



# Glass Performance Tables for International Markets

Performance for Insulating Glass Units of 4 mm Outer Lite + 12 mm Airspace + 4 mm Inner Lite

| Glass Configuration<br>4 mm + 12 mm Gap + 4 mm | UV % | Visible Light |               |     | Solar Energy |         |    |      |    | U-Values W/m <sup>2</sup> *K |       |          |       |        |       | LSG |
|--|------|---------------|---------------|-----|--------------|---------|----|------|----|------------------------------|-------|----------|-------|--------|-------|-----|
|  |      | Trans %       | Reflectance % |     | Refl %       | Trans % | SF | SHGC | SC | Win-NFRC                     |       | Sum-NFRC |       | EN 673 |       |     |
|  |      |               | Ext           | Int |              |         |    |      |    | air                          | argon | air      | argon | air    | argon |     |

**SOLARBAN® 90 Quad Silver Neutral Low-E Glasses**

|                                       |    |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---------------------------------------|----|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN 90 (2) STARPHIRE + STARPHIRE | 10 | 54 | 13 | 20 | 56 | 21 | 0.26 | 0.23 | 0.26 | 1.65 | 1.36 | 1.58 | 1.26 | 1.6 | 1.2 | 2.35 |
| SOLARBAN 90 (2) ACUITY + ACUITY       | 9  | 54 | 12 | 19 | 52 | 21 | 0.26 | 0.23 | 0.27 | 1.65 | 1.36 | 1.58 | 1.26 | 1.6 | 1.2 | 2.35 |
| SOLARBAN 90 (2) Clear + Clear         | 8  | 52 | 12 | 19 | 43 | 20 | 0.26 | 0.23 | 0.27 | 1.65 | 1.36 | 1.58 | 1.26 | 1.6 | 1.2 | 2.23 |
| SOLARBAN 90 (2) OPTIBLUE + Clear      | 7  | 41 | 9  | 19 | 36 | 16 | 0.23 | 0.21 | 0.24 | 1.65 | 1.36 | 1.58 | 1.26 | 1.6 | 1.2 | 1.95 |
| SOLARBAN 90 (2) OPTIGRAY + Clear      | 5  | 41 | 9  | 19 | 25 | 15 | 0.23 | 0.21 | 0.24 | 1.65 | 1.36 | 1.58 | 1.26 | 1.6 | 1.2 | 1.95 |
| SOLARBAN 90 (2) SOLARGRAY + Clear     | 4  | 32 | 7  | 19 | 22 | 12 | 0.19 | 0.18 | 0.21 | 1.65 | 1.36 | 1.58 | 1.26 | 1.6 | 1.2 | 1.78 |

**SOLARBAN® 72 Triple Silver Neutral Low-Iron Ultra-Clear Low-E Glasses**

|                                       |   |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---------------------------------------|---|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN 72 (2) STARPHIRE + STARPHIRE | 9 | 71 | 13 | 13 | 54 | 28 | 0.34 | 0.30 | 0.34 | 1.64 | 1.36 | 1.58 | 1.25 | 1.6 | 1.2 | 2.37 |
| SOLARBAN 72 (2) ACUITY + ACUITY       | 8 | 68 | 13 | 14 | 52 | 26 | 0.31 | 0.28 | 0.32 | 1.64 | 1.36 | 1.58 | 1.25 | 1.6 | 1.2 | 2.43 |

**SOLARBAN® 70 Triple Silver Neutral Low-E Glasses**

|                                   |   |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|-----------------------------------|---|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN 70 (2) Clear + Clear     | 6 | 64 | 12 | 13 | 54 | 25 | 0.31 | 0.28 | 0.32 | 1.63 | 1.35 | 1.56 | 1.24 | 1.6 | 1.2 | 2.33 |
| SOLARBAN 70 (2) OPTIBLUE + Clear  | 5 | 52 | 10 | 14 | 37 | 20 | 0.27 | 0.24 | 0.28 | 1.63 | 1.35 | 1.56 | 1.24 | 1.6 | 1.2 | 2.17 |
| SOLARBAN 70 (2) OPTIGRAY + Clear  | 4 | 52 | 9  | 13 | 25 | 19 | 0.26 | 0.24 | 0.28 | 1.63 | 1.35 | 1.56 | 1.24 | 1.6 | 1.2 | 2.17 |
| SOLARBAN 70 (2) SOLARGRAY + Clear | 2 | 20 | 6  | 12 | 9  | 8  | 0.15 | 0.15 | 0.18 | 1.63 | 1.35 | 1.56 | 1.24 | 1.6 | 1.2 | 1.33 |

