

# SOLAR CELL

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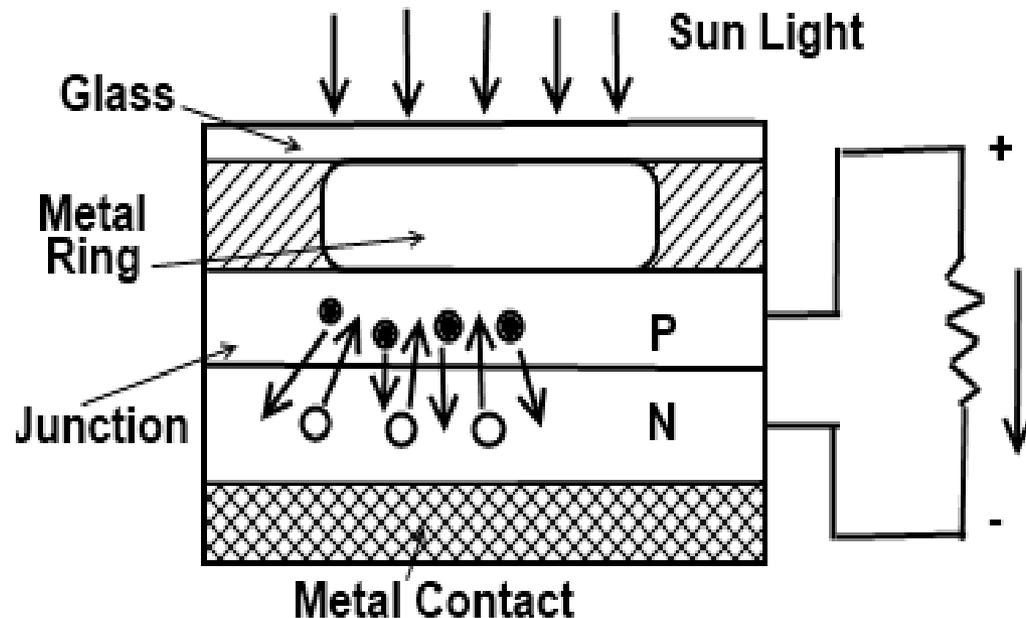
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# solar cell

A solar cell is basically a P-N junction diode that converts solar energy to electrical energy

- **Construction-**

It essentially consists of a silicon PN junction diode with a glass window on top surface layer of P material is made extremely thin so, that incident light photon's may easily reach the PN junction.



# Working of solar cell

- 1) Solar cell works under the principle of photovoltaic effect-when light is incident on 'P-N' junction a potential gets developed across the junction, this potential is capable of driving a current through the circuit.
- 2) Hence light energy is getting converted to electrical energy.
- 3) Here electrons absorb photons having energy greater than the band gap energy hence they can make transition from the valence band to the conduction band & hence contribute current.
- 4) The wavelength of light is given by the relation,  $E_g = hc/\lambda = 1.24$

