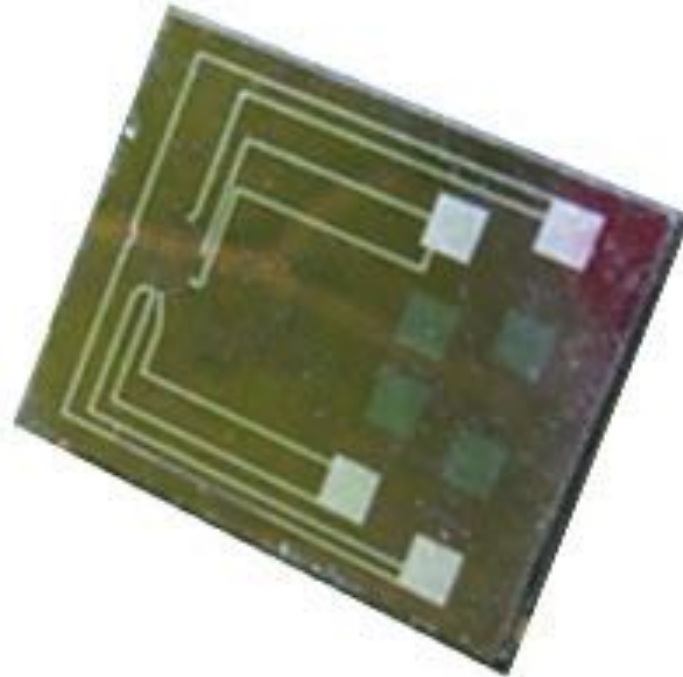
Microphone



Moisture Sensor



Moisture Sensor Chip (Cornell)



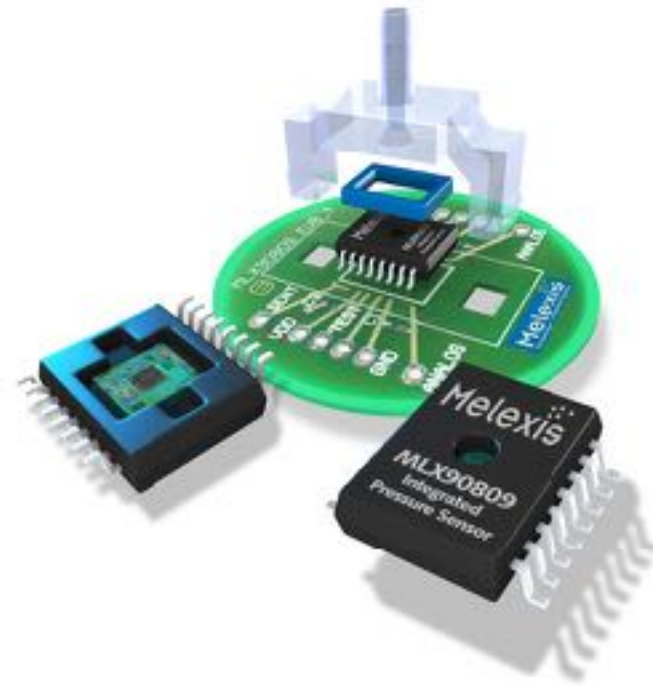
Optical Dust Sensor



Photo Interruptor



Pressure Sensor (MEMS)