**SOLARBAN® R100 Triple Silver Reflective Low-E Glasses**

|   |    |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---|----|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN R100 (2) STARPHIRE + STARPHIRE | 17 | 44 | 33 | 14 | 58 | 22 | 0.26 | 0.24 | 0.27 | 1.67 | 1.39 | 1.62 | 1.30 | 1.6 | 1.2 | 1.87 |
| SOLARBAN R100 (2) ACUITY + ACUITY       | 15 | 43 | 33 | 14 | 54 | 21 | 0.26 | 0.24 | 0.27 | 1.67 | 1.39 | 1.62 | 1.30 | 1.6 | 1.2 | 1.79 |
| SOLARBAN R100 (2) Clear + Clear         | 13 | 42 | 33 | 14 | 46 | 20 | 0.26 | 0.23 | 0.27 | 1.67 | 1.39 | 1.62 | 1.30 | 1.6 | 1.2 | 1.79 |
| SOLARBAN R100 (2) OPTIBLUE + Clear      | 10 | 34 | 22 | 14 | 38 | 17 | 0.23 | 0.21 | 0.24 | 1.67 | 1.39 | 1.62 | 1.30 | 1.6 | 1.2 | 1.62 |
| SOLARBAN R100 (2) OPTIGRAY + Clear      | 8  | 33 | 22 | 13 | 27 | 15 | 0.22 | 0.21 | 0.24 | 1.67 | 1.39 | 1.62 | 1.30 | 1.6 | 1.2 | 1.57 |
| SOLARBAN R100 (2) SOLARGRAY + Clear     | 7  | 26 | 15 | 13 | 23 | 13 | 0.20 | 0.19 | 0.22 | 1.67 | 1.39 | 1.62 | 1.30 | 1.6 | 1.2 | 1.37 |

**SOLARBAN® 67 Double Silver Subtly Reflective Low-E Glasses**

|                                       |    |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---------------------------------------|----|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN 67 (2) STARPHIRE + STARPHIRE | 16 | 57 | 19 | 16 | 50 | 28 | 0.33 | 0.30 | 0.35 | 1.67 | 1.39 | 1.61 | 1.30 | 1.6 | 1.2 | 1.90 |
| SOLARBAN 67 (2) ACUITY + ACUITY       | 14 | 56 | 19 | 16 | 46 | 27 | 0.33 | 0.30 | 0.34 | 1.67 | 1.39 | 1.61 | 1.30 | 1.6 | 1.2 | 1.87 |
| SOLARBAN 67 (2) Clear + Clear         | 12 | 55 | 19 | 16 | 39 | 25 | 0.32 | 0.29 | 0.34 | 1.67 | 1.39 | 1.61 | 1.30 | 1.6 | 1.2 | 1.86 |
| SOLARBAN 67 (2) OPTIBLUE + Clear      | 10 | 44 | 14 | 16 | 33 | 21 | 0.28 | 0.26 | 0.30 | 1.67 | 1.39 | 1.61 | 1.30 | 1.6 | 1.2 | 1.69 |
| SOLARBAN 67 (2) OPTIGRAY + Clear      | 8  | 43 | 14 | 16 | 23 | 20 | 0.27 | 0.26 | 0.29 | 1.67 | 1.39 | 1.61 | 1.30 | 1.6 | 1.2 | 1.65 |
| SOLARBAN 67 (2) SOLARGRAY + Clear     | 7  | 34 | 10 | 15 | 20 | 16 | 0.24 | 0.23 | 0.26 | 1.67 | 1.39 | 1.61 | 1.30 | 1.6 | 1.2 | 1.48 |

**SOLARBAN® 60 Double Silver Low-E Glasses**

|                                       |    |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---------------------------------------|----|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN 60 (2) STARPHIRE + STARPHIRE | 25 | 75 | 11 | 12 | 42 | 40 | 0.45 | 0.42 | 0.48 | 1.67 | 1.39 | 1.61 | 1.29 | 1.6 | 1.2 | 1.80 |
| SOLARBAN 60 (2) ACUITY + ACUITY       | 22 | 73 | 11 | 12 | 39 | 38 | 0.44 | 0.41 | 0.47 | 1.67 | 1.39 | 1.61 | 1.29 | 1.6 | 1.2 | 1.78 |
| SOLARBAN 60 (2) Clear + Clear         | 20 | 72 | 11 | 12 | 32 | 35 | 0.43 | 0.40 | 0.46 | 1.67 | 1.39 | 1.61 | 1.29 | 1.6 | 1.2 | 1.81 |
| SOLARBAN 60 (2) OPTIBLUE + Clear      | 16 | 57 | 8  | 11 | 27 | 30 | 0.38 | 0.35 | 0.40 | 1.67 | 1.39 | 1.61 | 1.29 | 1.6 | 1.2 | 1.63 |
| SOLARBAN 60 (2) OPTIGRAY + Clear      | 13 | 57 | 9  | 11 | 19 | 28 | 0.36 | 0.33 | 0.38 | 1.67 | 1.39 | 1.61 | 1.29 | 1.6 | 1.2 | 1.73 |
| SOLARBAN 60 (2) SOLARGRAY + Clear     | 11 | 45 | 7  | 11 | 17 | 23 | 0.31 | 0.29 | 0.34 | 1.67 | 1.39 | 1.61 | 1.29 | 1.6 | 1.2 | 1.55 |

**VISTACOOl® Subtly Reflective Glasses**

|                                |    |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|--------------------------------|----|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| VISTACOOl(2) AZURIA + Clear    | 35 | 52 | 24 | 33 | 12 | 28 | 0.40 | 0.39 | 0.45 | 2.74 | 2.59 | 2.88 | 2.76 | 2.8 | 1.2 | 1.33 |
| VISTACOOl (2) PACIFICA + Clear | 16 | 38 | 15 | 32 | 10 | 27 | 0.37 | 0.39 | 0.44 | 2.74 | 2.59 | 2.88 | 2.76 | 2.8 | 1.2 | 0.97 |

