EXPERIENCE LIGHTWELLNESS

Instant solar shading windows
FEEL THE LIGHT
WELLNESS AT YOUR FINGERTIPS
Discover a new sense of well-being at the flip of a switch with eyrise® s350 instant solar shading windows.

Enjoy immediate comfort with maximum natural light and ideal temperature throughout the day.
ADJUST THE LIGHT INSTANTLY TO YOUR NEEDS

COMFORT AT ALL TIMES

It only takes a second for eyrise® solar glass to darken and provide immediate protection from solar glare and heat. As sunlight intensifies or diminishes over time, easily fine-tune your shade at will by adjusting precisely your window tint.

Feel lasting comfort thanks to the windows neutral tint combined with transparency. They let you enjoy a natural day light in your interior space without negative color rendering effects. Whether eyrise® s350 glass is bright or dark, it always remains transparent whilst fully preserving outside views.

Thermal comfort evaluation

When you dim your eyrise® s350 windows to protect yourself from solar glare, you also regulate instantly the temperature to bring you optimal comfort.

A quantitative assessment known as the Predicted Percentage Dissatisfied (PPD) is commonly accepted to calculate the level of thermal comfort in a given room at a target of less than 10%.

In a recent study on building facades performance*, eyrise® technology shows a significantly more favorable result than the traditional double-glazed unit, with a PPD of 6% vs 21%.

* Source: Chasing Transparency - eyrise® dynamic liquid crystal windows by Elementa Member of Integral group.
CREATIVE FREEDOM
WITH SIMPLICITY

DESIGN YOUR VISION

No matter the light intensity, the weather, or the time of day, eyrise® solar solutions preserve the beauty of your creative architecture. Make your vision a reality with a wide variety of shapes available in large size panel, up to 1600 x 3500 mm (5.25 x 11.50 ft). Your creative designs are our command, from aesthetic neutral tones to creating your own color variations.

Combine simplicity and performance by choosing eyrise® fully functional shading windows in your buildings. With no mechanical parts, eyrise® s350 integrates seamlessly into any traditional or modern architecture. The ideal combination of aesthetics and functionality, eyrise®–fitted buildings are sure to provide complete physical, visual, and acoustic well-being to its occupants.
WELLNESS THAT RESPECTS THE ENVIRONMENT
SAVING ENERGY, SPACE AND TIME

ENERGY SAVING
At the touch of a button, eyrise® s350 solution helps reduce the need for energy by limiting the use of air conditioning and electrical power. By regulating light and temperature instantly, particularly in changing weather conditions of bright sun and intermittent clouds, eyrise® solar shading windows generates tangible energy savings.

SPACE SAVING
eyrise® s350 glass fits into standard window framing so it liberates usable space that would otherwise be used for other solar shading devices, e.g. closed cavity or double skin facades.

The recent study on building facades performance* showed that space gains with eyrise® s350 can add up to 160 m² (1,700 ft²) additional net lettable area in a typical London building.

MAINTENANCE TIME AND COST SAVING
eyrise® s350 solution reduces the risk of breakdown or technical support as it does not need any additional mechanical parts. eyrise® windows only require usual glass cleaning and will not incur additional time nor cost for maintenance.

A SUSTAINABLE, ENVIRONMENT FRIENDLY SOLUTION
- Energy consumption reduction
- Energy cost savings
- Space saving
- No additional maintenance time or costs
- Optimal thermal comfort

* Source: Chasing Transparency - eyrise® dynamic liquid crystal windows by Elementa Member of Integral group.
The tables below illustrate the performance of a selection of eyrise® IGUs (Insulated Glass Units) made with AT THE HEART OF THE TECHNOLOGY.

### TYPICAL INSULATED GLASS

- **Eyris® Glass Performance**
- **Typical Insulated Glass**
  - **Electrical consumption**
    - module: Approx. 1 W/m² (0.1 W/ft²) (depending on electronics)
  - **Ug-value (according to EN 673):**
    - down to 0.5 W/m²K
  - **U-value (calculated with Window LBNL 7.6):**
    - down to 0.12 BTU/h-ft²°F
  - **Switching speed:**
    - 1 second
  - **Glass shapes:**
    - -
  - **Neutral tint and colors:**

### ELECTRICAL SPECIFICATIONS

- **Electrical consumption**:
  - approx. 1 W/m² (0.1 W/ft²) (depending on electronics)
- **Driver**:
  - Din rail window driver - 48 V DC power input. Up to 8 window connections per driver
- **Communication module**:
  - KNX interface for window driver - powered by internal bus system
- **Glass connection**:
  - Max. 30 m (100 ft) cable length between glass and driver
  - IP67 water resistant connection

### CERTIFICATION & STANDARDS

- **CE certification**:
  - EN 14449:2005 Glass in building - Laminated glass and laminated safety glass
  - EN 1279:2018 Glass in Building - Insulating glass units
  - IEC 61000 Electromagnetic compatibility (EMC)
- **Glass visual quality**:
  - «Guidelines to assess the visible quality of glass in buildings» and «Guidelines for assessing the visual quality for systems in multiple-shett insulating glass» issued by Bundesverband Flachglas e.V.

