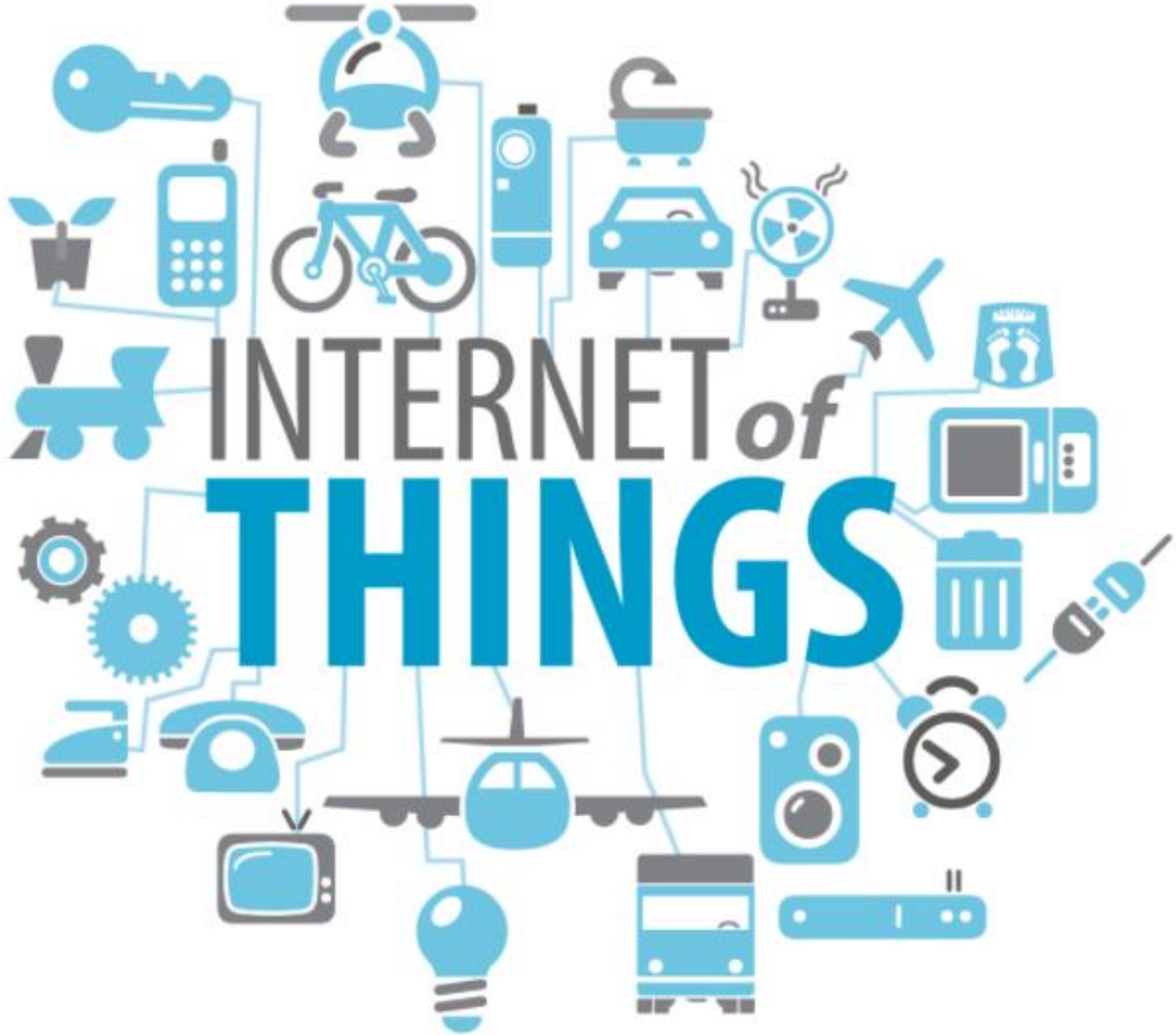

INTERNET of
THINGS

4 iot devices types

1. one-way monitoring

2. one-way monitoring with more complex data

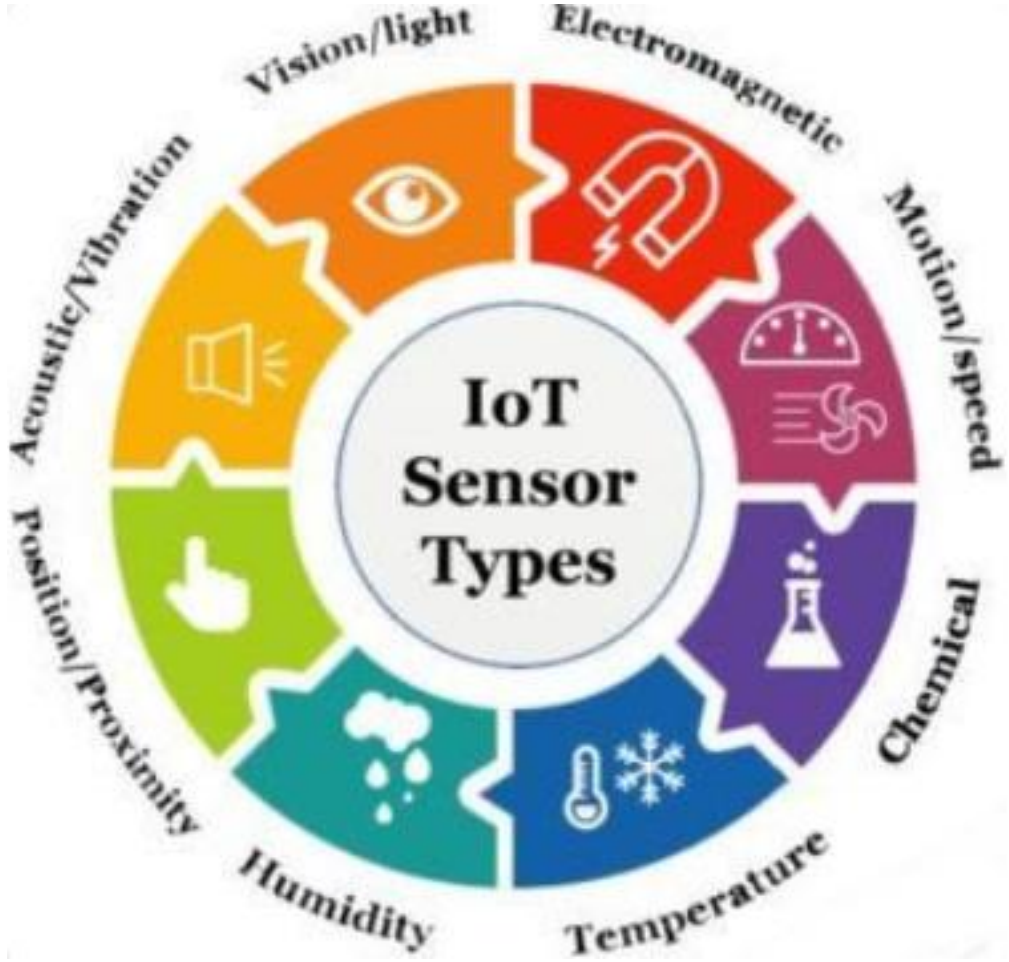
3. two-way communication

4. smart : can do everything

6 categories of things that can be connected by iot

1. connected products : improve services
2. connected assets : increase lifetime & reduce operations repair
3. connected fleets : tracking, monitoring
4. connected infrastructures : improve serices more effective and efficient operations