**SOLARCOOL® Reflective Glasses**

|                                   |    |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|-----------------------------------|----|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARCOOL (2) AZURIA + Clear      | 12 | 26 | 22 | 39 | 11 | 16 | 0.27 | 0.29 | 0.33 | 2.74 | 2.59 | 2.88 | 2.76 | 2.8 | 2.7 | 0.91 |
| SOLARCOOL (2) PACIFICA + Clear    | 6  | 19 | 14 | 39 | 9  | 16 | 0.27 | 0.29 | 0.34 | 2.74 | 2.59 | 2.88 | 2.76 | 2.8 | 2.7 | 0.65 |
| SOLARCOOL (2) SOLARBLUE + Clear   | 10 | 23 | 18 | 39 | 14 | 25 | 0.34 | 0.37 | 0.42 | 2.74 | 2.59 | 2.88 | 2.76 | 2.8 | 2.7 | 0.62 |
| SOLARCOOL (2) SOLARBRONZE + Clear | 8  | 22 | 17 | 39 | 15 | 27 | 0.35 | 0.38 | 0.44 | 2.74 | 2.59 | 2.88 | 2.76 | 2.8 | 2.7 | 0.57 |
| SOLARCOOL (2) SOLARGRAY + Clear   | 8  | 20 | 15 | 39 | 13 | 24 | 0.33 | 0.36 | 0.41 | 2.74 | 2.59 | 2.88 | 2.76 | 2.8 | 2.7 | 0.56 |

Please see below for performance value definitions and page 2 for product information, recommendations and simulation conditions. Visit vitrogazings.com for more product information.

On Cover

Fraser's Tower

Product

Solarban® R100 on Optiblu®

Location

Singapore

Architect

Aurecon

Vitro Certified™ Fabricator

Wujiang Golden Glass

Glazing Contractor

YKK

**Performance Values:**

**Color Rendering Index (CRI)** – A scale from 0 to 100 percent indicating how accurate transmitted color is when viewed through the window as compared to actual color.

**U-Value** – A measure of the insulating characteristics of the glass or how much heat gain or loss occurs through the glass due to the difference between indoor and outdoor temperatures and is measured W/m<sup>2</sup>\*K. The lower the number, the better the insulating performance. This number is the reciprocal of the R-value. Argon represents the u-value performance when the cavity is filled with a 90% argon/10% air/gas mixture. Two methods used for calculations – NFRC and EN673.

**Solar Factor (SF) or g Value** – The total solar energy transmittance as measured with European standards.

**Solar Heat Gain Coefficient (SHGC)** – Measures how well a window blocks (or shades) the heat from sunlight using NFRC methodology. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits and the greater the shading ability. The SHGC is similar to the Shading Coefficient (SC), but also accounts for absorbed, converted and inwardly radiated solar energy.

**Shading Coefficient (SC)** – Measures the total solar heat gain as compared to 3 mm glass.

**Light-to-Solar Gain (LSG)** – The ratio of visible light transmittance to solar heat gain coefficient.

**Performance for Insulating Glass Units of 4 mm Outer Lite + 16 mm Airspace + 4 mm Inner Lite**  
**Low-e coating showed in both #2 and #3 position**

| Glass Configuration<br>4 mm + 16 mm Gap + 4 mm | CRI | UV % | Visible Light |               |     | Solar Energy |         |             |      |    | U-Values W/m <sup>2</sup> *K |       |          |       |        |       | LSG |
|--|-----|------|---------------|---------------|-----|--------------|---------|-------------|------|----|------------------------------|-------|----------|-------|--------|-------|-----|
|  |     |      | Trans %       | Reflectance % |     | Refl %       | Trans % | SF<br>EN410 | SHGC | SC | Win-NFRC                     |       | Sum-NFRC |       | EN 673 |       |     |
|  |     |      |               | Ext           | Int |              |         |             |      |    | air                          | argon | air      | argon | air    | argon |     |

**SOLARBAN® 90 Quad Silver Neutral Low-E Glasses**

|                                       |    |    |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---------------------------------------|----|----|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN 90 (2) STARPHIRE + STARPHIRE | 96 | 10 | 54 | 13 | 20 | 56 | 21 | 0.26 | 0.23 | 0.26 | 1.69 | 1.42 | 1.31 | 1.04 | 1.3 | 1.1 | 2.35 |
| SOLARBAN 90 (2) ACUIITY + ACUIITY     | 95 | 9  | 54 | 12 | 19 | 52 | 21 | 0.26 | 0.23 | 0.26 | 1.69 | 1.42 | 1.31 | 1.04 | 1.3 | 1.1 | 2.35 |
| SOLARBAN 90 (2) Clear + Clear         | 93 | 8  | 52 | 12 | 20 | 43 | 20 | 0.26 | 0.23 | 0.26 | 1.69 | 1.42 | 1.31 | 1.04 | 1.3 | 1.1 | 2.26 |
| SOLARBAN 90 (2) OPTIBLUE + Clear      | 90 | 6  | 41 | 9  | 19 | 36 | 16 | 0.22 | 0.20 | 0.23 | 1.69 | 1.42 | 1.31 | 1.04 | 1.3 | 1.1 | 2.05 |
| SOLARBAN 90 (2) OPTIGRAY + Clear      | 92 | 5  | 41 | 9  | 19 | 25 | 15 | 0.22 | 0.20 | 0.23 | 1.69 | 1.42 | 1.31 | 1.04 | 1.3 | 1.1 | 2.05 |
| SOLARBAN 90 (2) SOLARGRAY + Clear     | 92 | 5  | 22 | 5  | 10 | 7  | 12 | 0.18 | 0.19 | 0.22 | 1.69 | 1.42 | 1.31 | 1.04 | 1.3 | 1.1 | 1.16 |
| STARPHIRE + SOLARBAN 90 (3) STARPHIRE | 96 | 10 | 54 | 20 | 13 | 59 | 21 | 0.39 | 0.34 | 0.40 | 1.69 | 1.42 | 1.31 | 1.04 | 1.3 | 1.1 | 1.57 |
| ACUIITY + SOLARBAN 90 (3) ACUIITY     | 95 | 9  | 54 | 19 | 12 | 55 | 21 | 0.39 | 0.34 | 0.39 | 1.69 | 1.42 | 1.31 | 1.04 | 1.3 | 1.1 | 1.56 |
| Clear + SOLARBAN 90 (3) Clear         | 93 | 8  | 52 | 19 | 12 | 46 | 20 | 0.30 | 0.34 | 0.39 | 1.69 | 1.42 | 1.31 | 1.04 | 1.3 | 1.1 | 1.54 |

