SolarInnovate Energy Solutions

Double-glass bifacial components increase power consumption

Overview

Does a glass bifacial module increase power?

Appling the lattice pattern on the rear glass boosts the front-side power by about 1.7%, but lowers the bifaciality factors by about eight percentages from 72% to 64%. The energy yield gain of glass/glass bifacial module is about 6% during the period of investigation.

What is the energy yield gain of glass/glass bifacial module?

The energy yield gain of glass/glass bifacial module is about 6% during the period of investigation. However, it can be increased to above 10% with optical enhanced effects of the reflective coating on the rear glass.

Do bifacial modules increase energy yield?

Due to optical enhanced effects of a reflective coating on the rear glass, the energy yield gain of bifacial modules can be increased to above 10%, even though the bifaciality factors were reduced from 72% to 64%. Our study indicates that enhancing the front-side output power of bifacial modules produces more benefits. 1. Introduction.

Do glass/glass modules with bifacial cells generate more energy?

Both the long-term field data collected from inverters and Multi I-V tracer clearly demonstrate that glass/glass modules with bifacial cells, DG Bi-PERC and DG Bi-PERC/RC, generate more energy than regular modules with monofacial cells, REG PERC.

Are bifacial modules more energy efficient than monofacial?

It is reported that bifacial modules have 10–30% energy yield gains (Pelaez et al., 2018, Shoukry et al., 2016) compared to the regular monofacial modules. The energy yield gains vary according to the different installation conditions as mentioned above.

Do glass/glass bifacial solar cells provide more energy yield?

Our results show that the glass/glass bifacial modules encapsulated with bifacial solar cells provide over 6% more energy yield compared to the glass/backsheet monofacial modules encapsulated with regular monofacial solar cells.

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