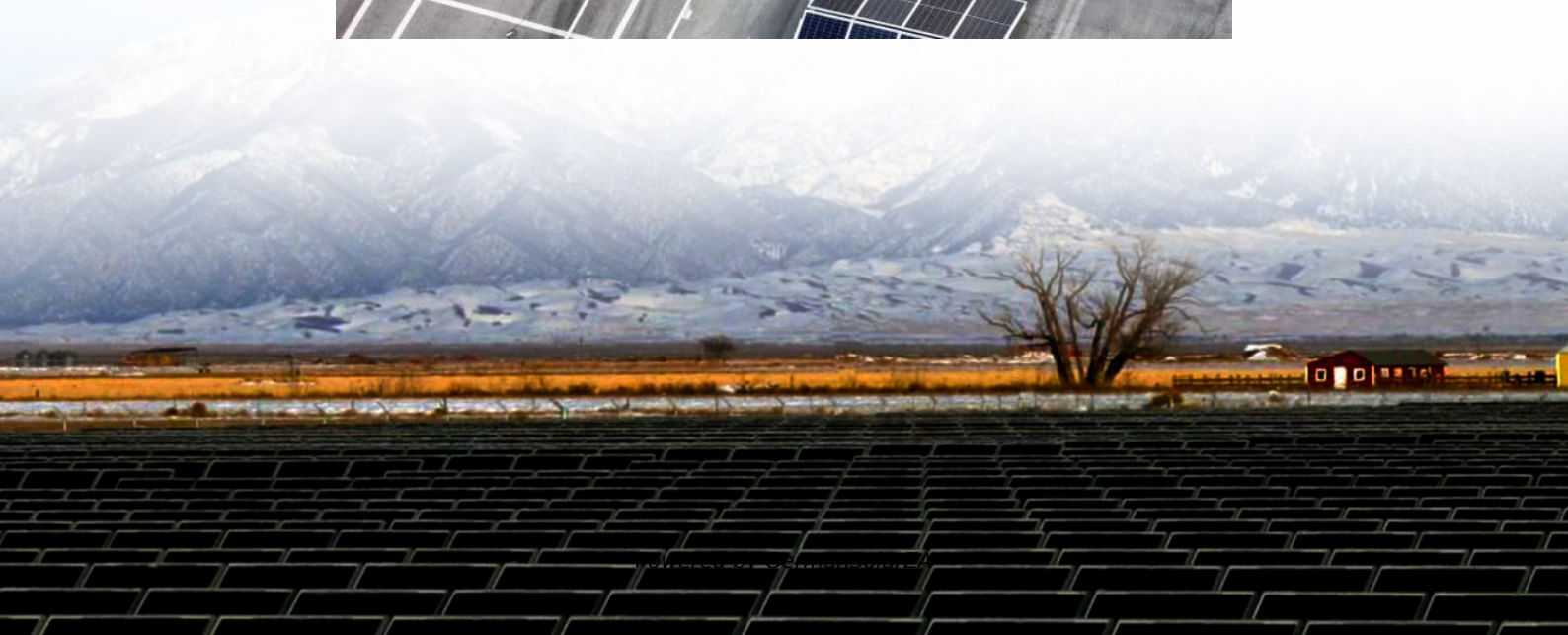
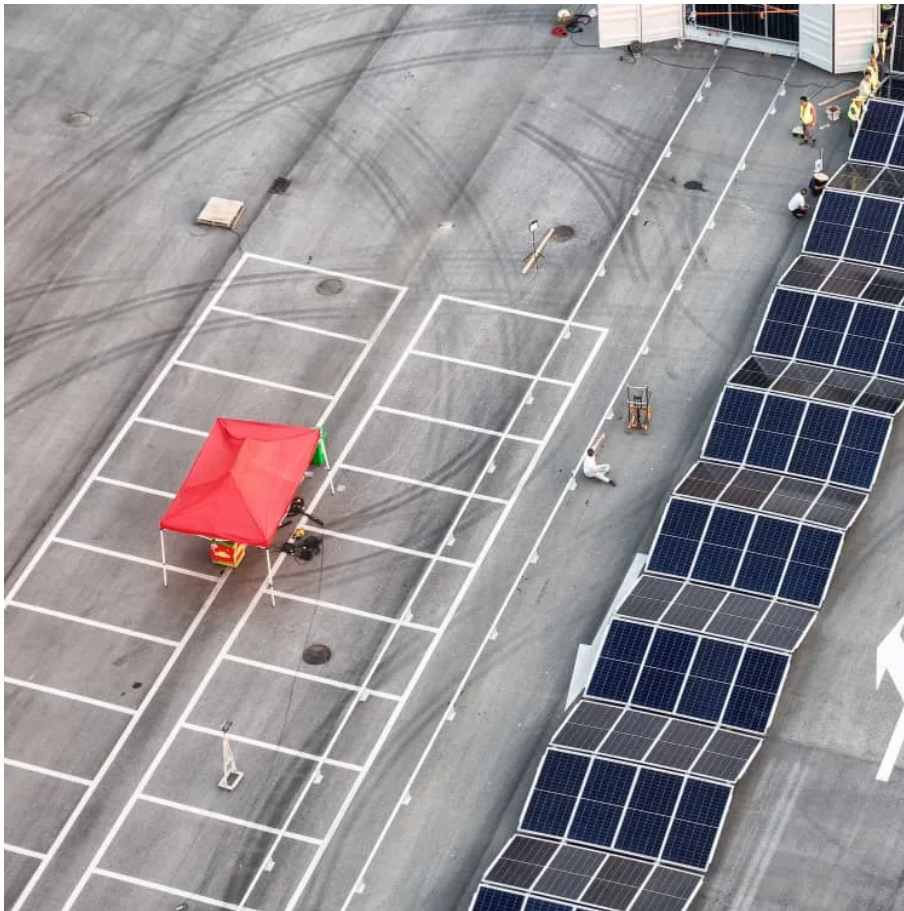


Solar glass heat dissipation





Overview

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.

Does window glass affect solar heat gain & velocity and temperature distribution?

Conjugate mixed-convection analysis was carried out in order to investigate effects of using different types of window glass on solar heat gain and velocity and temperature distributions inside AC rooms using mixing air-distribution system. ACH was varied in the range 5–20. Single- and double-pane clear and tinted window glass were considered.

What happens when solar radiation hits a glass surface?

When solar radiation strikes a glass surface, some of it is transmitted, some of it is absorbed and some of it is reflected. The absorbed component increases the temperature of the glass and the heat is slowly conducted (released) to the outside and inside depending on the difference in temperature.

How to reduce solar heat gain?

In order to reduce the energy consumption due to cooling loads, while maintaining thermal comfort, it is vital to reduce the solar heat gain. The present study focuses on energy saving by comparing the performance of using different types of window glass; namely, single- and double-pane clear and tinted glass.



Solar glass heat dissipation



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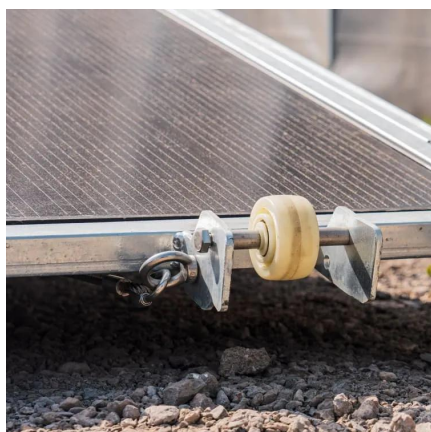
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