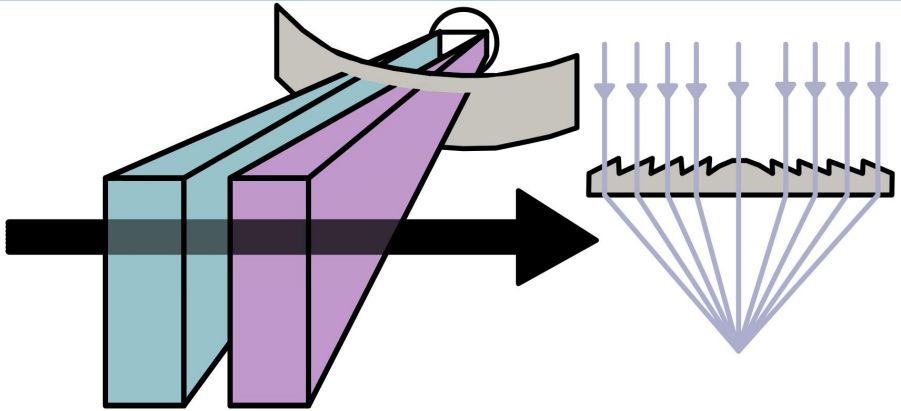
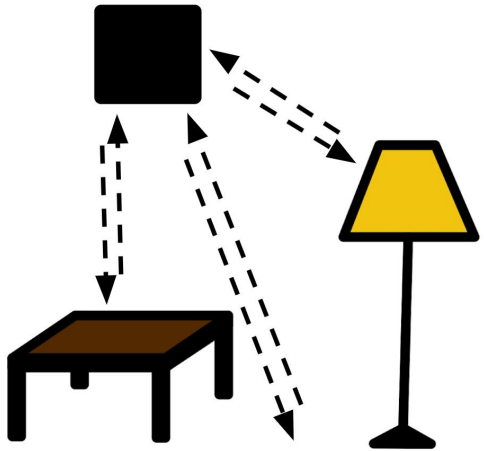
Dual Technology Motion Sensors



Passive InfraRed Sensors (PIR)
The PIR sensor detects changes in infrared radiation between different slots in the “grid” (Tross, 2019). The “grid” is formed by the fresnel lense that condense light and increase the range of the sensor. The lense is split into multiple sections so we don’t just have two large rectangles sensors, but many sets of small ones (Ada, 2014).



Microwave Sensor (MW)
Electromagnetic waves are sent form the MW sensor then bounced back to the receiver. The receiver looks for changes in the wave length and direction to detect motion (Protect America, 2019).

Once motion is detected in both the PIR and MW sensors then a signal is sent to the server

Server

After the server receives a signal saying motion was detected it starts the protocol assigned to that movement which can include effects like:

- Cameras start recording
- Lights turns on
- Sounds alarm system
- Calls police
- Alerts home owner via app on cell phone

etc.