Real Time Clock



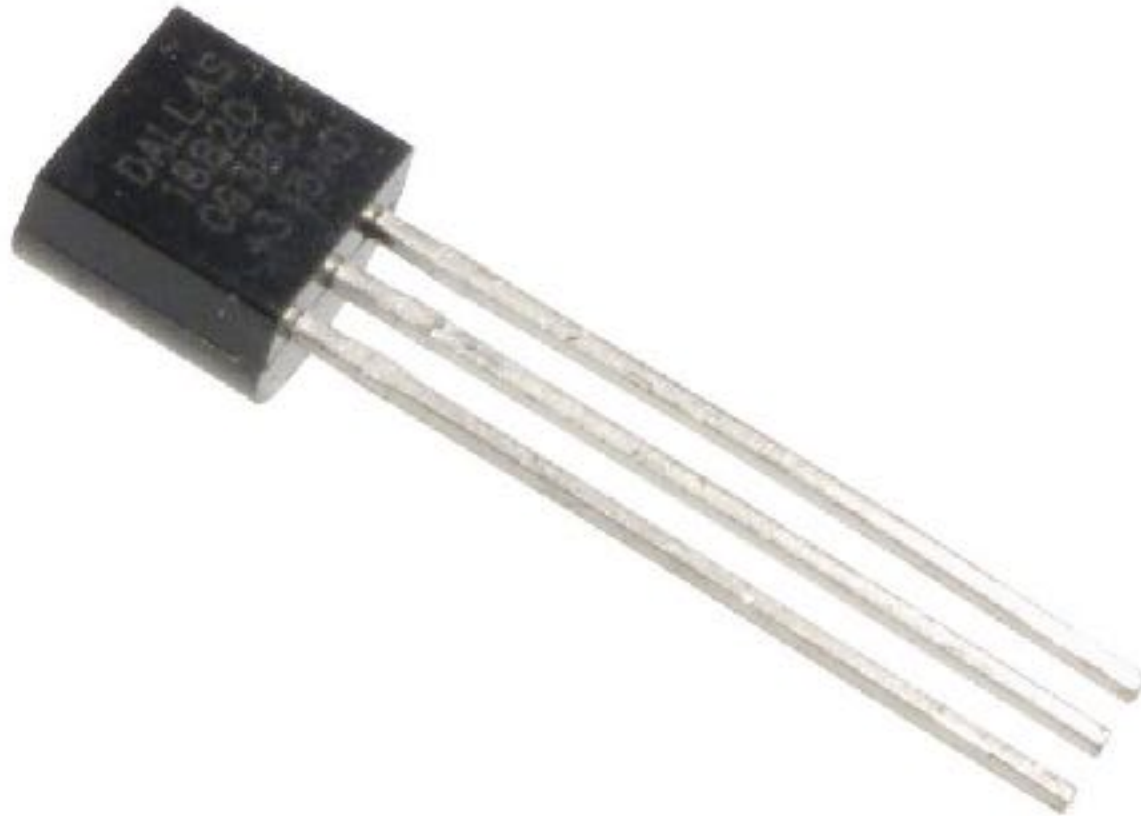
Reed Switch



Solar Radiation Sensor



Temperature Sensor



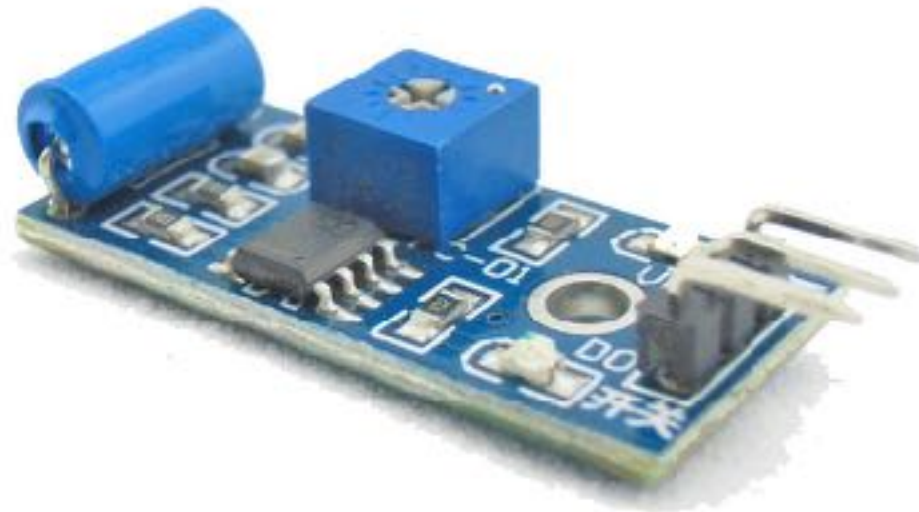
Thermistor



Touch Sensor: Capacitive



Vibration Sensor



Ultrasonic Range Finder



Ultraviolet Radiation Sensor

