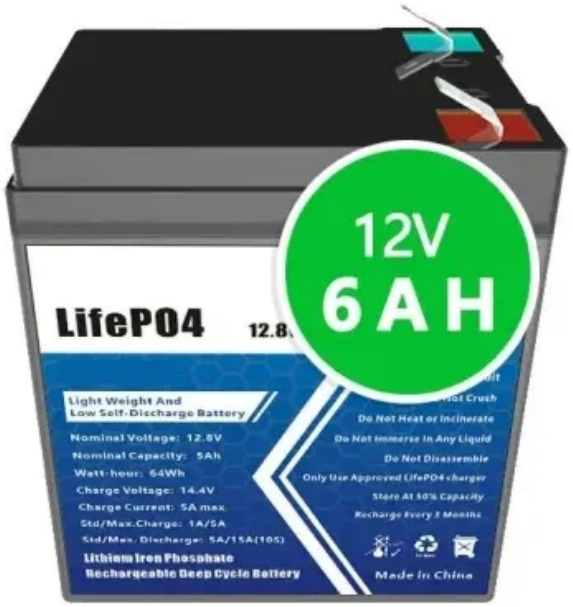
SolarTech Power Solutions

Transmittance of monocrystalline silicon double-glass components



Overview

Silicon is grown by Czochralski pulling techniques (CZ) and contains some oxygen which causes an absorption band at 9 microns. To avoid this, Silicon can be prepared by a Float-Zone (FZ) process. Optical Silicon is generally lightly doped (15 to 40 ohm cm) for best transmission above 10 microns.

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Silicon is used as an optical window primarily in the 3 to 5 micron band and as a substrate for production of optical filters. Large blocks of Silicon with polished faces are also employed as neutron targets in Physics experiments. Silicon is grown by Czochralski pulling techniques (CZ) and.

Thorlabs' Precision Monocrystalline Silicon (Si) Windows are offered in Ø1/2" and Ø1" sizes. They are available uncoated or with an AR coating on both sides that provides <1.25% average reflectance from 2 - 5 µm (see the Graphs tab for more details). Silicon offers high thermal conductivity and low.

High-purity silicon is a readily available material of utility in realizing a variety of long-wavelength optical and guided wave components. The transmittance of uncompensated for silicon is measured in the far- and mid-infrared regimes at room and cryogenic temperatures. The experimental and.

Usually the transmittance range spreads also into the near UV and IR regions. As a general trend lowest refractive index glasses show high transmittance far down to short wavelengths in the UV. Going to higher index glasses the UV absorption edge moves closer to the visible range. For highest index.

Micromorphous silicon module technology combines two different types of silicon, amorphous and microcrystalline silicon, in a top and a bottom photovoltaic cell.OverviewAmorphous silicon (a-Si) is the non- form of used for solar cells and in . Used as for a-Si solar cells, or thin-film silicon.

Usually silicon is considered as the material of choice for systems operating in the Middle Infrared (MIR) region, from 3 to 5 µm. But in fact the material may be used in much broader operating range - from 1.2 µm to 1000 µm or even higher. Three grades of silicon are produced to optimize.

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