A solar cell or photovoltaic cell is a device that converts solar energy into electricity by the photovoltaic effect. Photovoltaics is the field of technology and research related to the application of solar cells as solar energy.

Sometimes the term devices intended specifically to capture energy from sunlight, while the term photovoltaic cell is used when the source is unspecified.

Assemblies of cells are used to make solar modules, which may in turn be linked in photovoltaic arrays.

Solar applications. Individual small devices as electronic calculators. Photovoltaic arrays generate a form of renewable electricity, particularly useful in situations where from the grid as in remote area power systems, Earth-orbiting satellites and space probes, remote radiotelephones and water pumping applications. Photovoltaic electricity is also increasingly deployed in grid-tied electrical systems.

Similar devices intended to capture from other sources include thermophotovoltaic cells, betavoltaics cells, and optoelectric nuclear battery.