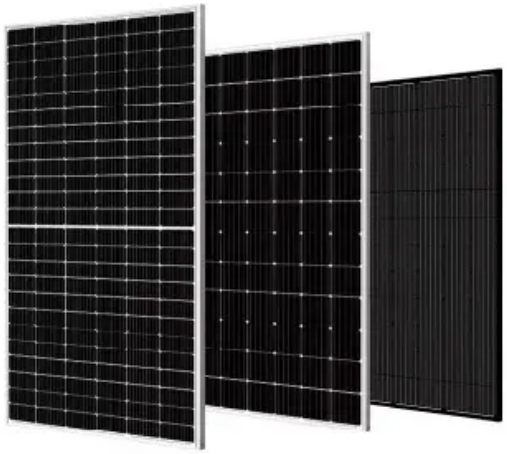
SolarTech Power Solutions

Silicon can be used to make solar panels



Overview

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Silicon, a non-metallic element that is abundant in the earth’s crust, serves as the foundational material for the vast majority of solar panels in use today. Its unique crystalline structure and semiconductor properties make it ideal for converting sunlight into electricity.

The most common are photovoltaic (PV) panels or modules, which use the sun’s light to make electricity. Another technology, concentrating solar power (CSP), uses the sun’s heat instead. The most common type of PV panel is made using crystalline-silicon (c-SI).

Silicon’s dominance in solar technology is rooted in its ideal semiconductor properties and durability. Solar cells made of silicon offer an impressive lifespan, exceeding two decades of service with minimal efficiency loss.

Many solar cells are connected to make a solar panel that can power your home once an inverter converts DC to AC. How is a silicon solar cell manufactured?

Quartz is purified into ultra-pure silicon, grown into ingots, sliced into thin wafers, and treated to absorb more light.

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