**SOLARBAN® 72 Triple Silver Neutral Low-Iron Ultra-Clear Low-E Glasses**

|                                       |    |   |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---------------------------------------|----|---|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN 72 (2) STARPHIRE + STARPHIRE | 95 | 9 | 68 | 13 | 14 | 56 | 26 | 0.31 | 0.28 | 0.32 | 1.69 | 1.42 | 1.31 | 1.04 | 1.3 | 1.1 | 2.43 |
| SOLARBAN 72 (2) ACUIITY + ACUIITY     | 95 | 8 | 68 | 13 | 14 | 52 | 26 | 0.31 | 0.28 | 0.32 | 1.69 | 1.42 | 1.31 | 1.04 | 1.3 | 1.1 | 2.43 |
| ACUIITY + SOLARBAN 72 (3) ACUIITY     | 95 | 8 | 68 | 14 | 13 | 54 | 26 | 0.41 | 0.36 | 0.41 | 1.69 | 1.42 | 1.31 | 1.04 | 1.3 | 1.1 | 1.89 |
| STARPHIRE + SOLARBAN 72 (3) STARPHIRE | 95 | 9 | 68 | 14 | 14 | 58 | 26 | 0.41 | 0.36 | 0.41 | 1.69 | 1.42 | 1.31 | 1.04 | 1.3 | 1.1 | 1.90 |

**SOLARBAN® 70 Triple Silver Neutral Low-E Glasses**

|                                   |    |   |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|-----------------------------------|----|---|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN 70 (2) Clear + Clear     | 93 | 6 | 64 | 12 | 13 | 41 | 24 | 0.31 | 0.27 | 0.32 | 1.69 | 1.42 | 1.31 | 1.04 | 1.3 | 1.1 | 2.37 |
| SOLARBAN 70 (2) OPTIBLUE + Clear  | 90 | 5 | 52 | 10 | 14 | 37 | 20 | 0.26 | 0.24 | 0.27 | 1.69 | 1.42 | 1.31 | 1.04 | 1.3 | 1.1 | 2.17 |
| SOLARBAN 70 (2) OPTIGRAY + Clear  | 91 | 5 | 52 | 9  | 13 | 25 | 19 | 0.26 | 0.24 | 0.27 | 1.69 | 1.42 | 1.31 | 1.04 | 1.3 | 1.1 | 2.17 |
| SOLARBAN 70 (2) SOLARGRAY + Clear | 91 | 4 | 41 | 8  | 13 | 22 | 15 | 0.22 | 0.20 | 0.24 | 1.69 | 1.42 | 1.31 | 1.04 | 1.3 | 1.1 | 2.05 |
| Clear + SOLARBAN 70 (3) Clear     | 93 | 6 | 64 | 13 | 12 | 43 | 24 | 0.42 | 0.37 | 0.43 | 1.69 | 1.42 | 1.31 | 1.04 | 1.3 | 1.1 | 1.70 |

**SOLARBAN® R100 Triple Silver Reflective Low-E Glasses**

|   |    |    |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---|----|----|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN R100 (2) STARPHIRE + STARPHIRE | 94 | 16 | 44 | 33 | 14 | 58 | 22 | 0.26 | 0.23 | 0.27 | 1.72 | 1.45 | 1.35 | 1.08 | 1.4 | 1.1 | 1.91 |
| SOLARBAN R100 (2) ACUIITY + ACUIITY     | 93 | 15 | 43 | 33 | 14 | 54 | 21 | 0.26 | 0.23 | 0.27 | 1.72 | 1.45 | 1.35 | 1.08 | 1.4 | 1.1 | 1.87 |
| SOLARBAN R100 (2) Clear + Clear         | 91 | 13 | 42 | 33 | 14 | 46 | 20 | 0.25 | 0.23 | 0.27 | 1.72 | 1.45 | 1.35 | 1.08 | 1.4 | 1.1 | 1.83 |
| SOLARBAN R100 (2) OPTIBLUE + Clear      | 88 | 10 | 34 | 22 | 14 | 38 | 16 | 0.22 | 0.21 | 0.24 | 1.72 | 1.45 | 1.35 | 1.08 | 1.4 | 1.1 | 1.62 |
| SOLARBAN R100 (2) OPTIGRAY + Clear      | 90 | 8  | 33 | 22 | 13 | 27 | 15 | 0.22 | 0.21 | 0.23 | 1.72 | 1.45 | 1.35 | 1.08 | 1.4 | 1.1 | 1.57 |
| SOLARBAN R100 (2) SOLARGRAY + Clear     | 91 | 7  | 25 | 15 | 13 | 23 | 13 | 0.18 | 0.18 | 0.21 | 1.72 | 1.45 | 1.35 | 1.08 | 1.4 | 1.1 | 1.39 |

