

SolarInnovate Energy Solutions

Function of solar cell system



Overview

These arrays, composed of many thousands of individual cells, can function as central electric power stations, converting sunlight into electrical energy for distribution to industrial, commercial, and residential users. What is the function of a solar cell?

The function of a solar cell, as shown in Figure 1, is to convert radiated light from the sun into electricity. Another commonly used name is photovoltaic (PV) derived from the Greek words “phos” and “volt” meaning light and electrical voltage respectively .

What is a solar cell?

A solar cell (also known as a photovoltaic cell or PV cell) is defined as an electrical device that converts light energy into electrical energy through the photovoltaic effect. A solar cell is basically a p-n junction diode.

How do solar panels work?

Once manufacturers have a single solar cell, they can combine them to create solar panels that combine the power of 60 or more individual cells to generate a useful voltage and current. The efficiency of a PV cell is the amount of electrical power that's coming out of the cell compared to the energy from the light shining on it.

What are the applications of solar cells?

Here are some notable applications of solar cells: Residential Solar Power: Solar panels installed on rooftops of homes generate electricity for household consumption. Excess energy can be fed back into the grid or stored for later use, reducing electricity bills and reliance on non-renewable energy sources.

How do solar cells generate electricity?

The conversion of sunlight, made up of particles called photons, into electrical energy by a solar cell is called the "photovoltaic effect" - hence why we refer

to solar cells as "photovoltaic", or PV for short. Solar PV systems generate electricity by absorbing sunlight and using that light energy to create an electrical current.

How do photovoltaic cells work?

Simply put, photovoltaic cells allow solar panels to convert sunlight into electricity. You've probably seen solar panels on rooftops all around your neighborhood, but do you know how they work to generate electricity?

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