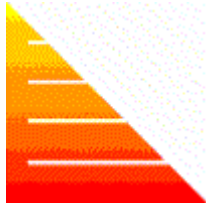


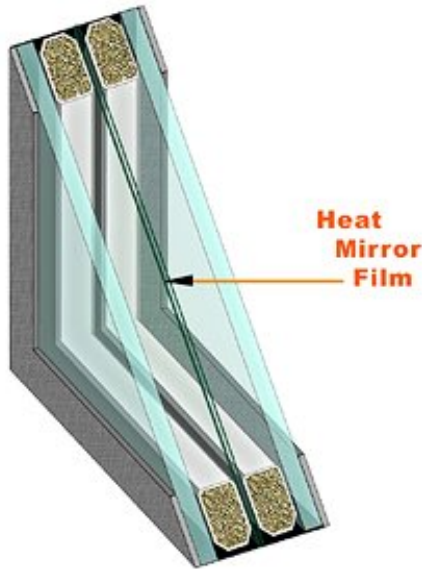
HEAT MIRROR™

The choice of the right glazing is one of the most important and far-reaching decisions that an architect or building owner will make. This decision impacts the overall design, human comfort, energy efficiency, mechanical HVAC design and loads, daylighting, condensation control, ultraviolet fading and sound control. In the design of any building (whether it be residential, commercial or industrial) one must look at and take into consideration the six principal glazing design challenges. These are:



- Winter Comfort and Heating Load
- Summer Comfort Cooling Load
- Natural Daylighting
- Appearance and Reflectivity
- Ultraviolet Fading Control
- Condensation Control

The Heat Mirror™ family of wavelength-selective products offer the solution to all glazing design challenges such as climate, elevation and application. These solutions provide unparalleled flexibility to "tune" a building to meet these needs. As more and more architects, builders and homeowners adopt the Heat Mirror technology, buildings will move from part of the environmental problem to part of its solution.

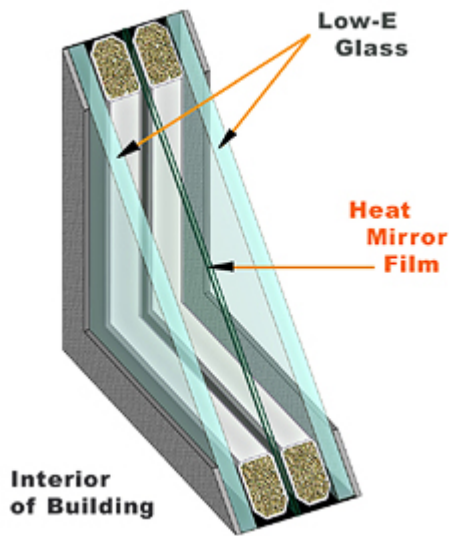


Heat Mirror is a low-emissivity coated film product suspended inside an insulating glass unit. The result is a triple unit with two airspaces without the weight of triple insulating glass and with far superior insulating and shading performance. There are many different Heat Mirror coatings: HM 88 , TC88, SC75, 66, 55, 44, 33, and 22. These range from the low reflectance, high-light transmittance performance of Heat Mirror 88 through the maximum shading performance of Heat Mirror 22.

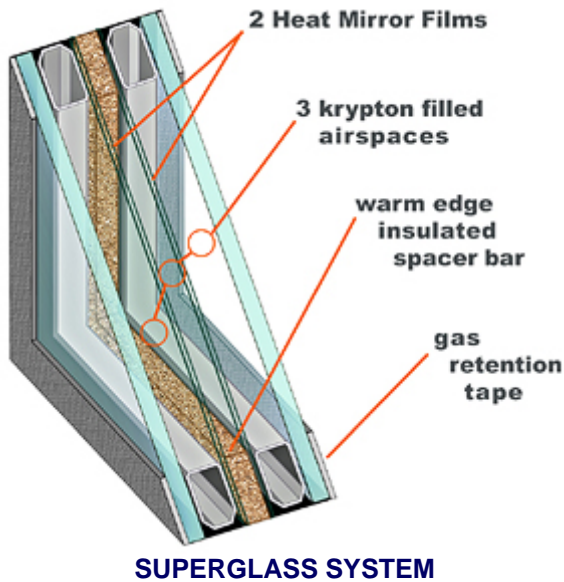
All Heat Mirror products can be used with virtually any type of glass clear, heat absorbing, reflective, heat-strengthened, tempered, laminated to achieve superior performance in a wide range of aesthetics.

HEAT MIRROR PLUS INSULATING GLASS

Heat Mirror Plus substitutes one lite of low-emissivity coated glass for the uncoated glass used in the Heat Mirror unit. With an optional Argon or Krypton filling, a U-Value of less than .12 (R-value of 8.33) can be achieved. This product



meets the criteria for institutional projects or projects requiring high insulation values and is available in custom sizes and shapes.