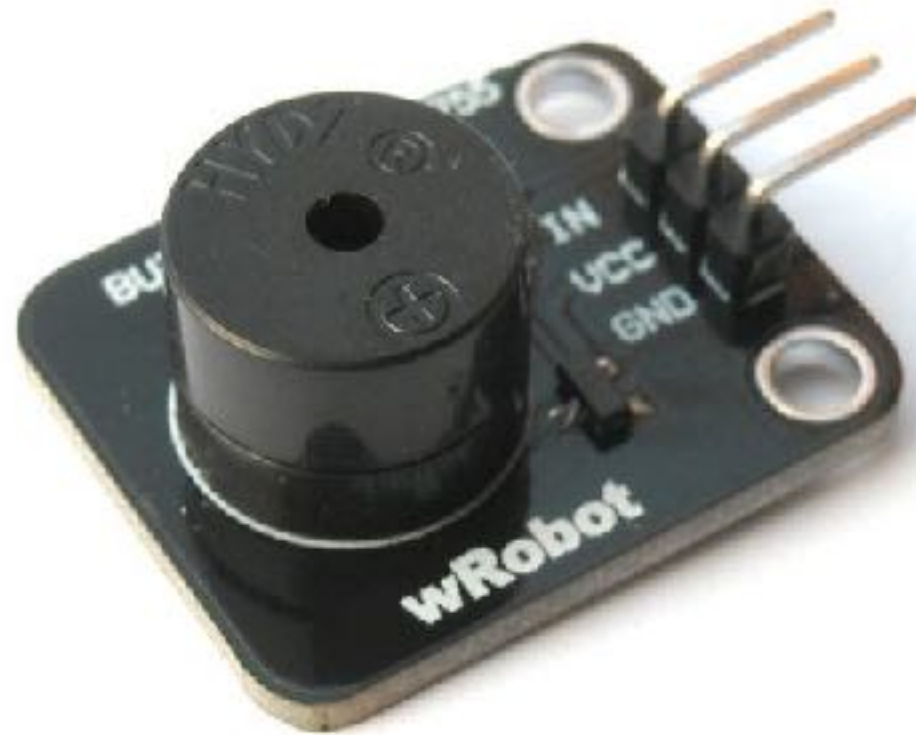


Actuators

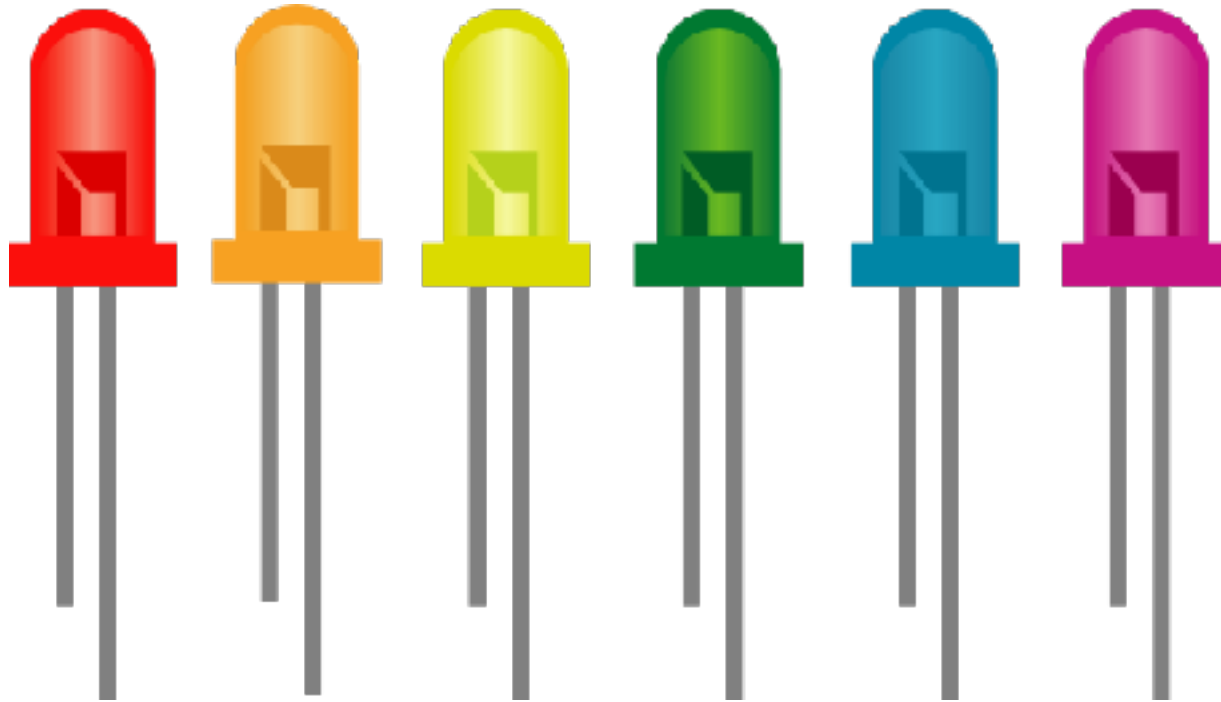
Actuators: Considerations

- Power Use: Voltage and Amperage
- Interface
- Accuracy (and Cost!)
- Availability
- Documentation, Support & Community Involvement

