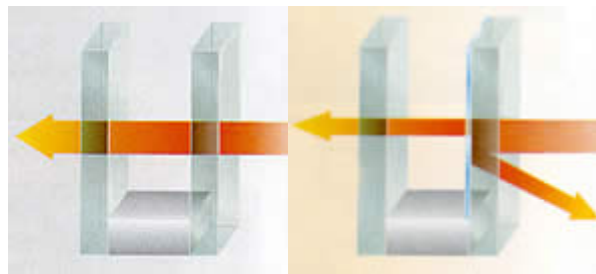


Low-E glass

Low-emission glass (Low-E) is a clear glass with a microscopically-thin coating (several atoms thick) of metal oxide. This allows the sun's heat and light to pass through the glass into the building. At the same time it blocks heat from leaving the room, reducing heat loss considerably.

One negative aspect of the Low-e coating is that there is a slight loss of solar contribution. However, this loss is offset by its insulating value at night. Also, a decrease in UV rays means less fading of carpets, curtains etc.

In comparison to conventional glazing which has high emissivity (high solar gains during the day and high radiative heat losses at night), the Low-e glass in windows is much more efficient.



Production

On-line coated (pyrolitic process): this is a clear glass which has been coated with a metal oxide through pyrolysis when the glass leaves the tin bath (at 650°C). The coating is consequently very resistant to mechanical damage, therefore this Low-E glass can be cut, tempered or laminated much the same way normal uncoated glass can.

Off-line coated (magnetron process): is a clear glass which has received, on one of its surfaces, a silver coating applied by magnetically-enhanced cathodic sputtering. This type of Low-E must be used exclusively in insulating glass, with the coating protected on an internal face. It can be tempered and laminated.