



## Solar Control Films

**Solar Control** films include ceramic and sputter films and design for heat reduction while maintaining near perfect clarity. They block UV rays, reduce glare and protect interiors without darkening windows. Our Low E Film is designed to specifically improve insulation by reducing heat transfer through the glass. All films are ideal for subtle heat control, energy efficiency and maximum natural light in homes or offices.

|                                   | SolaClear | SolaClear+ | Low E 60 | Heatshield 70 |
|-----------------------------------|-----------|------------|----------|---------------|
| <b>LIGHT &amp; GLARE</b>          |           |            |          |               |
| Transmission %                    | 81%       | 70%        | 58%      | 70%           |
| Reflectance (internal) %          | 18%       | 13%        | 26%      | 12%           |
| Glare Reduction %                 | 17%       | 27%        | 38%      | 27%           |
| <b>SOLAR ENERGY</b>               |           |            |          |               |
| Transmittance %                   | 52%       | 44%        | 36%      | 30%           |
| Reflectance %                     | 16%       | 29%        | 44%      | 8%            |
| Absorptance %                     | 32%       | 27%        | 21%      | 62%           |
| Total solar energy rejected %     | 38%       | 49%        | 59%      | 54%           |
| Solar Heat Gain Coefficient       | 0.63      | 0.52       | 0.41     | 0.5           |
| <b>ULTRAVIOLET &amp; INFRARED</b> |           |            |          |               |
| UV Rejection                      | 99%       |            |          |               |
| IR Rejection                      | 51%       | 70%        | 74%      | 81%           |
| Anti-Fade Rating (0-100)          | 67        | 76         | 79       | 77            |
| <b>INSTALLATION GUIDELINES</b>    |           |            |          |               |
| Clear Std Glass                   | ✓         | ✓          | ✓        | ✓             |
| Large Glass >2m <sup>2</sup>      | ✓         | ✓          | ✓        | !             |
| Low E Single Pane                 | ✓         | ✓          | ✓        | X             |
| Clear Double Pane                 | ✓         | ✓          | ✓        | !             |
| Double Pane >2m <sup>2</sup>      | ✓         | ✓          | ✓        | !             |
| Stock Code                        | CR7050    | SLCP70     | LOWE     | HEA30         |

- ✓ Clear films have one big advantage in that they don't affect window clarity
- ✓ Low E films are specifically designed to improve insulation, which offers both summer cooling and winter heat retention.
- ✗ With very limited reflectance and high light transmission these types of films are limited in how much heat reduction they can offer.

Distributed by: **Apex Auto Shield**

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## SolaClear - 80%

**SolaClear** (previously Crystal 7050) is a ceramic film which good provides heat reduction while maintaining nearly invisible clarity. At 38% TSER if reduced the total heat entering the windows by more than one-third. It blocks also UV rays, reduces glare, and protects interiors without darkening windows. Unlike metalized films, it won't interfere with signals. Ideal for those who want subtle heat control, energy efficiency, and maximum natural light in homes, offices, or vehicles.

### Technical Performance Data

Calculated on 3mm glass

#### Natural Light & Glare

|                                      |     |
|--------------------------------------|-----|
| VLT (Visible Light Transmission)     | 81% |
| Visible Light Reflectance (internal) | 18% |
| Glare Reduction                      | 17% |

#### Solar Energy

|                                    |     |
|------------------------------------|-----|
| Transmittance                      | 52% |
| Reflectance                        | 16% |
| Absorption                         | 32% |
| TSER (Total Solar Energy Rejected) | 38% |

#### Thermal Energy

|                             |      |
|-----------------------------|------|
| Shading Coefficient         | 0.72 |
| Solar Heat Gain Coefficient | 0.63 |
| U-Value - (W/m² K)          | 5.8  |
| R-Value - (m² K/W)          | 0.17 |

#### Ultraviolet & Infrared

|                            |     |
|----------------------------|-----|
| UV Rejection               | 99% |
| IR Rejection               | 51% |
| Anti-Fade Rating (0 - 100) | 67  |

#### Manufactured Specifications

|             |          |
|-------------|----------|
| Thickness   | 50 µm    |
| Structure   | 2 Ply    |
| Composition | PET      |
| Warranty    | 10 Years |
| Colour      | Blue     |
| Stock Code  | CR7050   |

### Installation Guidelines

Vertical Installation on standard glass surface

#### Single Pane Glazing

|                                         |   |
|-----------------------------------------|---|
| Clear Standard Glass                    | ✓ |
| Thermally Toughened Safety Glass        | ✓ |
| PVB / Laminated Glass - correct spacing | ✓ |
| Glass Panes Exceeding 2 SQM             | ✓ |
| Low-E Glass                             | ✓ |
| Glass with poor quality edging/spacing  | ! |

#### Double Pane / Double Glazing

|                                           |   |
|-------------------------------------------|---|
| Clear Double Pane                         | ✓ |
| Tinted Double Pane                        | ✓ |
| Gas-Filled Double Pane (Low-E)            | ✓ |
| Glass Panes Exceeding 2 SQM               | ✓ |
| PVB / Laminated Glass with correct spacin | ✓ |
| Thermally Toughened Safety Glass          | ✓ |
| Glass with poor quality edging/spacing    | X |

#### Safety Guideline Symbols

|                                    | Symbol |
|------------------------------------|--------|
| Safe to install                    | ✓      |
| Unsafe to install                  | X      |
| Caution, will cause thermal stress | !      |

#### Safety Performance

|                         |       |
|-------------------------|-------|
| For Internal use only   | ✓     |
| Peel Strength (gr/inch) | >1800 |
| Signal Interference     | 0%    |

Guidelines provided are based on a single glass surface up to 2.5 m² with no single length or width greater than 2 meters.