### TECHNICAL INFORMATION

- **Eyris® glass sizes**:
  - min. 405 x 410 mm (16 x 16.5 in)
  - max. 1600 x 3505 mm (63 x 138 in)
- **Liquid crystal layer**
  - «Guidelines to assess the visible quality of glass in buildings» and «Guidelines for assessing the visual quality for systems in multiple-shett insulating glass»

### TYPICAL INSULATED GLASS

- **Cover sheet 4-10 mm heat strengthened glass**
- **PVb interlayer**
- **Eyris® cell 17.52 mm**
- **Cavity gas or air filled**
- **Low-E coating**
- **Inner glass**
- **Toggle fixing (optional)**
- **Main seal**
- **Liquid crystal layer**

### EYRISE® GLASS PERFORMANCE

The tables below illustrate the performance of a selection of eyrise® IGUs (Insulated Glass Units) made with different liquid crystal mixtures. All performance values are center-of-glass values calculated using the LBNL Window 7.6 program, in both bright and dark states, using 2 different configurations.

#### Configuration: 23.04 mm / 16 mm argon / 6 mm with low-E coating

<table>
<thead>
<tr>
<th>eyrise® liquid crystal mixture</th>
<th>Transmittance visible light</th>
<th>SC</th>
<th>SHGC</th>
<th>U-value [BTU/h-ft²°F]</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC mixture A</td>
<td>Bright</td>
<td>0.59</td>
<td>0.28</td>
<td>0.48</td>
</tr>
<tr>
<td></td>
<td>Dark</td>
<td>0.48</td>
<td>0.35</td>
<td>0.28</td>
</tr>
<tr>
<td>LC mixture B</td>
<td>Bright</td>
<td>0.57</td>
<td>0.18</td>
<td>0.46</td>
</tr>
<tr>
<td></td>
<td>Dark</td>
<td>0.46</td>
<td>0.31</td>
<td>0.27</td>
</tr>
<tr>
<td>LC mixture C</td>
<td>Bright</td>
<td>0.52</td>
<td>0.11</td>
<td>0.44</td>
</tr>
<tr>
<td></td>
<td>Dark</td>
<td>0.44</td>
<td>0.27</td>
<td>0.27</td>
</tr>
<tr>
<td>LC mixture D</td>
<td>Bright</td>
<td>0.48</td>
<td>0.07</td>
<td>0.42</td>
</tr>
<tr>
<td></td>
<td>Dark</td>
<td>0.42</td>
<td>0.27</td>
<td>0.27</td>
</tr>
<tr>
<td>LC mixture E</td>
<td>Bright</td>
<td>0.39</td>
<td>0.02</td>
<td>0.39</td>
</tr>
<tr>
<td></td>
<td>Dark</td>
<td>0.39</td>
<td>0.22</td>
<td>0.22</td>
</tr>
</tbody>
</table>

#### Configuration: 23.04 mm / 16 mm argon / 6 mm with solar control coating

<table>
<thead>
<tr>
<th>eyrise® liquid crystal mixture</th>
<th>Transmittance visible light</th>
<th>SC</th>
<th>SHGC</th>
<th>U-value [BTU/h-ft²°F]</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC mixture A</td>
<td>Bright</td>
<td>0.55</td>
<td>0.22</td>
<td>0.38</td>
</tr>
<tr>
<td></td>
<td>Dark</td>
<td>0.38</td>
<td>0.26</td>
<td>0.26</td>
</tr>
<tr>
<td>LC mixture B</td>
<td>Bright</td>
<td>0.53</td>
<td>0.17</td>
<td>0.37</td>
</tr>
<tr>
<td></td>
<td>Dark</td>
<td>0.37</td>
<td>0.22</td>
<td>0.22</td>
</tr>
<tr>
<td>LC mixture C</td>
<td>Bright</td>
<td>0.49</td>
<td>0.11</td>
<td>0.35</td>
</tr>
<tr>
<td></td>
<td>Dark</td>
<td>0.35</td>
<td>0.19</td>
<td>0.19</td>
</tr>
<tr>
<td>LC mixture D</td>
<td>Bright</td>
<td>0.45</td>
<td>0.07</td>
<td>0.33</td>
</tr>
<tr>
<td></td>
<td>Dark</td>
<td>0.33</td>
<td>0.17</td>
<td>0.17</td>
</tr>
<tr>
<td>LC mixture E</td>
<td>Bright</td>
<td>0.37</td>
<td>0.02</td>
<td>0.30</td>
</tr>
<tr>
<td></td>
<td>Dark</td>
<td>0.30</td>
<td>0.14</td>
<td>0.14</td>
</tr>
</tbody>
</table>

- **Eyris® technology, at the heart of eyris® liquid crystal cell**
- **Eyris® technology in action**

**Eyris® technology** is a transparent liquid crystal mixture added with specific dye molecules tailored to your color needs. This dye-doped liquid crystal mixture is placed between two glass sheets coated with a transparent conductive film. Prompted by low voltage, the mixture molecules of this liquid crystal cell change orientation and thus regulate the amount of light and heat passing through.

With its 1 second transition capacity, **Eyris® technology** provides to eyris® dynamic windows continuous control for all intermediate tinted states, from bright to dark.

When a low voltage is applied, the dye-doped liquid crystals in the eyris® cell change orientation and thus regulate the amount of light and heat passing through.