

# What causes the low transmittance of solar glass

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Which heat absorbing glasses have the lowest solar transmittance?

Based on these transmittance spectra, solar transmittance measurement software was used to calculate solar transmittance and visible light transmittance values. The results indicated that the heat-absorbing glasses with relatively low transmittance for both visible and near-infrared regions had the lowest solar transmittance values.

What is solar transmittance?

Solar transmittance is defined as the ratio of solar radiation perpendicularly incident on window glass that is transmitted through the glass and calculated according to a formula specified in JIS R 3106 Testing method on transmittance, reflectance and emittance of flat glasses and evaluation of solar heat gain coefficient.

What are the factors affecting the choice of glass?

The main values in the choice of glass are thermal transmittance, light transmittance, and the solar factor. The solar factor  $g$  is the ratio between the solar energy that manages to pass through the glass entering the environment and the total solar energy that strikes the outer surface of the glazing.

How does JIS regulate solar transmittance?

JIS regulates solar transmittance as an index of the transmission characteristics of sunlight, which includes visible to near-infrared light. In this example, several types of glass were measured using a UV-3600 UV-VIS-NIR spectrophotometer and their solar transmittance was calculated using solar transmittance software.

The transmissivity of the low-E glass is seen to drop off much faster than that of ordinary glass in the near infrared region. That means that with low-E glass the inside of the house still receives ...

In hot conditions or for building with high internal loads, solar control glass is used to minimise solar heat

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gain. It allows sunlight to pass through a window or facade while radiating and ...

The glass is their protective gear--too bulky and it slows them down; too thin and they're vulnerable. Getting this balance right makes all the difference between a solar panel ...

Light travel through glass involves complex interactions at both the macroscopic and microscopic levels. When light enters glass, it slows down due to the material's refractive ...

Modern glass which blocks Solar Transmittance does not necessarily mean that light will also be blocked. Also single glazing may restrict solar transmission better than triple glazing even ...

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The solar factor, also known as the solar energy gain coefficient or total energy transmission, is a value that measures the amount of solar energy that can pass through a ...

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Solar transmittance, also referred to as light transmittance or visible transmittance, is the measurement of visible light passing through a piece of glass. Solar transmittance can be ...

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Polycarbonate has the lowest transmittance in UV, VIS and NIR ranges. The erythemal and DNA-damage transmittance for most materials is in the range 6-14%. It is ...

In hot conditions or for building with high internal loads, solar control glass is used to minimise solar heat gain. It allows sunlight to pass through a ...

As the incidence angle increases, the transmission of solar radiation becomes still smaller. Design specification for these glasses should be made very carefully because it can significantly ...

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