# SolaClear+ - 70%

**SolaClear+** is a premium sputter film which offers the perfect tradeoff between heat reduction and window clarity. With 70% light transmission this film looks clear, however can block nearly half of the heat entering the window. It also blocks UV rays, reduces glare, and protects interiors without darkening windows. Unlike metalized films, it won't interfere with signals. Ideal for those who want premium heat control, energy efficiency, and maximum natural light in homes, offices, or vehicles.

## Technical Performance Data

Calculated on 3mm glass

### Natural Light & Glare

|                                      |     |
|--------------------------------------|-----|
| VLT (Visible Light Transmission)     | 70% |
| Visible Light Reflectance (internal) | 13% |
| Glare Reduction                      | 27% |

### Solar Energy

|                                    |     |
|------------------------------------|-----|
| Transmittance                      | 44% |
| Reflectance                        | 29% |
| Absorption                         | 27% |
| TSER (Total Solar Energy Rejected) | 49% |

### Thermal Energy

|                             |      |
|-----------------------------|------|
| Shading Coefficient         | 0.63 |
| Solar Heat Gain Coefficient | 0.52 |
| U-Value - (W/m² K)          |      |
| R-Value - (m² K/W)          |      |

### Ultraviolet & Infrared

|                            |     |
|----------------------------|-----|
| UV Rejection               | 99% |
| IR Rejection               | 70% |
| Anti-Fade Rating (0 - 100) | 75  |

### Manufactured Specifications

|             |          |
|-------------|----------|
| Thickness   | 50 µm    |
| Structure   | 2 Ply    |
| Composition | PET      |
| Warranty    | 10 Years |
| Colour      | Blue     |
| Stock Code  | SLCP70   |

## Installation Guidelines

Vertical Installation on standard glass surface

### Single Pane Glazing

|                                         |   |
|-----------------------------------------|---|
| Clear Standard Glass                    | ✓ |
| Thermally Toughened Safety Glass        | ✓ |
| PVB / Laminated Glass - correct spacing | ✓ |
| Glass Panes Exceeding 2 SQM             | ✓ |
| Low-E Glass                             | ✓ |
| Glass with poor quality edging/spacing  | ✓ |

### Double Pane / Double Glazing

|                                           |   |
|-------------------------------------------|---|
| Clear Double Pane                         | ✓ |
| Tinted Double Pane                        | ✓ |
| Gas-Filled Double Pane (Low-E)            | ✓ |
| Glass Panes Exceeding 2 SQM               | ✓ |
| PVB / Laminated Glass with correct spacin | ✓ |
| Thermally Toughened Safety Glass          | ✓ |
| Glass with poor quality edging/spacing    | ! |

### Safety Guideline Symbols

| Safety Guideline Symbols           | Symbol |
|------------------------------------|--------|
| Safe to install                    | ✓      |
| Unsafe to install                  | X      |
| Caution, will cause thermal stress | !      |

### Safety Performance

|                         |       |
|-------------------------|-------|
| For Internal use only   | ✓     |
| Peel Strength (gr/inch) | >1800 |
| Signal Interference     | 0%    |

Guidelines provided are based on a single glass surface up to 2.5 m² with no single length or width greater than 2 meters.

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## Low E 60%

**Low-E 60%** window film will improve energy efficiency year-round. It reflects heat indoors during winter and blocks solar heat in summer, reducing energy costs. With high visible light transmission, it maintains natural brightness while protecting against UV rays. Ideal for homes or offices, it enhances comfort, reduces glare, and helps preserve furnishings. This film is made for internal use.

### Technical Performance Data

Calculated on 3mm glass

#### Natural Light & Glare

|                                      |     |
|--------------------------------------|-----|
| VLT (Visible Light Transmission)     | 58% |
| Visible Light Reflectance (internal) | 26% |
| Glare Reduction                      | 38% |

#### Solar Energy

|                                    |     |
|------------------------------------|-----|
| Transmittance                      | 36% |
| Reflectance                        | 44% |
| Absorption                         | 21% |
| TSER (Total Solar Energy Rejected) | 59% |

#### Thermal Energy

|                             |      |
|-----------------------------|------|
| Shading Coefficient         | 0.48 |
| Solar Heat Gain Coefficient | 0.41 |
| U-Value - (W/m² K)          | 5.28 |
| R-Value - (m² K/W)          | 0.19 |
| Emissivity                  | 0.61 |
| Heat loss reduction         | 12%  |

