

What is the transmittance of double-glass components





Overview

Understanding the thermal performance of window units is of utmost importance for the advancement of energy-efficient building design. Thermal transmittance (U-factor) is one of the most important indicators.

What is the transmittance of a float glass?

The research shows that the transmittance of the glass thickness is less than 0.9 mm, undergone the chemical strengthening process, reaches 91-92% values in whole UV-VIS-NIR region. For comparison, results for a float type glass (3 mm) shows a value about 80% in UV-VIS radiation range and about 60% above 1000 nm. Trans- mission over . [.].

How is the transmittance of optical glass measured?

The transmittance of optical glass is measured using double beam spectral photometers from the company Perkin Elmer with special modifications. The standard setup enables to measure within a wavelength region from 250 nm up to 2500 nm. The measurement accuracy over the complete spectrum is about $\pm 0.5\%$.

What is the transmittance spectra of quartz glass slabs?

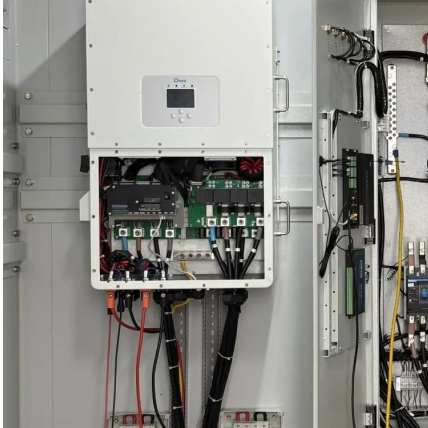
Spectral transmittance values of quartz glass slabs. As shown in Fig. 2, the shapes of transmittance spectra between 3 and 5 mm quartz glass slab are similar. And the float glass slabs have a wide transparent region, especially in the visual region 380–760 nm, in which the transmittances of float glass slab are beyond 78%.

Can transmittance spectrograms be used to determine optical properties of single glazing units?

In this work, transmittance spectrograms of single glazing units at normal incidence were only measured, and a novel spectroscopic method was developed to determine the optical properties of single and double glazing units based on the transmittance spectra modeling.



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The aim of this technical information is to give the optical designer a deeper understanding on the transmittance properties of optical glass.



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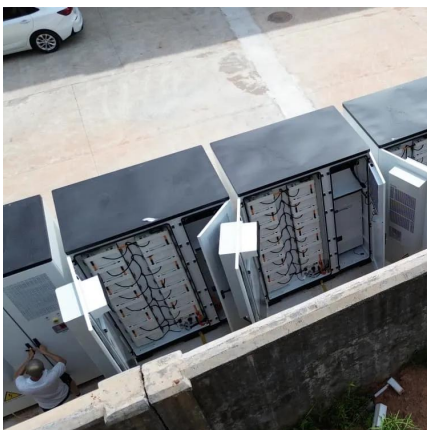
Optical performance of single and double glazing units in ...

Dec 1, 2015 · The transmittance spectrograms of single float glass glazing units at normal incidence with different glass thicknesses in the wavelength 337-900 nm were measured. ...



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Measuring The Daylight And Solar Energy Properties Of ...

The basic optical properties for the calculation of solar energy transmittance and daylight properties of glazing according to ISO 9050 and EN 410, are the reflectance and transmittance ...



A data-driven approach to thermal transmittance (U-factor) ...

Feb 15, 2024 · It also establishes a correlation between glass emissivity and center of glass U-factor (thermal transmittance). Furthermore, our developed data-driven approach exhibits ...

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