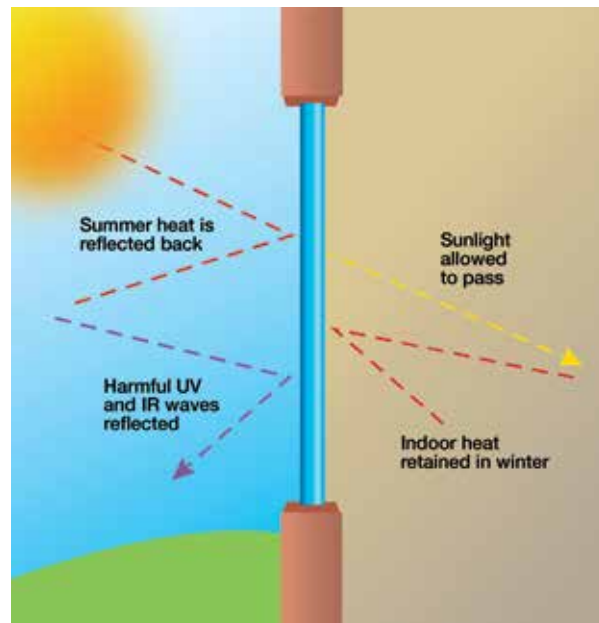


## What is Low-E glass and how is it made?

The ability of a material to radiate energy is known as emissivity. Low emissivity glass is used to minimize amount of ultraviolet and infrared light that can pass through the glass without compromising the amount of visible light that is transmitted. A microscopically thin transparent coating allows low-e glass to reflect exterior heat in warm temperatures and hold in heat during cold temperatures, making buildings light, bright and energy-efficient.

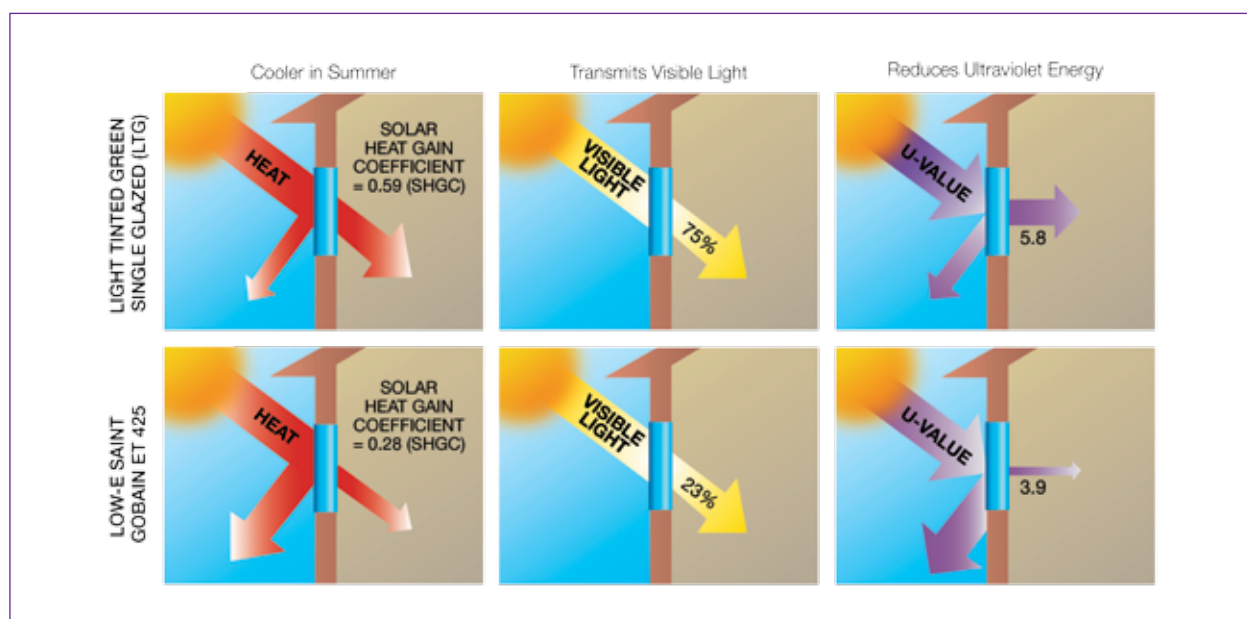
CSG Low-E Glasses are manufactured using the pyrolytic process – the coating is applied to the glass ribbon while it is being produced on the float line, the coating then “fuses” to the hot glass surface, creating a strong bond, or “hard-coat” that is very durable during fabrication.