5. connected markets : optimize use of assets, reduce energy, improve efficiency and quality of life
6. connected people : improving work, life and health

15 top sensor types

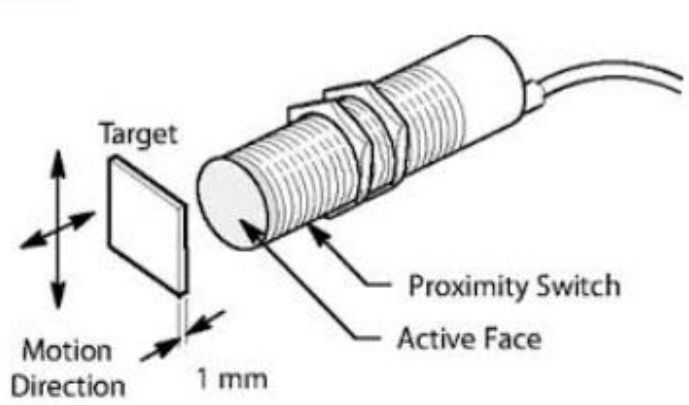


temperature sensors

- measure amout of heat energy
- physical change in temperature

proximity sensors

detects nearby properties object and convert to signal (non-contact detect)



pressure sensors

senses pressure and converts to electric signal
also use in whole water systems and heating systems