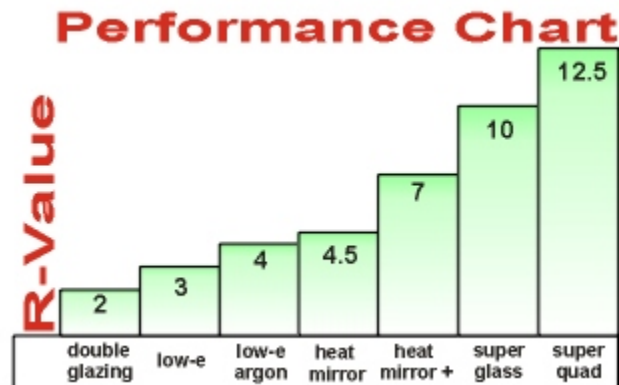
Introduced in 1990, the **Superglass System** has become the most energy-efficient glazing product on the market to be offered in a 1" overall thickness. A U-value of .11 (R-Value of 9.09) is achieved by using two HM 88 films suspended inside two 1/8" pieces of glass. This insulating glass unit is filled with krypton gas and features a patented tape system for gas retention. Superglass further offers a thermally broken, insulated spacer to stop conduction through the edge of the glass (Heat Seal Spacer). This achieves a lower U-value for the entire unit, thus a higher R-Value. (Exact U-values are dependent upon the framing system used.) Units are available in custom sizes for projects requiring high insulation, but limited in the overall thickness of glass such as operable windows.

Heat Mirror "Total Performance" Benefits

● **Superior Insulation:** While the different varieties of Heat Mirror insulating glass described on the previous pages offer a broad range of esthetic effects and solar control performance, all Heat Mirror glazings provide a unique package of additional benefits. Heat Mirror goes beyond common "high performance" glazing to provide total performance:

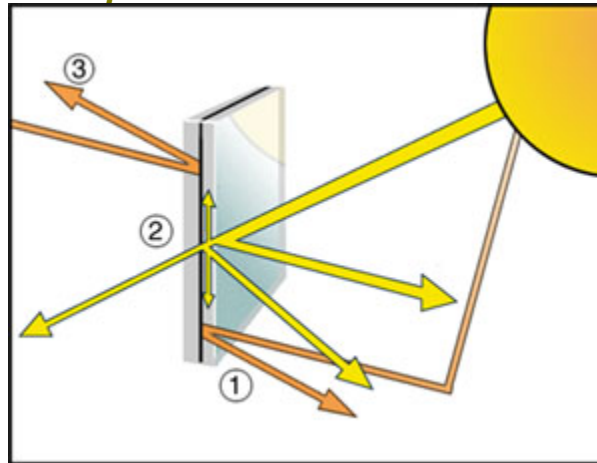


All Heat Mirror glazing provides higher insulating ratings than ordinary double-pane, "low-e" coated, and even triple-pane windows. In fact, Heat Mirror insulating glass insulates as well as an equal thickness of fiberglass wall insulation! Heat Mirror "transparent insulation" lets you design with more glass, while reducing heating and cooling loads.



[view detailed performance chart](#)

Improved Solar Heat Control



1. Ext. Radiated heat is reflected.
2. Direct heat coming in is reduced.
3. Int. Radiated Heat is reflected

Heat Mirror insulating glass is available with a variety of clear coatings for mastering the sun's heat. From Heat Mirror 88 to Heat Mirror 22, solar heat gain is properly controlled, and offers you energy efficiency with relation to HVAC costs.

● *Improved Comfort*



Even when outside temperatures are very low, Heat Mirror keeps the interior glass temperature close to the room temperature, reducing drafts and chilly spots near windows.

● *Minimal Condensation*



Heat Mirror resists wintertime condensation at exterior temperatures up to 45 degrees colder than conventional insulating glass, a particularly important benefit for pool and spa enclosures, computer rooms, and other high-humidity environments.

● *Reduced Fabric Fading*



Heat Mirror insulating glass blocks 99.5% of the sun's ultraviolet (UV) radiation, helping protect valuable furnishings and merchandise from fading and deterioration. Laboratory studies indicate that fabrics behind clear Heat Mirror glazings resist fading and retain their original color up to three times longer than fabrics behind clear single pane glass.

● *Noise Control*

In noisy environments, Heat Mirror's unique construction insulates against unwanted sound transmission better than ordinary double-pane windows. Heat Mirror can be used with laminated glass on the inboard and/or outboard light for maximum noise control. See the ratings below for comparative Sound Transmission Class (STC) performance.

<i>Glazing type</i>	<i>STC Rating</i>
1/4 inch Float Glass	31
3-5/8 inch Gypsum Wall	36
Conventional Double Glazing	34
Heat Mirror Insulating Glass (1" inch unit)	36
Heat Mirror (1" inch unit), one lite laminated	39
Heat Mirror (1" inch unit), two lites laminated	43

● *Improved Plant Growth*



Heat Mirror's outstanding insulation eliminates the wide temperature swings that can be harmful to plant health. In addition, Heat Mirror blocks the infrared radiation that can scorch leaves, while letting in the light plants need for healthy growth.