# solar cell structure

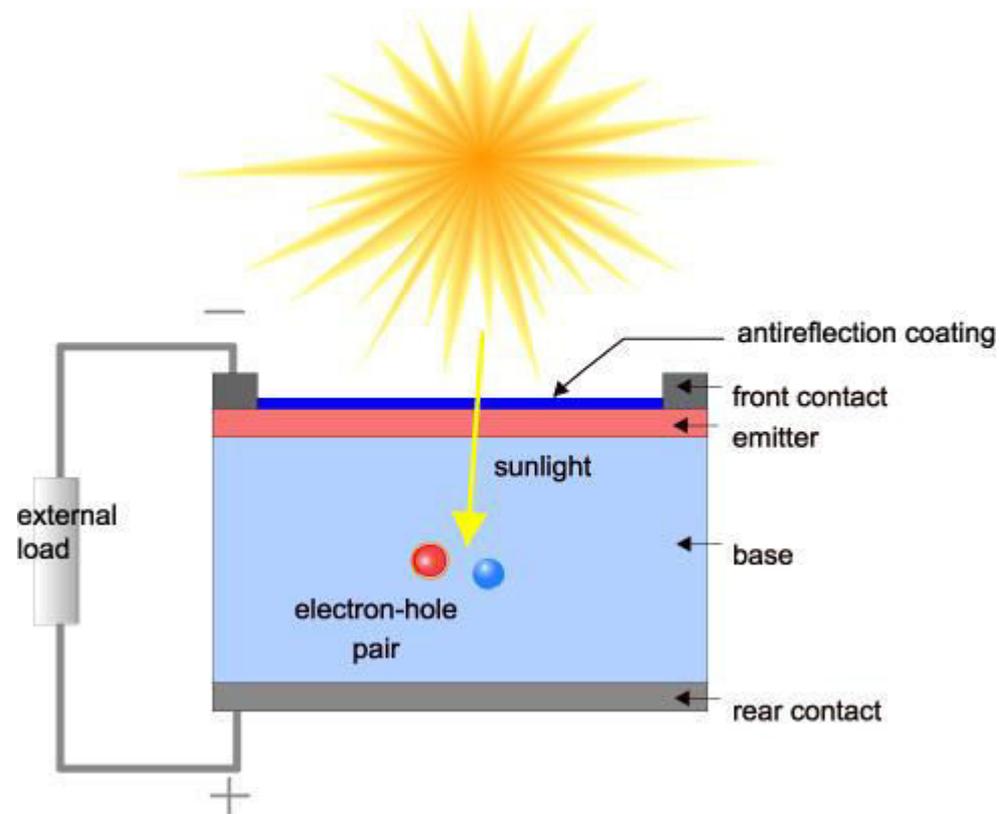