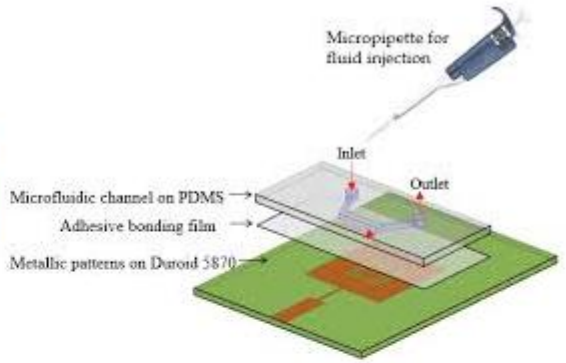


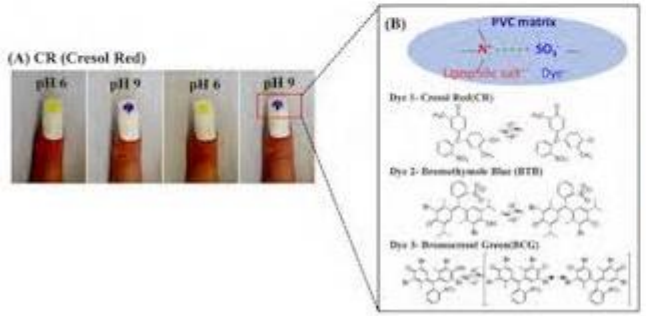

water quality sensors

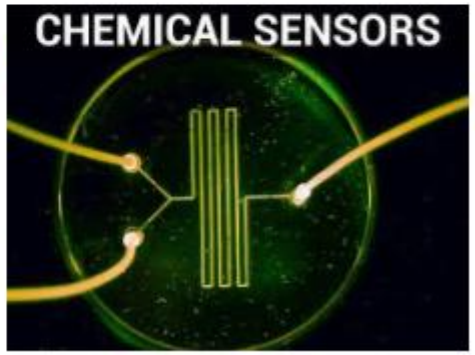
detect water quality and ion monitoring

chemical sensors

to indicate changes in liquid or air chemical changes to protect population







gas sensors

monitor changes of air quality and various gases












smoke sensors

senses smoke (airborne & gases & it's level)