**SOLARBAN® 67 Double Silver Subtly Reflective Low-E Glasses**

|                                       |    |    |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---------------------------------------|----|----|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN 67 (2) STARPHIRE + STARPHIRE | 96 | 16 | 57 | 19 | 16 | 50 | 28 | 0.33 | 0.30 | 0.34 | 1.72 | 1.45 | 1.35 | 1.08 | 1.4 | 1.1 | 1.90 |
| SOLARBAN 67 (2) ACUIITY + ACUIITY     | 95 | 14 | 56 | 19 | 16 | 46 | 27 | 0.32 | 0.30 | 0.34 | 1.72 | 1.45 | 1.35 | 1.08 | 1.4 | 1.1 | 1.87 |
| SOLARBAN 67 (2) Clear + Clear         | 93 | 12 | 55 | 19 | 16 | 39 | 25 | 0.32 | 0.29 | 0.34 | 1.72 | 1.45 | 1.35 | 1.08 | 1.4 | 1.1 | 1.90 |
| SOLARBAN 67 (2) OPTIBLUE + Clear      | 90 | 10 | 44 | 14 | 16 | 33 | 21 | 0.28 | 0.26 | 0.30 | 1.72 | 1.45 | 1.35 | 1.08 | 1.4 | 1.1 | 1.69 |
| SOLARBAN 67 (2) OPTIGRAY + Clear      | 92 | 8  | 43 | 14 | 16 | 23 | 20 | 0.27 | 0.25 | 0.29 | 1.72 | 1.45 | 1.35 | 1.08 | 1.4 | 1.1 | 1.72 |
| SOLARBAN 67 (2) SOLARGRAY + Clear     | 92 | 7  | 34 | 10 | 15 | 20 | 16 | 0.23 | 0.22 | 0.25 | 1.72 | 1.45 | 1.35 | 1.08 | 1.4 | 1.1 | 1.55 |

**SOLARBAN® 60 Double Silver Neutral Low-E Glasses**

|                                       |    |    |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---------------------------------------|----|----|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN 60 (2) STARPHIRE + STARPHIRE | 99 | 25 | 74 | 11 | 12 | 42 | 39 | 0.45 | 0.41 | 0.47 | 1.72 | 1.45 | 1.35 | 1.08 | 1.4 | 1.1 | 1.80 |
| SOLARBAN 60 (2) ACUIITY + ACUIITY     | 98 | 22 | 74 | 11 | 12 | 39 | 38 | 0.44 | 0.41 | 0.47 | 1.72 | 1.45 | 1.35 | 1.08 | 1.4 | 1.1 | 1.80 |
| SOLARBAN 60 (2) Clear + Clear         | 96 | 20 | 72 | 11 | 12 | 32 | 35 | 0.43 | 0.40 | 0.46 | 1.72 | 1.45 | 1.35 | 1.08 | 1.4 | 1.1 | 1.80 |
| SOLARBAN 60 (2) OPTIBLUE + Clear      | 94 | 16 | 57 | 8  | 11 | 27 | 30 | 0.37 | 0.35 | 0.40 | 1.72 | 1.45 | 1.35 | 1.08 | 1.4 | 1.1 | 1.63 |
| SOLARBAN 60 (2) OPTIGRAY + Clear      | 95 | 13 | 57 | 9  | 11 | 19 | 28 | 0.35 | 0.33 | 0.38 | 1.72 | 1.45 | 1.35 | 1.08 | 1.4 | 1.1 | 1.73 |
| SOLARBAN 60 (2) SOLARGRAY + Clear     | 95 | 11 | 45 | 7  | 11 | 17 | 23 | 0.30 | 0.29 | 0.33 | 1.72 | 1.45 | 1.35 | 1.08 | 1.4 | 1.1 | 1.55 |
| STARPHIRE + SOLARBAN 60 (3) STARPHIRE | 99 | 25 | 74 | 12 | 11 | 45 | 40 | 0.55 | 0.50 | 0.57 | 1.72 | 1.45 | 1.35 | 1.08 | 1.4 | 1.1 | 1.49 |
| ACUIITY + SOLARBAN 60 (3) ACUIITY     | 98 | 22 | 74 | 12 | 11 | 41 | 38 | 0.54 | 0.49 | 0.57 | 1.72 | 1.45 | 1.35 | 1.08 | 1.4 | 1.1 | 1.50 |
| Clear + SOLARBAN 60 (3) Clear         | 96 | 20 | 72 | 12 | 11 | 34 | 35 | 0.52 | 0.47 | 0.55 | 1.72 | 1.45 | 1.35 | 1.08 | 1.4 | 1.1 | 1.51 |

Please see page 1 for performance value definitions and below for product information, recommendations and simulation conditions. Visit [vitroglazings.com](http://vitroglazings.com) for more product information.