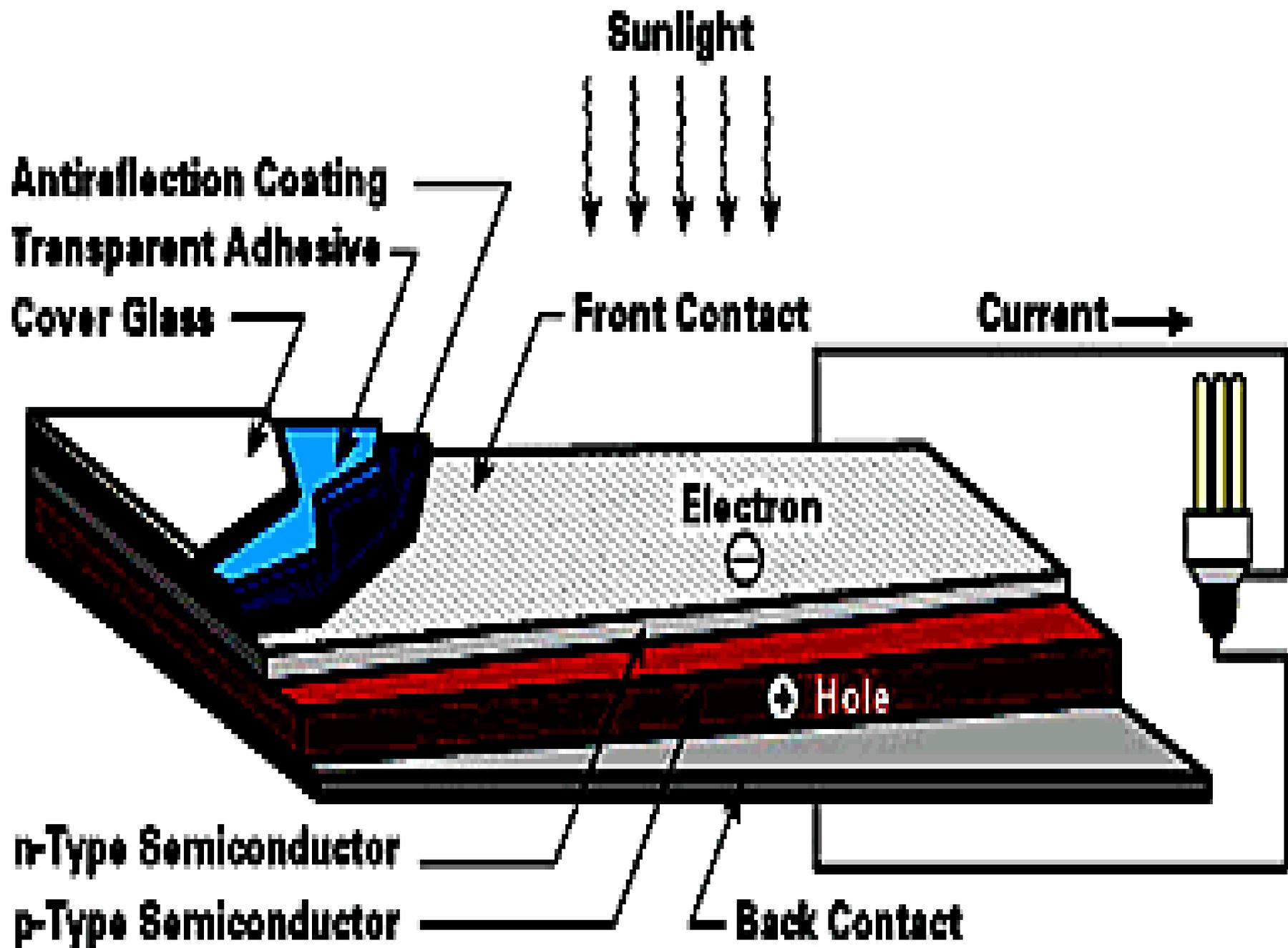
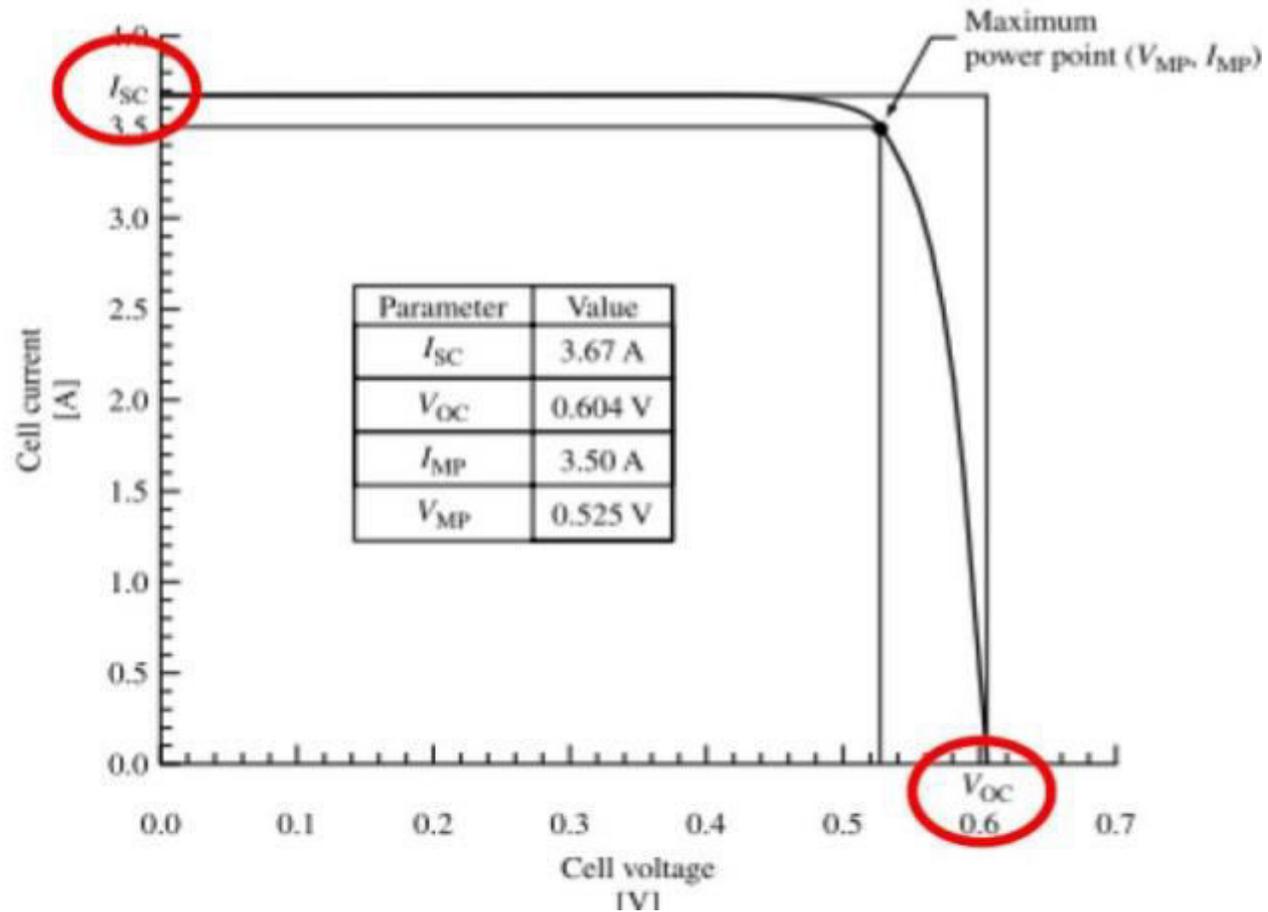