1 = Output
2 = Vcc (positive voltage)
3 = Gnd

ir sensors

sense surrounding by heat

level sensors

determine level amount of fluids, liquids or other flow in open or closed system

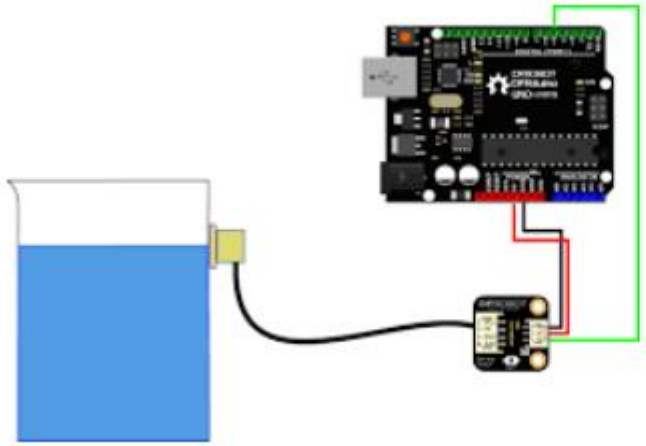
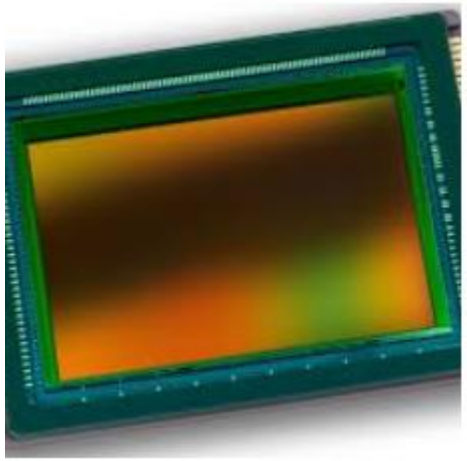
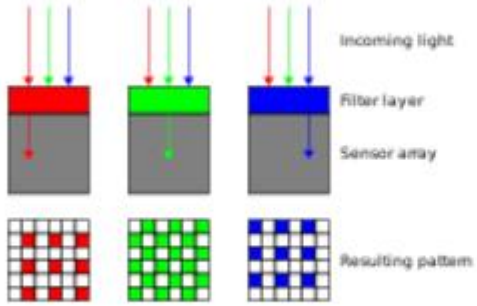
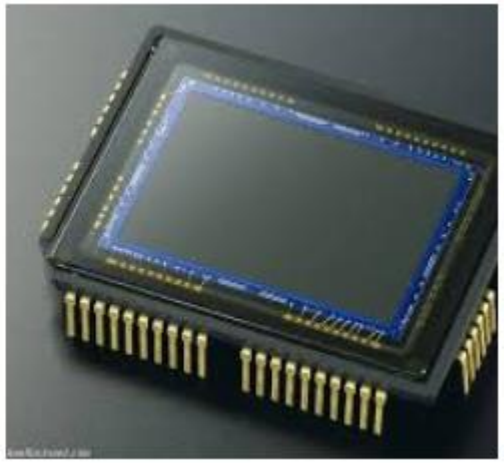


image sensors

convert optical images into electric signals for display or storage

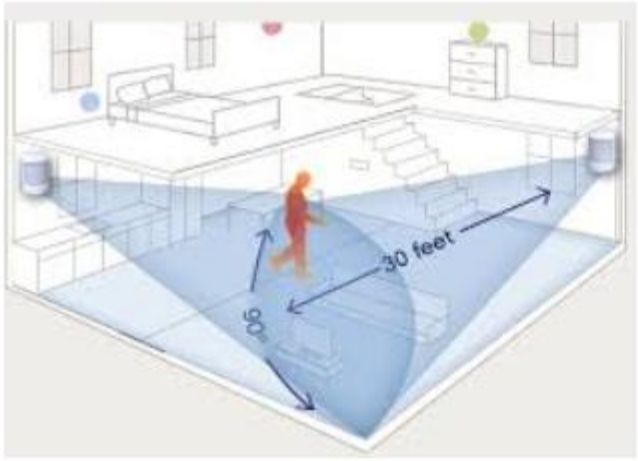






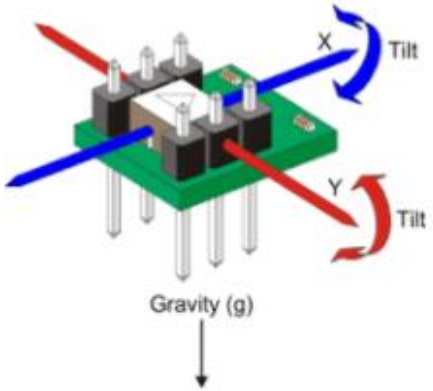
motion detection sensors

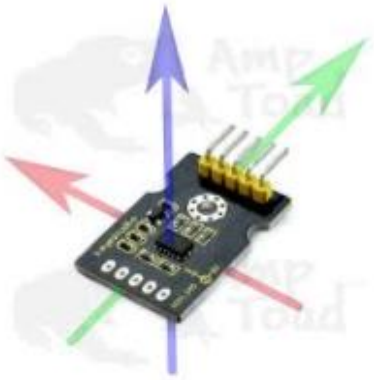
detect physical (object or human) movement in given area and transfroms to electric signal

