



## **RESIDENTIAL INSULATING GLASS ORIENTATION GENERAL RULES**

- Residential customers generally want glass with high light transmission and low reflectivity. The glass “look” is often the most important feature – and that might be defined as “looks like clear glass”, or perhaps that the appearance “matches” other glass. Clear glass is the usual substrate.
- To maximize collection of solar heat gain to reduce heating costs, use a passive solar Low E product like Pilkington Energy Advantage, oriented to the #3 surface.
- To maximize u-factor and SHGC, select Guardian ClimaGuard RLE 71/38 and orient the coating to the #2 surface.
- All Low E glass looks different than clear glass. If the “view” is the primary homeowner concern, or if close scrutiny is desired (rather than energy performance), consider using clear glass with no Low E coating.
- Tempering adds distortion to glass, and it will be more noticeable 1/ in thinner residential glass, 2/ in bigger sizes, and 3/ especially with Low E coatings. Consider using annealed laminated glass in critical viewing applications that require a safety glazing material where distortion is a concern. Use economical standard “patio door” units in picture window applications only after the customer understands that more distortion will be present than other options.
- The Pilkington Energy Advantage Low E has high light transmission – it looks very close to clear glass - which most home owners like. But if it is partially shaded, a “haze” in the sunlit portion of the glass will be visible from the interior at certain times of day. The Guardian Low E exhibits less haze, but has a lower light transmission that may surprise a home owner accustomed to the appearance of clear, uncoated glass. Either condition isn’t a defect, won’t cause seal failure, and isn’t a cause for rejection. But either Low E product may disappoint an uninformed customer. We recommend that residential customers be presented with information (like our residential Low E document) or samples to weigh performance, price and appearance, to ensure satisfaction.
- If using Low E insulating glass for breakage or seal failure replacements, replacing all adjacent lites with the same Low E glass is recommended if color uniformity is a concern. The original manufacturer is the best source for replacement glass if color uniformity is most important. Given the numerous Low E options that are possible, matching existing glass originally manufactured by others with our glass is not likely.

Passive Solar Low E – Pilkington Energy Advantage

Solar Control Low E – Guardian ClimaGuard RLE 71/38 (1/8” tempered only)