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Title: Solar semi-tempered glass is impact-resistant

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Can tempered glass be used in solar modules?

The only feasible way for tempered glass to be widely used in solar modules is its application in single-glass modules. The prevailing benchmark for hail resistance, which stipulates that solar modules must be capable of withstanding impacts from hailstones up to 35mm in diameter, may fall short in areas frequently subjected to larger hailstones.

Why is tempered glass better than heat-strengthened glass?

The tempered glass's ability to break into small, less harmful pieces makes it a safer option in the event of an impact, whereas heat-strengthened glass, which breaks into larger fragments, poses a higher risk of damage to the module and potential injury during maintenance.

Do PV modules have tempered glass?

Among the current module products on the market, only single-glass modules are equipped with tempered glass. The choice of front and shear materials is critical in determining the module's ability to withstand hail impacts. Over the past decade, the PV industry has experienced a great revolution.

Why is tempered glass a problem?

The issue is that as glass becomes thinner, the tempering process becomes more difficult; achieving the necessary flatness is challenging, leading to low yield rates and increased production costs. Moreover, using a combination of tempered glass on the front and heat-strengthened glass on the back is economically unfeasible.

As a result, the tempering process fails, and the glass remains merely strengthened (heat-strengthened or semi-tempered) instead of fully tempered. Thin glass is also highly sensitive to ...

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it a safer option in the event of an impact, whereas heat-strengthened glass, which breaks into larger ...

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