The name of *Solarban® 70XL* solar control low-emissivity (low-e) glass has changed to *Solarban® 70* glass, formally dropping the "XL".

*Solarban® z50* glass has been changed to *Solarban® 60* on *Optiblue®* glass. No change in performance or aesthetics.

*Solarban® z75* glass has been changed to *Solarban® 70* on *Optiblue®* glass. No change in performance or aesthetics.

Data is based on center of glass performance of representative factory production samples. Actual values may vary due to the production process and manufacturing tolerances. All tabulated data is based on NFRC methodology using the LBNL Window 7.3 software and EN 410/673 methodology using WinDat WIS version 3.0.1 software. This data is to be used for comparison purposes and should not be considered a contract. Simulations for laminated glass are not NFRC approved.

It is the recipient's responsibility to ensure the manufacturability of the glazing configurations as well as evaluating appropriate design considerations such as wind and snow load analysis, thermal stress analysis and local building code compliance.

Vitro recommends a full size mock-up be reviewed under the specific job-site conditions and the mock-up be retained as a basis of acceptable final product.

Important glass design considerations and comprehensive technical information, including performance, thermal stress and wind load tools for all Vitro glasses, are available at [vitroglazings.com](http://vitroglazings.com). Construct custom glass units from a virtually unlimited number of glazing configurations at [construct.vitroglazings.com](http://construct.vitroglazings.com).

Performance for Insulating Glass Units of 6 mm Outer Lite + 12 mm Airspace + 6 mm Inner Lite

| Glass Configuration<br>6 mm + 12 mm Gap + 6 mm | CRI | UV % | Visible Light |               |       | Solar Energy |         |       |       |    | U-Values W/m <sup>2</sup> *K |       |          |       |        |       | LSG |
|--|-----|------|---------------|---------------|-------|--------------|---------|-------|-------|----|------------------------------|-------|----------|-------|--------|-------|-----|
|  |     |      | Trans %       | Reflectance % |       | Refl %       | Trans % | EN410 | SHGC  | SC | Win-NFRC                     |       | Sum-NFRC |       | EN 673 |       |     |
|  |     |      |               | Ext           | Int   |              |         |       |       |    | air                          | argon | air      | argon | air    | argon |     |
|  |     |      | SF            | air           | argon | air          | argon   | air   | argon |    |                              |       |          |       |        |       |     |

**SOLARBAN® 90 Quad Silver Neutral Low-E Glasses**

|                                       |    |    |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---------------------------------------|----|----|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN 90 (2) STARPHIRE + STARPHIRE | 95 | 10 | 54 | 13 | 20 | 54 | 21 | 0.26 | 0.23 | 0.26 | 1.63 | 1.35 | 1.57 | 1.25 | 1.6 | 1.2 | 2.34 |
| SOLARBAN 90 (2) ACUITY + ACUITY       | 94 | 9  | 53 | 12 | 19 | 48 | 20 | 0.26 | 0.23 | 0.27 | 1.63 | 1.35 | 1.57 | 1.25 | 1.6 | 1.2 | 2.28 |
| SOLARBAN 90 (2) Clear + Clear         | 92 | 7  | 51 | 12 | 19 | 37 | 19 | 0.26 | 0.23 | 0.27 | 1.63 | 1.35 | 1.57 | 1.25 | 1.6 | 1.2 | 2.18 |
| SOLARBAN 90 (2) AZURIA + Clear        | 75 | 5  | 39 | 9  | 19 | 8  | 14 | 0.22 | 0.21 | 0.24 | 1.63 | 1.35 | 1.57 | 1.25 | 1.6 | 1.2 | 1.88 |
| SOLARBAN 90 (2) ATLANTICA + Clear     | 82 | 2  | 39 | 9  | 19 | 8  | 13 | 0.21 | 0.20 | 0.23 | 1.63 | 1.35 | 1.57 | 1.25 | 1.6 | 1.2 | 1.90 |
| SOLARBAN 90 (2) SOLEXIA + Clear       | 86 | 4  | 44 | 10 | 19 | 13 | 16 | 0.24 | 0.22 | 0.26 | 1.63 | 1.35 | 1.57 | 1.25 | 1.6 | 1.2 | 1.99 |
| SOLARBAN 90 (2) OPTIBLUE + Clear      | 88 | 5  | 37 | 8  | 19 | 30 | 14 | 0.21 | 0.20 | 0.23 | 1.63 | 1.35 | 1.57 | 1.25 | 1.6 | 1.2 | 1.87 |
| SOLARBAN 90 (2) PACIFICA + Clear      | 69 | 2  | 24 | 6  | 18 | 7  | 9  | 0.17 | 0.17 | 0.19 | 1.63 | 1.35 | 1.57 | 1.25 | 1.6 | 1.2 | 1.46 |
| SOLARBAN 90 (2) SOLARBLUE + Clear     | 81 | 4  | 32 | 8  | 18 | 16 | 12 | 0.20 | 0.19 | 0.22 | 1.63 | 1.35 | 1.57 | 1.25 | 1.6 | 1.2 | 1.70 |
| SOLARBAN 90 (2) SOLARBRONZE + Clear   | 94 | 3  | 31 | 7  | 18 | 20 | 11 | 0.18 | 0.18 | 0.20 | 1.63 | 1.35 | 1.57 | 1.25 | 1.6 | 1.2 | 1.72 |
| SOLARBAN 90 (2) OPTIGRAY + Clear      | 90 | 4  | 36 | 8  | 19 | 18 | 13 | 0.21 | 0.20 | 0.23 | 1.63 | 1.35 | 1.57 | 1.25 | 1.6 | 1.2 | 1.83 |
| SOLARBAN 90 (2) SOLARGRAY + Clear     | 90 | 3  | 26 | 6  | 18 | 15 | 10 | 0.17 | 0.17 | 0.19 | 1.63 | 1.35 | 1.57 | 1.25 | 1.6 | 1.2 | 1.53 |

