

# Solar glass reliability





## Overview

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Are glass-glass PV modules a problem?

Unfortunately, glass-glass PV modules are, similar to regular PV modules, subject to early life failures. A failure of growing concern are defects in the glass layer (s) of PV modules. The scale of decommissioned PV modules with glass defects will increase with the development of solar PV energy [ 7 ].

Is solar glass fracture a major reliability issue?

In recent years, however, the nature and causes of solar glass fracture have changed in alarming and unsustainable ways. Given the scale of the global market, increasing solar glass failure rates have the potential to become a major reliability issue for manufacturers, developers, owners, insurers and investors.

How common are glass defects in solar panels?

The relative amount of glass defects ranges from several percent up to one of the most prominent failures of registered PV failures. A customer complaints research, on PV modules after two years of operation, observed glass breakage for 10% of the failure cases [ 28 ].

Are glass-glass PV modules more expensive than regular GBS modules?

While there are no technical disadvantages to glass-glass PV modules [ 10, 19 ], in general glass-glass PV designs are more expensive than regular GBS modules due to the use of an additional costly glass layer and the increased weight that may lead to higher costs for support structures.



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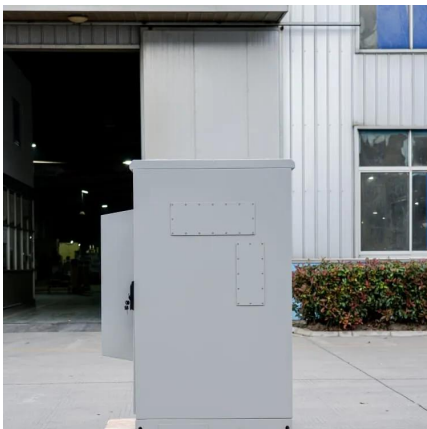


### [Spontaneous glass breakage on solar panels on the rise](#)

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### [Solar Glass Durability and Failure Modes -- RETC, LLC](#)

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### [Experimental repair technique for glass defects of glass-glass](#)

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