

# THINGS YOU SHOULD CONTEMPLATE SHOULD YOU BUY SOLAR PANELS ONLINE

Due to advancements in engineering and science, photovoltaic cells, the light absorbing part of the solar panel, have become efficient enough to effectively be used as a form of power production. Many homeowners are now looking to buy solar panels online and in stores as they recognize the cost reductions that they can provide along with the benefits towards the environment.

A solar panel has various components includes things such as an inverter, wiring, batteries and of course the photovoltaic cells themselves known as a photovoltaic array. The array ensures that an appropriate amount of voltage or current is produced.

Photovoltaic cells are usually produced using very thin crystalline silicon cells or a thin-film layer cell created from either cadmium telluride or silicon. In order for these cells to be useful they must be able to generate enough power and as such they are connected in series to be able to achieve the appropriate output voltage, whilst they are connected in parallel to achieve a specific size of current.

When choosing a solar cell you should be aware of factors that can cause damage to the cell itself, if you ensure that the panel you buy is free from these kinds of problems it will last you in good stead for many years. The panel must be able to withstand conditions which provide hail, wind or snow as these if not properly protected against

can cause damage to the thin film on the cell thus rendering it less efficient or useless.

The next is that the panel is sealed to ensure moisture cannot penetrate, as moisture can corrode the connections between metal contacts and also in the conductive oxide layer in thin film cells.

Presently photovoltaic cells operate at efficiencies between about 5% and 18%; although cells have been designed with efficiencies of up to 43% they are not suitable for commercial production. From this it is reasonable to assume that panels made with different cells will produce different voltages and currents under similar conditions. As the cost associated with each cell differs, it would be helpful to determine how much power you require the panel to generate. Therefore you may not have to buy the most expensive panel available as you may not use all of the energy produced.

Another factor which affects the efficiency of the cell is heating. The warmer the cell gets the less efficient it becomes. Therefore it is a good idea to search for a panel that provides good cooling technique and ventilation.

A new way of improving efficiency and reduces cost is through the use of lenses and mirrors, these help to focus the light from Sun onto a condensed number of high cost cells which are more efficient converters of light. The effect of this is a reduction in manufacturing costs whilst providing an appropriate amount of electricity

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