Buzzer



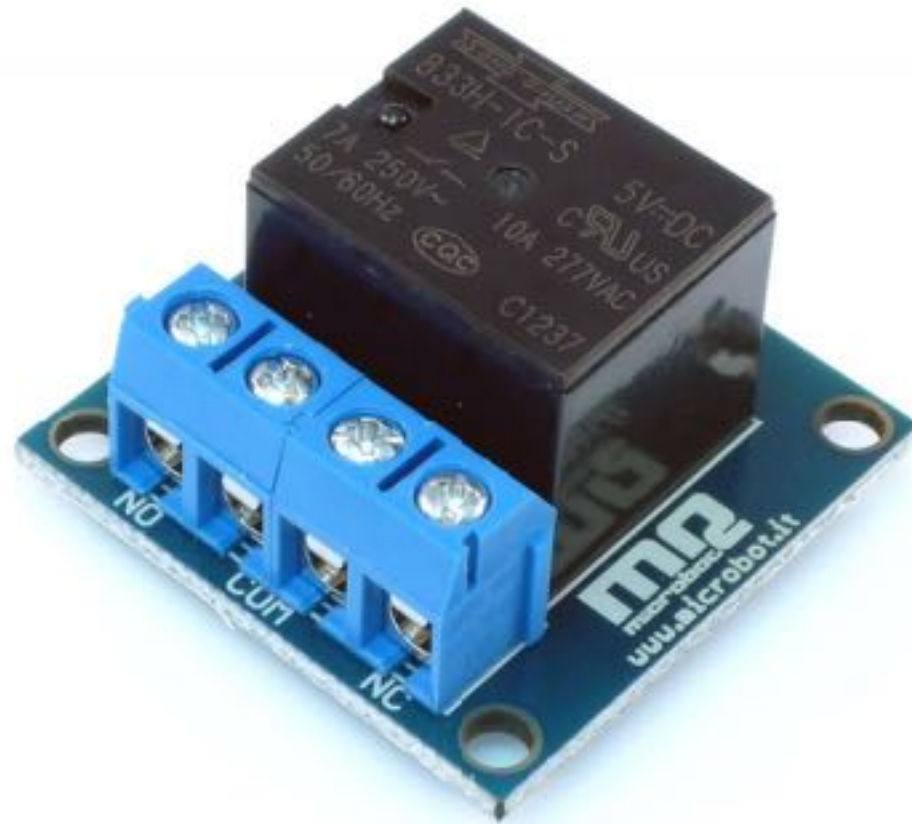
Light Emitting Diodes



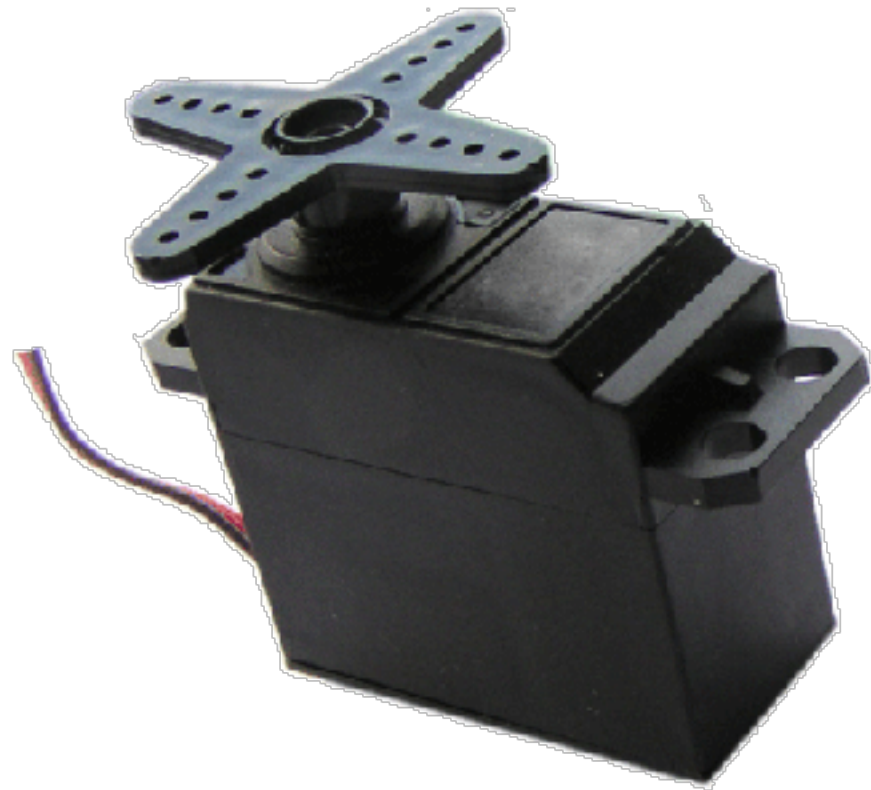
Transistor



Relay



Servo



Solenoid