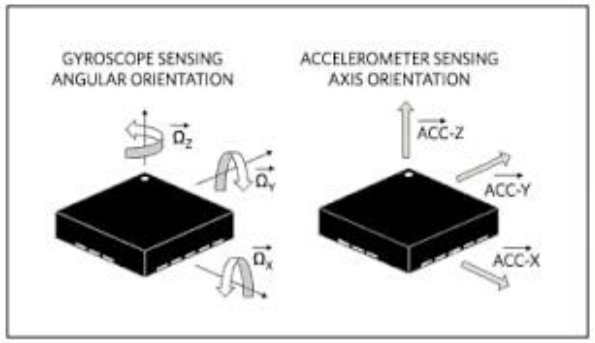


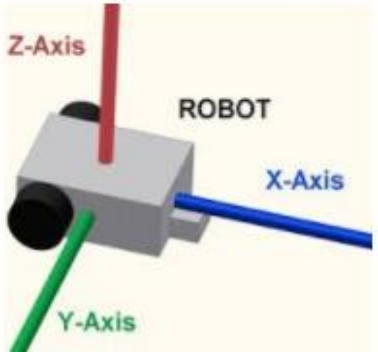
accelerometer sensors

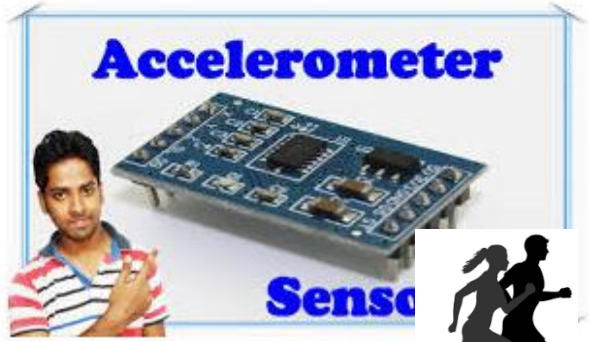
measure physical or acceleration object convert to electrical output









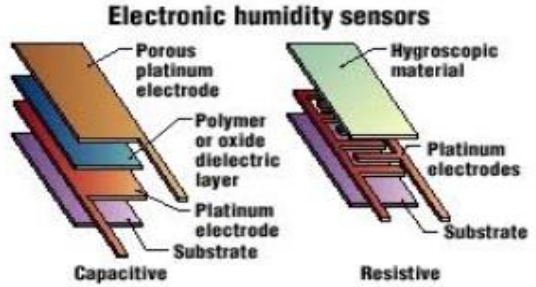


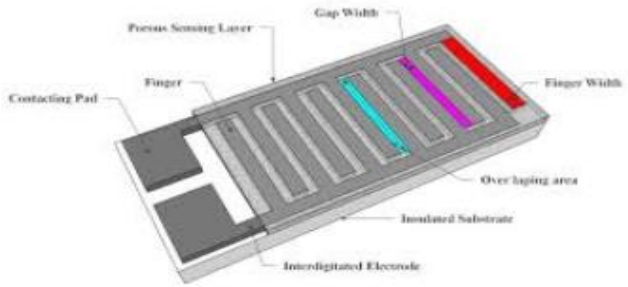
gyroscope sensors

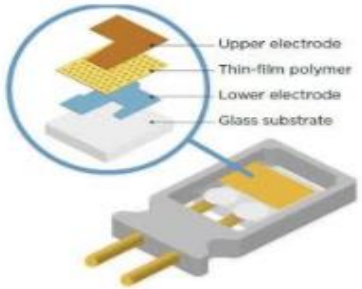
measure the angular rate or angular velocity (speed of rotation around an axis

