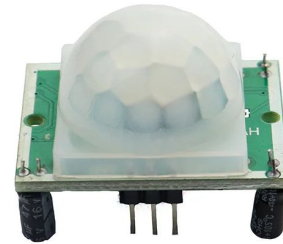
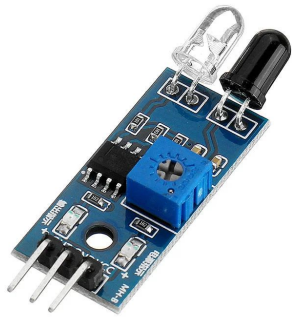


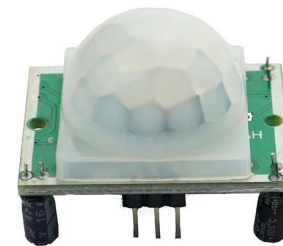
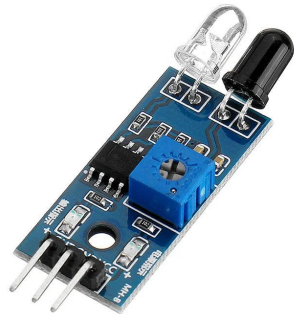
# Motion Sensor



- The term 'Motion sensors' can be used to refer to any kind of sensing system which is used to detect motion; motion of any object or motion of human beings.
- Motion sensor is also called as motion detector.
- Motion sensors are commonly used in security systems as triggers for automatic lights or remote alarms and similar applications.

- There are two basic types of motion sensors:
  - Active Sensors
  - Passive Sensors

- Active sensors emit a signal, typically an burst of (light, microwaves or sound) waves which is reflected by the surroundings.(IR)
- Passive sensors are a type of motion sensor that do not emit a signal, but instead detect infrared radiation around the sensor(PIR)



# TYPICAL APPLICATIONS

- Motion sensing is used in number of applications
  - Automated lighting system
  - Security systems
  - Smart Floodlights
  - Burglar Alarm
  - Radar Guns

# What is a PIR Sensor?

- A passive infrared sensor(PIR sensor) is an electronic sensor that measures infrared (IR) light radiating from objects in its field of view. They are most often used in PIR-based motion detectors.

# How does PIR Works?

- When the sensor is idle, both slots detect the same amount of IR, the ambient amount radiated from the room or walls or outdoors. When a warm body like a human or animal passes by, it first intercepts one half of the PIR sensor, which causes a positive differential change between the two halves.