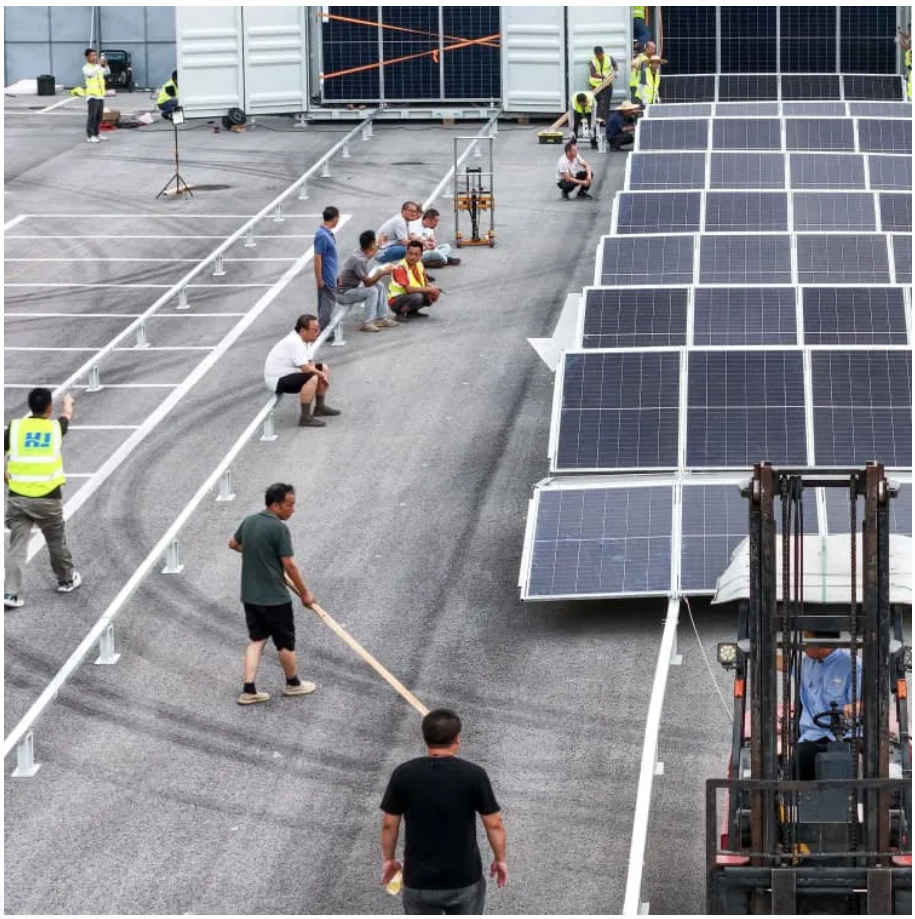
FTMRS SOLAR

Heat dissipation method of solar glass



Overview

Does absorption of solar radiation in glass cover increase heat flow?

Thermal network for upward heat flow in single and double glazed flat plate solar collectors including the effect of absorption of solar radiation in glass cover (s). Absorption of solar radiation in the glass cover has been analyzed as a case of uniform heat generation. The rate of heat generation per unit volume is (αg I / Lg).

Does glass cover absorption affect heat transfer coefficients?

The resulting effect of absorption of solar radiation in glass covers on heat transfer coefficients in a solar collector with double glazing is significantly more than in a solar collector with single glazing. The effect on convective heat transfer coefficients between the absorber plate and the first glass cover, hcp1, is substantial.

How does solar irradiation affect thermal loads absorbed by glass?

Thermal loads due to solar radiation absorbed by glass (part of which is conducted to inner space) and transmitted through glass depend on the solar irradiation, type of window glass used, and indoor airflow and temperature distributions.

What are the components of heat gain through glass?

The heat gain components through glass consists of solar radiation and conduction. Solar radiation is considered in two parts - direct and diffuse (or scatter). Diffuse radiation is the solar radiation that is absorbed, stored and scattered in the atmosphere.

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Solar control

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