humidity sensors

defined amount of water in atmosphere of air or other gases

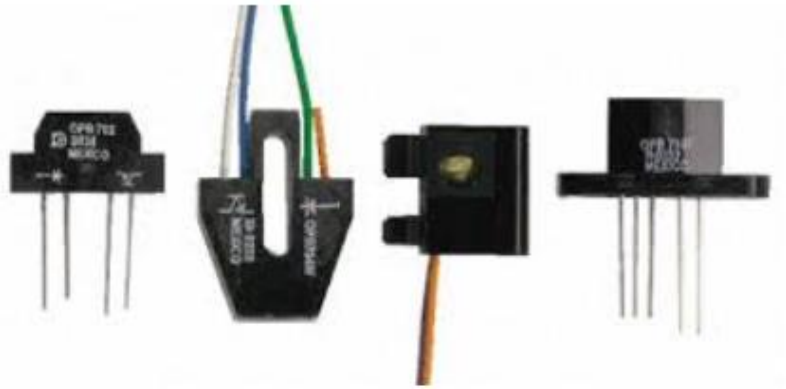


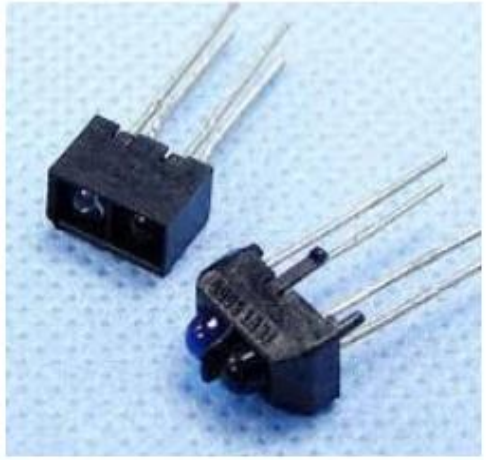


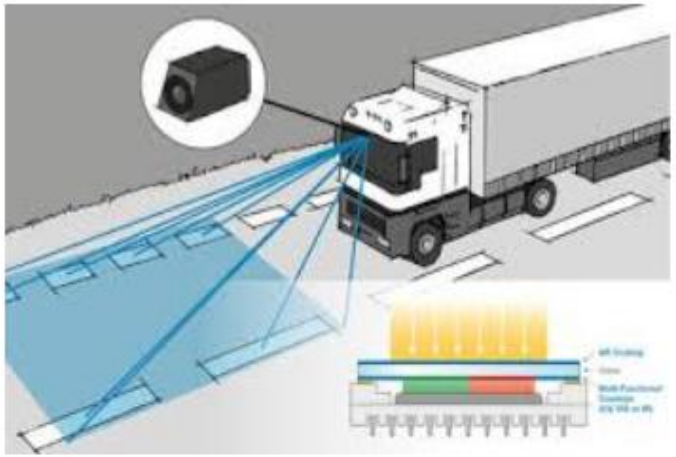


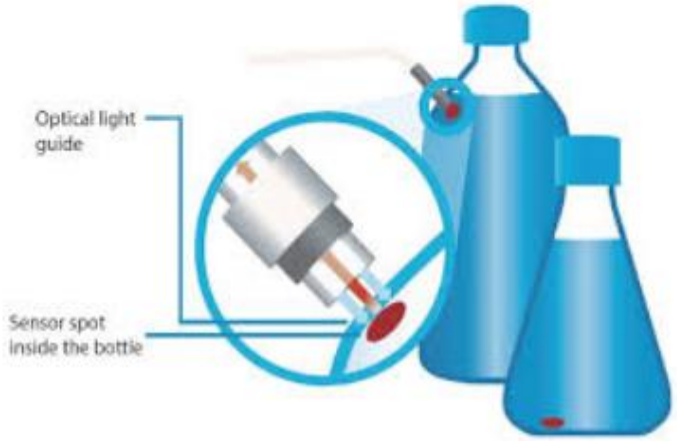
optical sensors

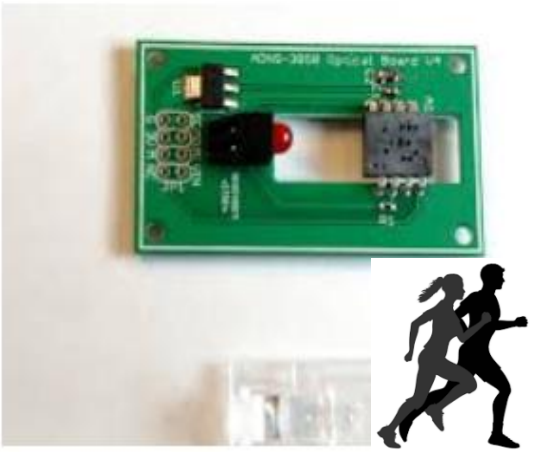
measure physical quantity of light rays and convert to electrical signal











Solutions Examples