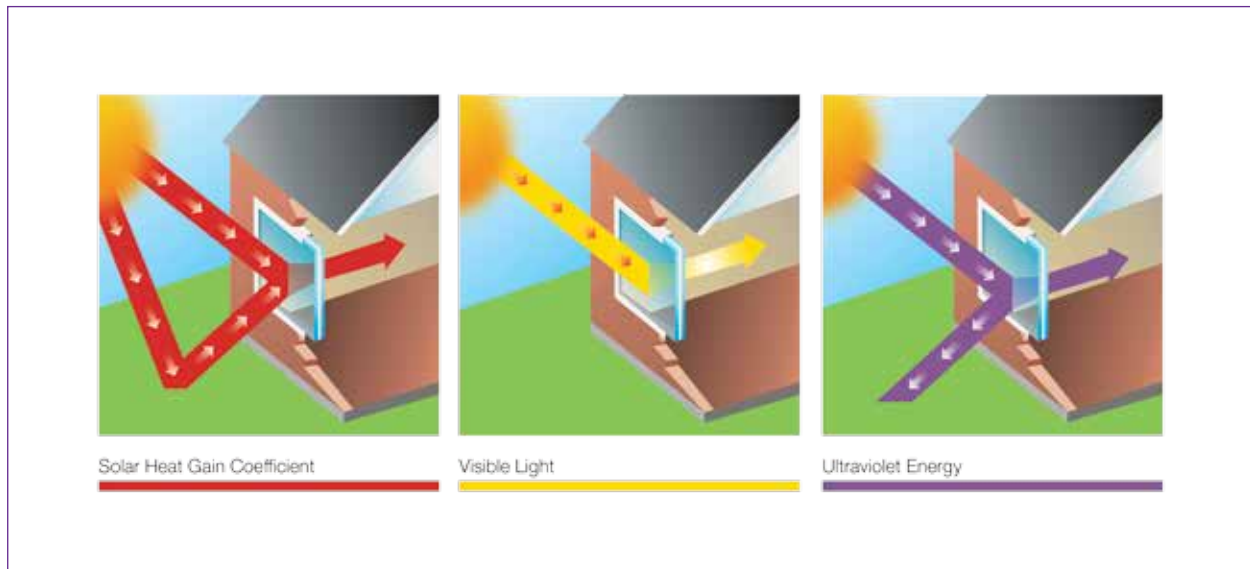
## Tinted Glass (Heat-Absorbing) vs. Low-E Coated Glass

Before the development of low-e coatings, architects relied on tinted (heat-absorbing glass) or reflective coatings to reduce solar energy transmission. Tinted glass almost always requires heat-treatment to reduce potential thermal stress and breakage and tends to

reradiate the absorbed heat. Reflective coatings are effective at reducing heat gain but also reduce visible light transmission. Low-e coatings reflect solar energy away from the glazing, often without requiring heat treatment, and generally have lower visible light reflection.



\* CSG is constantly certified as a processor of Saint-Gobain Glass products in Malaysia.



The following are used to measure the effectiveness of glass with Low-e coatings:

- ◇ **U-value** is the rating given to a window based on how much heat loss it allows.
- ◇ **Light to Solar Gain** is the ratio between the window's Solar Heat Gain Coefficient (SHGC) and its visible light transmittance (VLT) rating.
- ◇ **Visible Light Transmittance** is a measure of how much light passes through a window.
- ◇ **Solar Heat Gain Coefficient** is the fraction of incident solar radiation admitted through a window, both directly transmitted and that is absorbed and re-radiated inward. The lower a window's solar heat gain coefficient, the less solar heat it transmits.



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