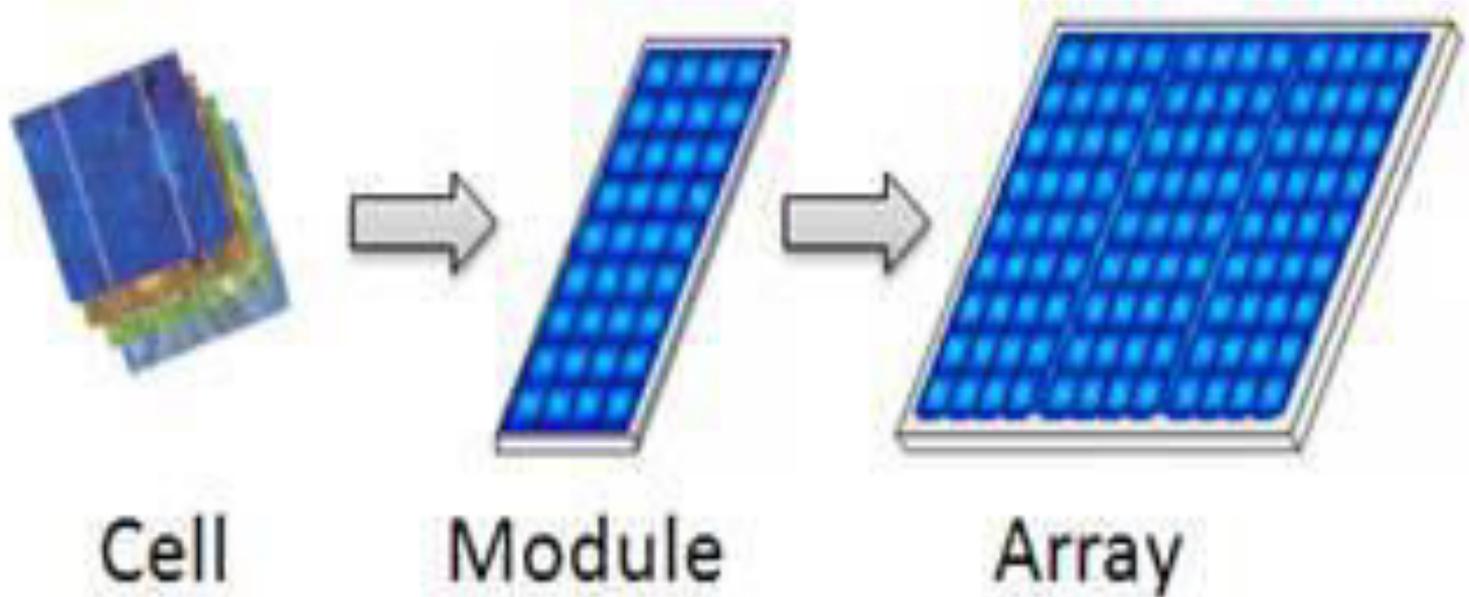
Figure 1. [A Solar Cell Structure](#)



# CHARACTERISTICS OF SOLAR CELL



# solar panel configuration



# Uses of solar cell

- 1. Solar cells are used on board satellites to recharge their batteries.
- 2. Solar cells are used in photographic equipments.
- 3. Solar cells are used in calculators

Have a nice day

**THANK YOU**