

SOLAR PROPERTIES OF GLASS

From an energy-efficiency standpoint, the single most important piece of information Phoenix homeowners need to know about their new windows is the **Shading Coefficient** or **Solar Heat Gain Coefficient**. These terms are expressed as a number between 0 and 1 and tell us the amount of heat from the sun that is transmitted, relative to what passes through a pane of 1/8" clear glass —obviously, the lower the number, the better.

As critical as this measure of negative energy flow is, however, it must always be weighed against **Visible Light Transmittance**. In glass technology there's always a tradeoff between heat and light: in order to reduce the former you have to sacrifice the latter — the question is, by how much? The most amazing characteristic of Low E technology is its "spectral selectivity." Acting as a filter, it differentiates between the longer wavelengths constituting the *heat* portion of the electromagnetic spectrum and the shorter wavelengths that reach us in the form of *visible light*. It provides for the best of both worlds: maximum illumination with minimal warming effect.

Type of Glass	Solar Heat Gain Coefficient (the lower the number, the better)	Visible Light Transmittance (the higher the number, the better)
Single-pane, clear	.86	90%
Double-pane, clear	.76	81%
Double-coat Low E (Low E ²)	.41	72%
Triple-coat Low E (Low E ³)	.27	65%