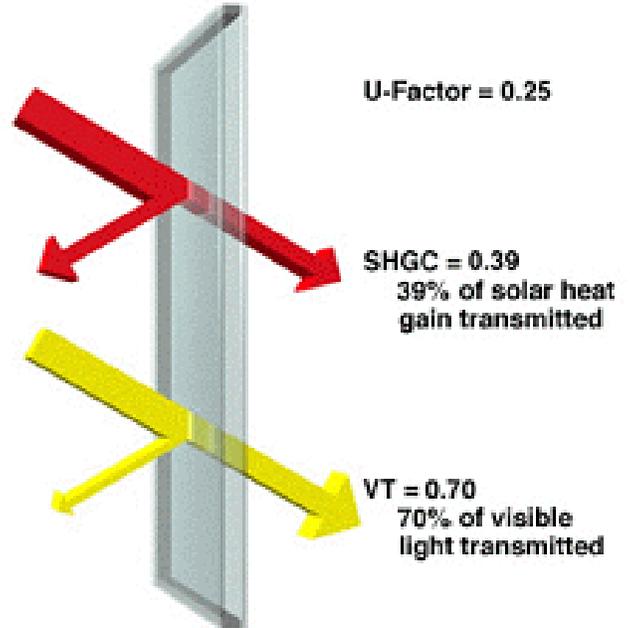


Low E Soft Coat

Application: Low-E Soft Coat, or Low-E(sc), is a low temperature sputter coating application (typically applied to surface 2 in dual glazing). This means it is basically sprayed on in layers comprising of generally three primary layers with additional layers of metal. Each layer is deposited on the glass in a vacuum chamber. The application is so thin, it is equivalent to 1/10,000 of the thickness of a human hair.

Emissivity: Emissivity is the ability of a material to radiate energy or transfer heat. Soft coat windows usually use a product with an emissivity of .04, meaning 96% of the long wavelength of radiant energy received by the surface is reflected. This would in turn lower the U-factor, which is the measurement of how much heat escapes through your window, also referred to as the "insulating measurement".

Spectral Selectivity: The spectral selectivity of the soft coat application is designed to not only block the re-radiation of heat from inside the home while still allowing a high transmittance of light into the home; it also cuts down on the heat from the sun that is allowed inside. Therefore, Low-E(sc) helps to lower the U-factor, in addition to reducing the Solar Heat Gain Coefficient or the amount of heat from the sun that travels through your window to help heat your home.



This figure illustrates the characteristics of center of glass values for a typical dual glazed unit with Low-E(sc), argon gas and Super Spacer

Low E Hard Coat

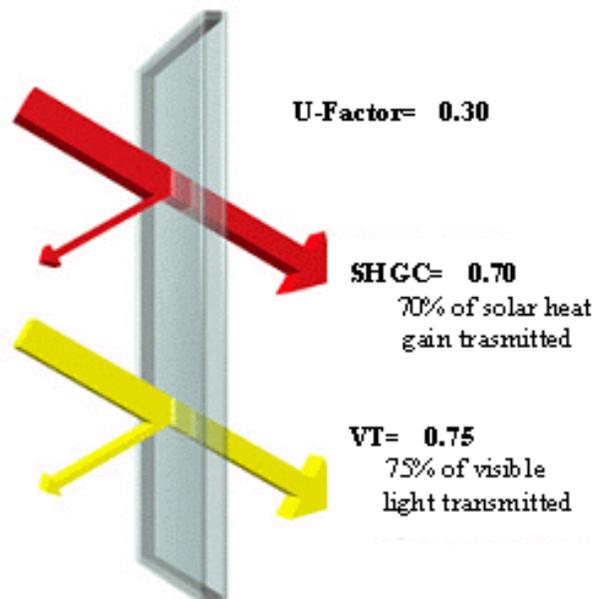
Application: Low-E Hard Coat, or Low-E(hc), is a pyrolytic coating of metallic oxide, most commonly tin oxide with some additives, which is deposited directly onto the glass surface (generally surface 3) while it is still hot; typically "baked into the glass". Although a pyrolytic coating is a thicker application than the soft coat, it is still extremely thin.

Emissivity: The hard coat product windows usually use has an emissivity of 0.154; meaning approximately 85% of the long wavelength of radiant energy received by the surface is reflected. This would in turn also lower the unit's overall U-factor.

Spectral Selectivity: The spectral selectivity of the hard coat application is designed to allow basically all of the solar spectrum to pass through while blocking the re-radiation of heat from the inside of the house and still keeping a high transmittance of light into the home.

Low-E(hc) helps reduce the U-factor, in comparison to that of clear glass for example, due to its emissivity being much lower.

While lowering the U-factor, Low-E(hc) will also allow more solar heat gain to pass through.



This figure illustrates the characteristics of center of glass values for a typical dual glazed unit with Low-E(hc), argon gas and Super Spacer