



Glass manages solar heat radiation by three mechanisms: reflectance, transmittance and absorptance.

Reflectance – the proportion of solar radiation reflected back into the atmosphere

Direct transmittance – the proportion of solar radiation transmitted directly through the glass

Absorptance – the proportion of solar radiation absorbed by the glass (heating up the glass).

Factor:

The glass ability to minimize the amount of ultraviolet and infrared light that can pass through glass without compromising the amount of visible light that is transmitted.

Ultraviolet light (310-380nm) causes interior materials to fade

Visible light (380-780 nm) light up the space

Infrared light or heat energy, is transmitted as heat into a building (780nm -). Solar infrared is commonly referred to as short-wave infrared energy, while heat radiating off of warm objects has higher wavelengths than the sun and referred to as long-wave infrared.

Recede when travelling through space

Diffused sunlight

Evenly distributed throughout the space

Working Surface

Direct sunlight

Factor:
Reflectance and emissivity of material
Amount of internal reflected component

Internal reflected component

Absorptance

