

Double-glass component disadvantages





Overview

Why is 2mm glass more fragile than thicker glass?

Although 2-mm glass can be fully tempered for increased strength, it is naturally more fragile than thicker glass. The reduced thickness affects how glass distributes stress, making it more prone to cracking due to minor defects.

Why do PV modules use thinner glass?

Modern PV modules often use thinner glass to reduce weight and material costs. As per NREL study, while panels commonly used 3.2-mm-thick glass earlier, modern double-glass modules often feature 2-mm glass. A 2-mm fully tempered glass can break with a high-energy fracture pattern (left) or a low-energy fracture pattern (right). Source: NREL.

Why is glass breakage a problem in solar power plants?

Modern PV modules often use thinner glass to reduce weight and material costs which lead to glass breakage. Glass breakage is a growing concern for the solar power plant operators.

Can glass break a PV module?

Studies have found that contact between glass and frames is linked to spontaneous breakage in some PV modules. A recommended solution is using rubbery silicone spacers which maintain separation between the glass and the frame. Many modules already use silicone gaskets, but some designs leave gaps where the glass directly touches the metal frame.



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