

Homemade Sun Glasses

Low-E Glass Cuts the Glare

If your house faces east there may be times when you wake up in the morning, walk into your living room, and wish you were wearing sunglasses because it is so bright. Either that, or you stub your toe on a piece of furniture because your window blinds have blocked out all of the bright light. What if your house had windows like sunglasses? Low-Emissivity glass windows are just like having sunglasses for your house that filter the brightness of the light.

What is Low-E Glass?

Low-Emissivity glass, commonly called *low-E* glass, is a type of reflective glass that is gaining in popularity, especially in residential and office applications. Windows with low-E coatings resist ultraviolet light. Low-E coatings are very thin metallic coatings that reduce visible light transmission by about 10 percent compared to uncoated glass. They are applied using either the vacuum (sputter) or pyrolytic process.

Low-E Glass Advantages

Because it resists ultraviolet light, low-E glass prevents sunlight exposure from damaging carpets, draperies, sofas and other furnishings. Plus, low-E glass reduces sunlight glare in a room. Most importantly, low-E windows reduce energy costs by helping to control the climate in the house.

Low-E glass allows sunlight into a room without letting heat inside. In the summer this keeps rooms cool and lowers air conditioning costs. In warmer southern areas, low-E coatings are usually applied to bronze, green or gray tinted glass. The coatings reduce glare and reflect the sun's heat

away from the structure.

In the winter low-E glass keeps heat from escaping. This reduces heating costs because the low-E coating re-radiates the heat absorbed from sunlight back inside the room. In cooler northern areas, low-E coatings let in the heat from the winter sun while retaining the heat generated from inside the building.

The main reason low-E glass has these advantages is that it reflects sensible heat. The heat generated by hot water or steam radiators, or the heat from hot air ducts, are examples of sensible heat. Low-E glass retains more of this heat indoors than other types of reflective glass. The amount of coating can be adjusted for different climates to provide optimum U-value energy efficiency.

The U-Value

The measure of the rate of non-solar heat loss or gain through the glass is called the U-value. Either the glass alone or the entire window (the glass, frame and the spacer materials for IG units) can be U-value rated. The lower the U-value number, the greater a window's resistance to heat flow and the better its insulating value.

When considering whether or not to install low-E glass, consult a professional glass service provider who can explain the options available. To find the *Glass Doctor* shop near you, visit www.glassdoctor.com or call 1-800-877-GLASS.

