

LAURIER

Architectural

Compagnie du Groupe Novatech

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ENERGY EFFICIENT GLASS

Glass coated with a thin metallic coating to improve thermal performance of insulated glass units.

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ENERGY EFFICIENT GLASS

Used in sealed units, energy efficient glass, also referred to as Low-E glass, is a glass on which a thin invisible metallic layer has been deposited to improve the glazing thermal performance.

There are several Low-E types of glass designed to address different energy concerns. They fall under two main categories:

- Hard Coat Low-E (Pyrolytic)
- Soft Coat Low-E (Sputtered).



PYROLYTIC LOW-E

Pyrolytic Low-E started being used in the 1970s. It is designed to maximize solar heat gain. A thin layer of metallic coating is applied to the glass on line while it is still hot. The coating is covalently bonded to the glass, which makes it extremely hard and durable.

Strength

Improves heat gain

SOFT COAT LOW-E

Soft Coat Low-E appeared in the late 1980s. The process is done off-line applying a thin metallic coating by magnetron sputtering vacuum deposition (MSVD). There are several types of soft coat Low-E glass that will have different properties depending on the metal and the number coats applied. It is possible to select the most appropriate Low-E for your projects, according to the orientation of the building and its main usage.

The selection of Low-E often requires some trade-offs. For example, a Low-E reducing substantially the heat gain (SHGC), will have several metallic coats, therefore will be darker than a Low-E offering a higher heat gain. However, this last one will have a higher light transmittance, than the first one.

Strength

Better insulating value (U Value)



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REFLECTIVE GLASS

Reflective glass is designed for areas where a high level of reflection is desired, while minimizing solar transmission. It is available in many colors, such as clear, blue-green, blue, green, grey and bronze. Reflective glass can offer a wide range of performance levels according to the type of coating applied to its surface. In some cases, it can even be used as an energy efficient glass.

Strength

Counteract glare and allow for better match with the spandrel areas.

Product selection is complex, in addition to performance factors, lead-time and manufacturing dimensions must also be taken into consideration.

For assistance in selection the best energy efficient glass suited to your project, contact our technical team.

PRODUCTS AVAILABLE

Laurier Architectural fabricates products from the following manufacturers:

- AGC
- Guardian
- Saint-Gobain
- Cardinal
- Pilkington

STANDARDS

Glass

ASTM C1036 Standard specification for flat glass

CAN/CGSB 12.3 M91 Flat, Clear Float glass.

Tempered products

CGSB-12.1 Safety glazing

ASTM C1048 Heat treated flat glass

ANSI-Z97.1 Safety Glazing Materials used in Buildings

16CFR 1201 II, Safety Standard for Architectural Glazing Materials

DIN EN 14179-1, Heat Soaked Thermally Toughened Soda Lime Silicate Safety Glass.

