# Working of photovoltaic cell with diagram

Working of photovoltaic cell with diagram

A photovoltaic cell harnesses solar energy;converts itto electrical energy by the principle of photovoltaic effect. It consists of a specially treated semiconductor layer for converting solar energy into electrical energy.

In this article, you will learn about the working mechanism of photovoltaic cells along with its advantages, disadvantages and applications.

A photovoltaic cell is a type of PN junction diode which harnesses light energy into electricity. They generally work in a reverse bias condition. It is analogous to a solar cell since they belong to similar working principles but have distinct differences.

The diagram above is a cross-section of a photovoltaic cell taken from a solar panel which is also a type of photovoltaic cell.

The cell consists of each a P-type and an N-type material and a PN junction diode sandwiched in between. This layer is responsible for trapping solar energy which converts into electricity. The N-type layer is also known as the first layer or the emitter layer. The P-type layer is the base layer and the intermediate layer between the two is the PN junction diode. The surface of the cell is covered by an anti-reflective material which traps the light energy and avoids any loss of energy. The bottom layer, the last one may completely be covered by the material in which the conductor is made up of.

This is the working of a photovoltaic cell.

Here is the difference between solar cell and photovoltaic cell in tabular format:

A device that converts sunlight directly into electricity

A device that converts light energy into electricity using the photovoltaic effect

Any light source (not necessarily sunlight)

Generate electric power from sunlight, solar calculators, solar panels

Generate electric power from sunlight as well as artificial light, solar photovoltaic modules, building integrated photovoltaics

Contact us for free full report

Web: https://www.kary.com.pl/contact-us/
Email: energystorage2000@gmail.com
WhatsApp: 8613816583346