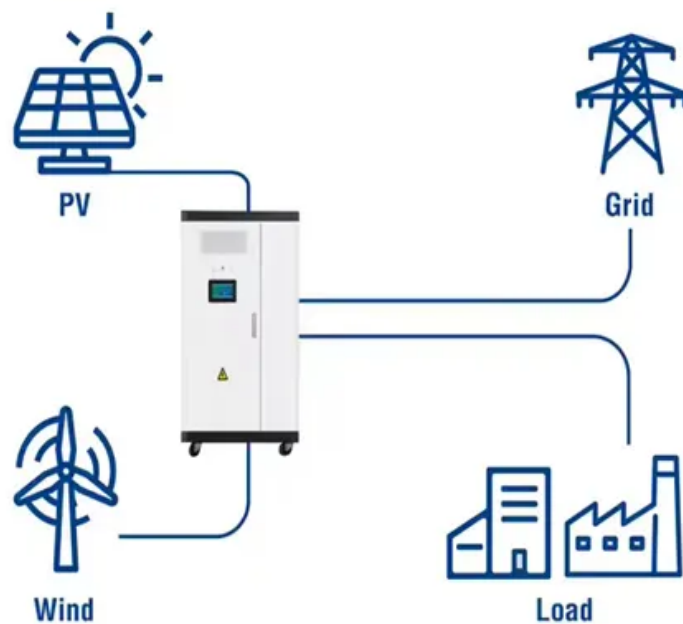


SolarMax Energy Systems

Double-glass multi-crystalline modules and multi-crystalline modules

Utility-Scale ESS solutions



Overview

A simulation model of finite differences describing a double-glass multi-crystalline photovoltaic module has been developed and validated using experimental data from such a photovoltaic module. This simulatio.

What is a double glass module?

The double glass module design offers not only much higher reliability and longer durability but also significant Balance of System cost savings by eliminating the aluminum frame of conventional modules and frame-grounding requirements. The application of double-glass modules covers multiple markets including utility, residential and commercial.

What is glass-glass module technology?

In this paper a glass-glass module technology that uses liquid silicone encapsulation is described. The combination of the glass-glass structure and silicone is shown to lead to exceptional durability. The concept enables safe module operation at a system voltage of 1,500V, as well as innovative, low-cost module mounting through pad bonding.

What is a double-glass solar module?

ABSTRACT: Double-glass modules provide a heavy-duty solution for harsh environments with high temperature, high humidity or high UV conditions that usually impact the reliability of traditional solar modules with backsheet material.

Are double-glass PV modules durable?

Double-glass PV modules are emerging as a technology which can deliver excellent performance and excellent durability at a competitive cost. In this paper a glass-glass module technology that uses liquid silicone encapsulation is described. The combination of the glass-glass structure and silicone is shown to lead to exceptional durability.

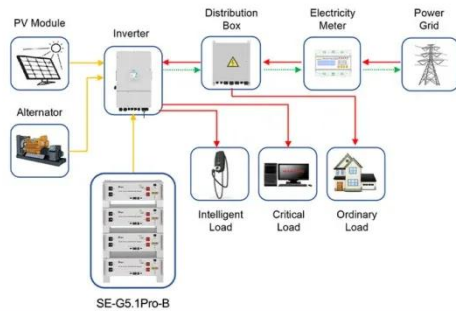
Why are double-glass modules important?

Double-glass modules have increased resistance to cell micro-cracking, potential induced degradation, module warping, degradation from UV rays, and sand abrasion, as well as alkali, acids or salt mist.

What is a double glass c-Si PV module?

Recently several double-glass (also called glass-glass or dual-glass modules) c-Si PV modules have been launched on the market, many of them by major PV manufacturers. These modules use a sheet of tempered glass at the rear of the module instead of the conventional polymer-based backsheet. There are several reasons why this structure is appealing.

Double-glass multi-crystalline modules and multi-crystalline module



Application scenarios of energy storage battery products

Monocrystalline PERC Bifacial Dual Glass Solar PV ...

EVO 6 Series Mono PERC 120 Half Cells
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Dual Glass Solar Module Based on
210mm silicon wafer and 120 half-cut ...

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The PV module cell temperature is a function of the physical variables of the PV cell material, the module and the surrounding environment. A simulation model of finite differences ...

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The Double Glass versus Glass/Backsheet project conducted at Case School of Engineering's Solar Durability and Lifetime Extension (SDLE) Research Center is detailed below.

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