

# Double-glass modules and bifacial dual-wave modules







#### **Overview**

#### What is a dual glass module?

Our dual glass modules use the same internal circuit connection as a traditional glass-backsheet module but feature heat-strengthened glass on both sides. We produce the back glass with a unique drilling technique that ensures the reliability of both the junction box installation and the module.

Why do bifacial modules need 2 mm glass?

As a result of the additional cost of very thin glass, most mass production bifacial modules being produced today are described as using  $2 \times 2.5$  mm glass. More often, this means 3.2 mm on the front and 2 mm backsheet glass, states Weilharter – which brings down costs but in turn introduces its own issues.

Does Trina Solar have a dual glass bifacial module?

However, Trina Solar has made such a breakthrough by abandoning the backsheet and developing the brand-new dual glass module. Trina Solar Vertex TSM-DEG21C.20 (670 W) framed dual-glass bifacial module.

What is bifacial glass technology?

Bifacial glass technology is the preferred material among manufacturers for the rear side cover of the modules. Some key advantages of the glass-glass structure are: Glass-glass modules can also be frameless, which helps eliminate the cost of an extruded aluminum frame. However, glass-glass models with frames have a lower risk of breakage.

Why are glass-glass bifacial modules becoming more popular?

Due to their better reliability, glass-glass bifacial configurations have a larger portion of the worldwide bifacial module market share. Glass shortages, weight concerns for larger format modules, and decreasing prices for transparent backsheets have caused some manufacturers to switch to a glass-



transparent backsheet structure.

Do bifacial modules come with frames?

As a result, most glass-glass modules come with frames in place. Compared with standard glass backsheet technology, framed modules with two layers of glass are heavier. Therefore, transparent backsheets are a solution for a lighter bifacial module. A more lightweight module means less cost on transportation, labor, and trackers whenever applicable.



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## Double-wave bifacial solar modules: Technological Evolution and ...

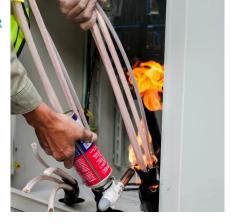
The photovoltaic industry is undergoing an efficiency and reliability revolution led by double-wave bifacial solar modules (commonly known as bifacial double-glass modules).

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### The weekend read: Double glass can spell double trouble

Highly transparent allowing power generation on both sides of the module, robust in some of the toughest elements, and able to remain in the field or on the roof for 30, 40, or ...

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### What are the advantages of dual-glass Dualsun modules?

To summarize the advantages cited above, the choice of a double glass structure means that the photovoltaic cells are better protected from external stress, in particular from the penetration of ...

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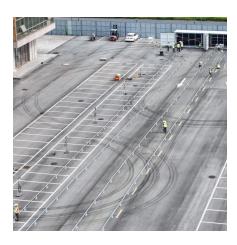


#### Double glass solar module, Maysun Solar

Glass-glass solar modules (bifacial modules) increase energy production by approximately 2% to 5% compared to traditional glass-backsheet modules, thanks to their ability to capture light ...







### Bifacial Photovoltaics 2021: Status, Opportunities and Challenges ...

The reason for this is that bifacial solar cells are the result of an evolution of crystalline Si PV cell technology and, at the same time, module producers are increasingly ...

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Bifacial with transparent backsheet and bifacial with dual glass have their own advantages and disadvantages. The radar chart can help customers evaluate the two products ...

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#### JA Solar 595W JAM72D40 MB N-type Double Glass Bifacial Modules

The JA Solar JAM72D40 MB modules from the DeepBlue 4.0 series deliver 570-595W with high-efficiency Mono-PERC cells and 16 busbars. Featuring a bifacial double-glass structure and ...

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### Dual-glass vs glass-backsheet: The winning formula for bifacial modules

Thanks to improvements in module stiffness and the better support of dual-glass design, the deformation of our dual-glass modules is much lower than that of traditional ...

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### The Difference Between Bifacial Module and Double Glass Bifacial Module

In summary, the primary difference between a bifacial module and a double glass bifacial module is the presence of glass on both sides in the latter, which provides improved ...

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#### Bifacial Solar Modules , Maysun Solar

Single-glass bifacial modules are lightweight and suitable for rooftop installations, while double-glass bifacial modules provide greater resistance to weather conditions, making them ideal for ...

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### Choose Right: Bifacial vs Glass-Glass Solar Panels Decision Guide

1 day ago· How Glass-Glass Modules Differ Glassglass modules sandwich solar cells between two tempered glass layers. Standard panels use glass on front, polymer backsheet behind. ...

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#### ??? 158.9 JAM72D09 370-390 BP

Introduction JA bifacial modules are assembled by high-performance PERCIUM encapsulated by glass-glass panels, are capable of converting energy from lights on front and diffuse light, as

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### Towards 50 Year Lifetime PV Modules: Double Glass vs. Glass...

This award aims to increase the lifetime of c-Si modules by lowering the power degradation rate to the goal of 0.2 %/year, while also increasing the harvested irradiance per ...

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