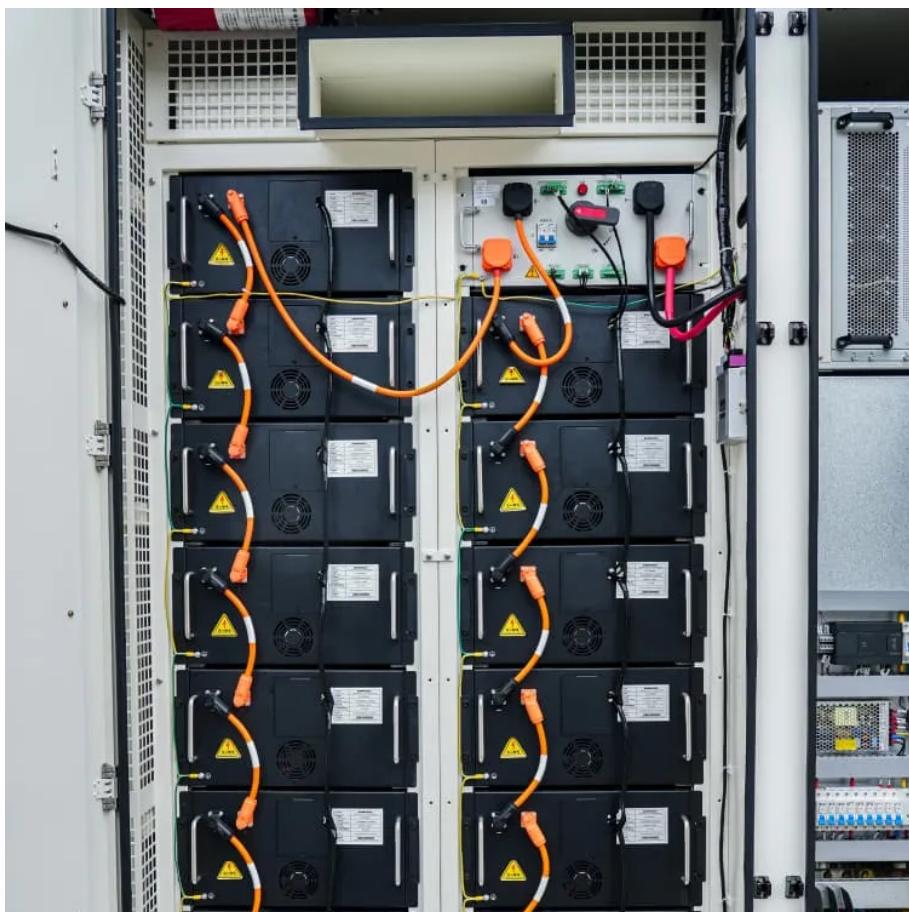




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# Solar glass tensile strength





## Overview

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Which glass is considered a superstrate for a PV module?

We consider specialty thin glass (Corning Eagle XG®) as superstrate of the PV module, while a standard tempered Soda-Lime-Silica Glass (SLG) is considered as bottom support. The reliability calculations for the module were performed based on the stress magnitudes obtained from the FEA computations.

What are the optimal design parameters for a glass-glass PV module?

This study finds the optimal design parameters of the support structure consisting of two C-Chanel that support the Glass-Glass PV module having thin glass on top and SLG at the bottom. Based on analysis described here, it was found that optimal channel location from free edges is close to L/5 that gives mechanical reliability of 0.99.

How strong is tempered glass?

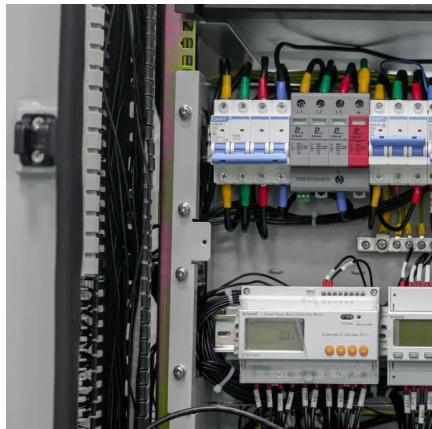
Atest is area of test specimen, 127 mm<sup>2</sup> . Characteristic strength of the glass was estimated to be 167 MPa. Aproduct used in Fig. 9 is based on FE calculations and top glass surface (S1) is chosen as it was found to be dominant stress among all surfaces (SLG being a tempered glass).

Which glass is best for thin film photovoltaic applications?

resistance is significantly better than that of soda-lime-silica glass. Thicknesses ranging from 0.7 to .5 mm are shown to be suitable for thin film photovoltaic applications. As with any glass selection, support structure design is a key factor for limiting mechanical stress



## Solar glass tensile strength



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