**SOLARBAN® 72 Triple Silver Neutral Low-Iron Ultra-Clear Low-E Glasses**

|                                       |    |   |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---------------------------------------|----|---|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN 72 (2) STARPHIRE + STARPHIRE | 95 | 9 | 68 | 13 | 14 | 54 | 26 | 0.31 | 0.28 | 0.32 | 1.62 | 1.34 | 1.56 | 1.23 | 1.6 | 1.2 | 2.45 |
| SOLARBAN 72 (2) ACUITY + ACUITY       | 94 | 8 | 67 | 13 | 14 | 49 | 25 | 0.31 | 0.28 | 0.32 | 1.62 | 1.34 | 1.56 | 1.23 | 1.6 | 1.2 | 2.40 |

**SOLARBAN® 70 Triple Silver Neutral Low-E Glasses**

|                                     |    |   |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|-------------------------------------|----|---|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN 70 (2) Clear + Clear       | 91 | 6 | 64 | 13 | 14 | 40 | 24 | 0.31 | 0.27 | 0.32 | 1.62 | 1.34 | 1.56 | 1.23 | 1.6 | 1.2 | 2.34 |
| SOLARBAN 70 (2) AZURIA + Clear      | 74 | 4 | 50 | 10 | 13 | 8  | 17 | 0.26 | 0.24 | 0.28 | 1.62 | 1.34 | 1.56 | 1.23 | 1.6 | 1.2 | 2.08 |
| SOLARBAN 70 (2) ATLANTICA + Clear   | 81 | 2 | 49 | 10 | 13 | 8  | 16 | 0.24 | 0.23 | 0.27 | 1.62 | 1.34 | 1.56 | 1.23 | 1.6 | 1.2 | 2.10 |
| SOLARBAN 70 (2) SOLEXIA + Clear     | 85 | 3 | 56 | 11 | 14 | 13 | 19 | 0.28 | 0.26 | 0.30 | 1.62 | 1.34 | 1.56 | 1.23 | 1.6 | 1.2 | 2.18 |
| SOLARBAN 70 (2) OPTIBLUE + Clear    | 87 | 5 | 46 | 9  | 13 | 30 | 18 | 0.25 | 0.23 | 0.26 | 1.62 | 1.34 | 1.56 | 1.23 | 1.6 | 1.2 | 2.04 |
| SOLARBAN 70 (2) PACIFICA + Clear    | 69 | 2 | 31 | 7  | 13 | 8  | 11 | 0.20 | 0.19 | 0.22 | 1.62 | 1.34 | 1.56 | 1.23 | 1.6 | 1.2 | 1.65 |
| SOLARBAN 70 (2) SOLARBLUE + Clear   | 81 | 3 | 41 | 8  | 13 | 16 | 15 | 0.23 | 0.22 | 0.25 | 1.62 | 1.34 | 1.56 | 1.23 | 1.6 | 1.2 | 1.88 |
| SOLARBAN 70 (2) SOLARBRONZE + Clear | 93 | 3 | 39 | 8  | 13 | 20 | 14 | 0.21 | 0.20 | 0.23 | 1.62 | 1.34 | 1.56 | 1.23 | 1.6 | 1.2 | 1.90 |
| SOLARBAN 70 (2) OPTIGRAY + Clear    | 89 | 4 | 46 | 9  | 13 | 18 | 17 | 0.24 | 0.23 | 0.26 | 1.62 | 1.34 | 1.56 | 1.23 | 1.6 | 1.2 | 2.01 |
| SOLARBAN 70 (2) SOLARGRAY + Clear   | 89 | 3 | 32 | 7  | 13 | 15 | 12 | 0.20 | 0.19 | 0.22 | 1.62 | 1.34 | 1.56 | 1.23 | 1.6 | 1.2 | 1.72 |

