

11/1/16

PASSIVE IR SENSORS → MEASURES INFRARED LIGHT FROM OBJECTS THAT GENERATE HEAT OR INFRARED RADIATION

★ → LIGHTING/SECURITY SYSTEMS

→ RANGE OF APPROX 6 METERS

→ SHOWS HIGH OUTPUT RESPONSE WHEN A SUDDEN CHANGE OCCURS

★ ACTIVE SENSORS ⇒ TIME OF DAY DOES NOT MATTER

11/3/16

SOLAR COLLECTION

SOLAR PHOTO VOLTIC

→ CONVERTS SUNLIGHT INTO ELECTRICITY USING A SILICON SEMICONDUCTOR

→ WHEN LIGHT STRIKES THE CELL A PORTION IS ABSORBED WITHIN THE SEMICONDUCTOR MATERIAL KNOCKING ELECTRONS LOOSE AND ALLOWING THEM TO FLOW

↳ ELECTRIC CURRENT

→ ABSORB VISIBLE OF LIGHT SPECTRUM

→ NORMALLY CONNECTED TO AN INVERTER TO CONVERT FROM DC TO AC

→ DC POWERS LIGHT DIRECTLY

→ CONVERSION EFFICIENCY = 15-20%.

★ 200W PANEL WILL NOT CONSISTENTLY PROVIDE 200W POWER

(BASED ON MAX SUMMER RADIATION LEVEL)