Low-E Glass

Performance Glass

PGSmartGlass®
Our Low-E building glass range efficiently adds to your home’s comfort all year-round. ‘Low-E’ refers to ‘low thermal emissivity glass’ which provides better insulation than standard glass. You can now use more glass in a new home, or retrofit our glass in your existing home to maximise views and increase comfort all year round.

Our Low-E range consists of X1™ single pane laminated glass and X2™ double glazed units.
Cooler in Summer
Our range uses special coatings, including a vinyl interlayer, that reduces the amount of heat that passes through the glass. Use X2™ in extreme conditions, or when using large amounts of glass, to keep your home cooler in summer.

Warmer in Winter
Our range reduces the rate at which heat inside your home is lost to the outside. The X1™ range can reduce the rate of heat loss by up to 35% and X2™ by 64%, increasing indoor comfort and warmth for the resident in winter.

Quieter Inside
The vinyl interlayer found in the X1™ range of laminated glass reduces the transmission of external sound through the glass. Use X2™ double glazing for even more sound reduction.

Safer
The vinyl laminate acts as an additional barrier, preventing someone from falling through the glass and reducing injury by securing the broken glass in place.

Energy Efficient
Dramatically reduces the energy required to keep a building warm in winter and cool in summer.

Aesthetics
Our range allows you to use more glass in your home, maximising views and light without compromising on comfort.

Compliant
SANS 204 compliance allows for the use of more glass per floor square meterage.
Standard glass allows heat, cold, light and noise in and out of your home resulting in higher energy consumption and compromised comfort.

X1™ is an all season Low-E glass that provides energy efficiency and comfort. It provides thermal and acoustic insulation as well as safety and light control benefits.

X2™ is a double-glazed unit designed to manage extreme solar and cold conditions. It is ideal for homeowners that want to optimise comfort levels and maximise the use of glass in a home.
Our X1™ single glazed range of laminated glass panes carries a range of specialised coatings. This allows homeowners to use more glass whilst complying with legislation and benefiting from safety, security, sound reduction and UV control.

It is important to note that legislation compliance does not necessarily lead to thermal comfort. That is why we offer a range of different performance options that can be specified to manage different solar and thermal comfort requirements for your home.

**X1™ Standard**
This is our most cost-effective thermal comfort solution. This option lets in the most natural light creating a sense of well being. The Low-E surface coating increases thermal insulation, and is used in areas where heat and light management is moderate but not critical. Secondary benefits are safety, security, sound reduction and UV control.

**X1™ Plus**
This is our most popular all round choice for light, insulation and comfort. This solution offers medium solar control, eliminating solar heat and offer medium light transmission. Secondary benefits are safety, security, sound reduction and UV control.

**X1™ Elite**
The preferred choice for architects, offering the very best solar control and thermal insulation in a single glazed solution. Secondary benefits are safety, security, sound reduction and UV control.
Our X2™ double glazed range is constructed using two panes of performance glass. If you need the very best blend of insulation, light, energy efficiency and all round comfort, the X2™ range has you covered.

You have the choice of using laminated glass to enhance the secondary benefits of safety, security, sound reduction and UV control.

**X2™ Standard**
This is our most economical energy solution. If the management of light and heat is not critical, this solution gives you the most cost-effective blend of insulation, energy efficiency and winter comfort.

**X2™ Plus**
This is our all round choice for light, insulation and comfort. Offers medium solar control, eliminating solar heat and offers optimal light transmission thus providing winter and summer comfort.

**X2™ Elite**
This is our second most popular choice for excellent solar and insulation, light control, energy efficiency and provides all year round comfort.

**X2™ Superior**
Architects’ preferred choice featuring the most advanced blend of excellent solar control, light control and energy efficiency providing all year round comfort.
<table>
<thead>
<tr>
<th>Window to Floor Ratio Compliance</th>
<th>X1” Standard</th>
<th>X1” Plus</th>
<th>X1” Elite</th>
<th>X2” Standard</th>
<th>X2” Plus</th>
<th>X2” Elite</th>
<th>X2” Superior</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15%</td>
<td>20%</td>
<td>25%</td>
<td>25%</td>
<td>30%</td>
<td>35%</td>
<td>+35%</td>
</tr>
<tr>
<td>Visible Light Transmission</td>
<td>83%</td>
<td>60%</td>
<td>43%</td>
<td>80%</td>
<td>69%</td>
<td>65%</td>
<td>71%</td>
</tr>
<tr>
<td>U-Value (COG) W/m²K</td>
<td>3.65</td>
<td>3.65</td>
<td>3.65</td>
<td>2.70</td>
<td>1.88</td>
<td>1.67</td>
<td>1.65</td>
</tr>
<tr>
<td>Solar Heat Gain Coefficient</td>
<td>0.71</td>
<td>0.55</td>
<td>0.43</td>
<td>0.75</td>
<td>0.55</td>
<td>0.41</td>
<td>0.34</td>
</tr>
<tr>
<td>Relative Heat Gain W/m²</td>
<td>535</td>
<td>427</td>
<td>332</td>
<td>565</td>
<td>414</td>
<td>308</td>
<td>262</td>
</tr>
</tbody>
</table>

**Low-E Performance**

Low-E coatings keep more heat on the side of the glass where it originated while letting visible light pass. This results in glazing that better retains interior warmth in winter and better insulates against exterior heat in summer.

**Visible Light Transmittance**

The measure of how much light passes through a window and thus how much daylight can enter a room. A high visible light transmittance value refers to a window that allows more daylight through.

**U-Value**

The rating given to a window based on how much heat loss it allows. The lower the U-Value, the better the window acts as a heat insulator.

**Solar Heat Gain Coefficient**

The total amount of heat that is transferred from sunlight through the entire window unit is calculated as a fraction of solar radiation passing through a window, both directly transmitted, absorbed and re-radiated inward. The lower a window’s solar heat gain coefficient, the less solar heat is transmitted into the building through it.

**Relative Heat Gain**

The amount of heat gain through a window taking into consideration the effects of solar heat gain and conductive heat gain (U-value). The lower the value, the greater the glass restricts heat gain.
Low-E

Performance
All Year Round