



WINDOW FILM RETROFIT AN ECONOMICAL ENERGY CONSERVATION AND SECURITY MEASURE

The environmental and security Achilles' heel of any building is its windows. Heat and cold easily escape through windows. Property is damaged due to exposure to the elements and injuries occur as a result of glass breakage. Window film provides protection in these instances. A window film retrofit reduces the wasteful flow of energy in and out of windows and improves building safety...an economical and effective energy conservation and security measure.

If energy conservation is your priority, Low-E window films have been specifically designed for energy conservation. They substantially reduce heating and air-conditioning expense by blocking a high percentage of the sun's heat. Patented construction techniques enable their metal coating to reduce heat loss in colder months and heat gain in warmer months. Additionally, reductions in drafts and temperature fluctuations generate considerable savings on utilities expense.

Many films are LEED rated and qualify for LEED credits. An informed window film dealer will be able to provide you with LEED rating information for specific window films. Authorized dealers should be able to provide a manufacturer's certification and supporting documentation for potential tax or utilities rebates. Select window film dealers utilize sophisticated software that accurately predicts energy usage and savings before and after window film installation – a great tool to justify your investment. Be sure that their program is algorithm based and supported by the DOE.

By holding glass in place, security films help mitigate property damage and injuries resulting from glass breakage due to high winds, severe weather, bomb blasts or vandalism. I often demonstrate a particular security films' strength by swinging a crow bar at plates of glass with applied film. The glass breaks, but stays in tact -- no dangerous flying shards – no vulnerability to nature's elements.

Data on blast testing of specific security films is available to consumers. Tests should have been conducted according to GSA criteria. Be certain that the test data is indicative of consistent performance in all climates and conditions. The more a particular film has been applied in the field, the more reliable the data for performance.

The history of window film began in 1966 when 3M Company was granted a patent application for a metalized solar control film. Window film technology has been improving ever since. Depending upon window type—clear, tinted,

insulated, single or double pane—and desired effects, there is an appropriate window film for any application. There are films that reduce fading of fabrics and furnishings, reduce glare, and improve a building's overall aesthetics. Some films provide substantial enough UV protection to justify recommendation by the Skin Cancer Foundation. Optically clear, non-metallic window films that minimize reflectivity and allow light to be fully transmitted have recently appeared on the market. Since metallic films can interfere with cell phone and WiFi transmissions, non-metallic films offer an alternative.

Given the plethora of films available, choice can become overwhelming. Look for experience. An experienced window film dealer and manufacturer with financial strength to invest in research and development is a good indicator of stability. Note the number of years the manufacturer has been in the business and whether it is an ISO 9002 certified facility. Window film is only as good as its adhesive. A bad adhesive will produce bubbling and blistering — distortions created from thermal cycling that can result in seal failures. An assurance of lifelong optical clarity is a statement regarding a film's adhesive. A manufacturer that uses its own adhesives is desirable.

Verify that you are working with a manufacturer's authorized dealer. An authorized dealer will be happy to have you check with their distributor or manufacturer for confirmation of their status as a dealer. An installation by such a dealer that employs professionally trained installers will assure quality work and the security of the manufacturer's warranty.

With so many factors contributing to the need for energy conservation and security, it seems foolish not to consider the purchase of Low-E or security window film...products that will pay for themselves in short order with dollars saved in utilities expense. An assessment of your building's specifications and your specific concerns can be addressed quickly by those who have the knowledge, experience and the products proven in the field.

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