#### Ultraviolet & Infrared

|                            |     |
|----------------------------|-----|
| UV Rejection               | 99% |
| IR Rejection               | 74% |
| Anti-Fade Rating (0 - 100) | 79  |

#### Manufactured Specifications

|             |         |
|-------------|---------|
| Thickness   | 50 µm   |
| Structure   | 2 Ply   |
| Composition | PET     |
| Warranty    | 5 Years |
| Colour      | Gold    |
| Stock Code  | LOWE    |

### Installation Guidelines

Vertical Installation on standard glass surface

#### Single Pane Glazing

|                                         |   |
|-----------------------------------------|---|
| Clear Standard Glass                    | ✓ |
| Thermally Toughened Safety Glass        | ✓ |
| PVB / Laminated Glass - correct spacing | ✓ |
| Glass Panes Exceeding 2 SQM             | ✓ |
| Low-E Glass                             | ✓ |
| Glass with poor quality edging/spacing  | ✓ |

#### Double Pane / Double Glazing

|                                           |   |
|-------------------------------------------|---|
| Clear Double Pane                         | ✓ |
| Tinted Double Pane                        | ✓ |
| Gas-Filled Double Pane (Low-E)            | ✓ |
| Glass Panes Exceeding 2 SQM               | ✓ |
| PVB / Laminated Glass with correct spacin | ✓ |
| Thermally Toughened Safety Glass          | ✓ |
| Glass with poor quality edging/spacing    | ! |

#### Safety Guideline Symbols

Symbol

|                                    |   |
|------------------------------------|---|
| Safe to install                    | ✓ |
| Unsafe to install                  | X |
| Caution, will cause thermal stress | ! |

#### Safety Performance

|                         |       |
|-------------------------|-------|
| For Internal use only   | ✓     |
| Peel Strength (gr/inch) | >1000 |

Guidelines provided are based on a single glass surface up to 2.5 m² with no single length or width greater than 2 meters.

# Heat Shield 70%

**Heat Shield 70%** is a nano ceramic window film with 54% Total Solar Energy Rejected (TSER) and 70% visible light transmission (VLT) blocks heat while keeping windows clear. It reduces UV exposure, improves comfort, and protects interiors without darkening your view. Unlike metalized films, it won't interfere with signals. Ideal for heat reduction, energy efficiency, and maintaining natural light in homes, offices, or vehicles.

## Technical Performance Data

Calculated on 3mm glass

### Natural Light & Glare

|                                      |     |
|--------------------------------------|-----|
| VLT (Visible Light Transmission)     | 70% |
| Visible Light Reflectance (internal) | 12% |
| Glare Reduction                      | 27% |

### Solar Energy

|                                    |     |
|------------------------------------|-----|
| Transmittance                      | 30% |
| Reflectance                        | 8%  |
| Absorption                         | 62% |
| TSER (Total Solar Energy Rejected) | 54% |

### Thermal Energy

|                             |      |
|-----------------------------|------|
| Shading Coefficient         | 0.58 |
| Solar Heat Gain Coefficient | 0.5  |
| U-Value - (W/m² K)          | 5.8  |
| R-Value - (m² K/W)          | 0.17 |

### Ultraviolet & Infrared

|                            |     |
|----------------------------|-----|
| UV Rejection               | 99% |
| IR Rejection               | 81% |
| Anti-Fade Rating (0 - 100) | 77  |

### Manufactured Specifications

|             |          |
|-------------|----------|
| Thickness   | 50 µm    |
| Structure   | 2 Ply    |
| Composition | PET      |
| Warranty    | 10 Years |
| Colour      | Blue     |
| Stock Code  | HEA30    |

## Installation Guidelines

Vertical Installation on standard glass surface

### Single Pane Glazing

|                                         |   |
|-----------------------------------------|---|
| Clear Standard Glass                    | ✓ |
| Thermally Toughened Safety Glass        | ✓ |
| PVB / Laminated Glass - correct spacing | ! |
| Glass Panes Exceeding 2 SQM             | ! |
| Low-E Glass                             | X |
| Glass with poor quality edging/spacing  | X |

### Double Pane / Double Glazing

|                                           |   |
|-------------------------------------------|---|
| Clear Double Pane                         | ! |
| Tinted Double Pane                        | X |
| Gas-Filled Double Pane (Low-E)            | X |
| Glass Panes Exceeding 2 SQM               | ! |
| PVB / Laminated Glass with correct spacin | X |
| Thermally Toughened Safety Glass          | ✓ |
| Glass with poor quality edging/spacing    | X |

### Safety Guideline Symbols

| Safety Guideline Symbols           | Symbol |
|------------------------------------|--------|
| Safe to install                    | ✓      |
| Unsafe to install                  | X      |
| Caution, will cause thermal stress | !      |

### Safety Performance

|                         |       |
|-------------------------|-------|
| For Internal use only   | ✓     |
| Peel Strength (gr/inch) | >1800 |
| Signal Interference     | 0%    |

Guidelines provided are based on a single glass surface up to 2.5 m² with no single length or width greater than 2 meters.