**SOLARBAN® R100 Triple Silver Reflective Low-E Glasses**

|   |    |    |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---|----|----|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN R100 (2) STARPHIRE + STARPHIRE | 90 | 16 | 44 | 33 | 14 | 57 | 21 | 0.26 | 0.24 | 0.27 | 1.66 | 1.38 | 1.61 | 1.29 | 1.6 | 1.3 | 1.86 |
| SOLARBAN R100 (2) ACUITY + ACUITY       | 92 | 14 | 43 | 33 | 13 | 51 | 21 | 0.26 | 0.24 | 0.27 | 1.66 | 1.38 | 1.61 | 1.29 | 1.6 | 1.3 | 1.83 |
| SOLARBAN R100 (2) Clear + Clear         | 93 | 12 | 42 | 32 | 14 | 41 | 19 | 0.25 | 0.23 | 0.27 | 1.66 | 1.38 | 1.61 | 1.29 | 1.6 | 1.3 | 1.78 |
| SOLARBAN R100 (2) AZURIA + Clear        | 72 | 8  | 32 | 21 | 13 | 11 | 12 | 0.21 | 0.20 | 0.23 | 1.66 | 1.38 | 1.61 | 1.29 | 1.6 | 1.3 | 1.63 |
| SOLARBAN R100 (2) ATLANTICA + Clear     | 80 | 3  | 31 | 20 | 13 | 11 | 12 | 0.20 | 0.19 | 0.22 | 1.66 | 1.38 | 1.61 | 1.29 | 1.6 | 1.3 | 1.63 |
| SOLARBAN R100 (2) SOLEXIA + Clear       | 83 | 6  | 36 | 25 | 13 | 17 | 15 | 0.22 | 0.21 | 0.25 | 1.66 | 1.38 | 1.61 | 1.29 | 1.6 | 1.3 | 1.69 |
| SOLARBAN R100 (2) OPTIBLUE + Clear      | 86 | 8  | 30 | 19 | 13 | 31 | 14 | 0.21 | 0.20 | 0.23 | 1.66 | 1.38 | 1.61 | 1.29 | 1.6 | 1.3 | 1.48 |
| SOLARBAN R100 (2) PACIFICA + Clear      | 66 | 3  | 20 | 11 | 13 | 9  | 9  | 0.17 | 0.16 | 0.19 | 1.66 | 1.38 | 1.61 | 1.29 | 1.6 | 1.3 | 1.21 |
| SOLARBAN R100 (2) SOLARBLUE + Clear     | 79 | 6  | 26 | 15 | 13 | 17 | 12 | 0.20 | 0.19 | 0.22 | 1.66 | 1.38 | 1.61 | 1.29 | 1.6 | 1.3 | 1.38 |
| SOLARBAN R100 (2) SOLARBRONZE + Clear   | 95 | 5  | 25 | 15 | 13 | 20 | 11 | 0.19 | 0.18 | 0.21 | 1.66 | 1.38 | 1.61 | 1.29 | 1.6 | 1.3 | 1.36 |
| SOLARBAN R100 (2) OPTIGRAY + Clear      | 89 | 6  | 29 | 18 | 13 | 20 | 13 | 0.20 | 0.20 | 0.23 | 1.66 | 1.38 | 1.61 | 1.29 | 1.6 | 1.3 | 1.48 |
| SOLARBAN R100 (2) SOLARGRAY + Clear     | 89 | 5  | 21 | 12 | 13 | 16 | 10 | 0.17 | 0.17 | 0.20 | 1.66 | 1.38 | 1.61 | 1.29 | 1.6 | 1.3 | 1.21 |

**SOLARBAN® 67 Double Silver Subtly Reflective Low-E Glasses**

|                                       |    |    |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---------------------------------------|----|----|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN 67 (2) STARPHIRE + STARPHIRE | 95 | 15 | 57 | 20 | 16 | 49 | 28 | 0.33 | 0.30 | 0.35 | 1.66 | 1.38 | 1.60 | 1.29 | 1.6 | 1.3 | 1.89 |
| SOLARBAN 67 (2) ACUITY + ACUITY       | 94 | 14 | 56 | 19 | 16 | 44 | 27 | 0.33 | 0.30 | 0.34 | 1.66 | 1.38 | 1.60 | 1.29 | 1.6 | 1.3 | 1.87 |
| SOLARBAN 67 (2) Clear + Clear         | 92 | 11 | 54 | 19 | 16 | 34 | 24 | 0.32 | 0.29 | 0.34 | 1.66 | 1.38 | 1.60 | 1.29 | 1.6 | 1.3 | 1.84 |
| SOLARBAN 67 (2) AZURIA + Clear        | 74 | 8  | 42 | 13 | 16 | 9  | 16 | 0.24 | 0.23 | 0.26 | 1.66 | 1.38 | 1.60 | 1.29 | 1.6 | 1.3 | 1.81 |
| SOLARBAN 67 (2) ATLANTICA + Clear     | 82 | 3  | 41 | 13 | 16 | 9  | 15 | 0.23 | 0.23 | 0.26 | 1.66 | 1.38 | 1.60 | 1.29 | 1.6 | 1.3 | 1.80 |
| SOLARBAN 67 (2) SOLEXIA + Clear       | 85 | 6  | 47 | 16 | 16 | 13 | 19 | 0.27 | 0.26 | 0.29 | 1.66 | 1.38 | 1.60 | 1.29 | 1.6 | 1.3 | 1.83 |
| SOLARBAN 67 (2) OPTIBLUE + Clear      | 88 | 8  | 39 | 12 | 15 | 27 | 19 | 0.26 | 0.25 | 0.28 | 1.66 | 1.38 | 1.60 | 1.29 | 1.6 | 1.3 | 1.57 |
| SOLARBAN 67 (2) PACIFICA + Clear      | 68 | 3  | 26 | 8  | 15 | 8  | 11 | 0.19 | 0.19 | 0.22 | 1.66 | 1.38 | 1.60 | 1.29 | 1.6 | 1.3 | 1.37 |
| SOLARBAN 67 (2) SOLARBLUE + Clear     | 81 | 6  | 34 | 10 | 15 | 15 | 16 | 0.24 | 0.23 | 0.26 | 1.66 | 1.38 | 1.60 | 1.29 | 1.6 | 1.3 | 1.50 |
| SOLARBAN 67 (2) SOLARBRONZE + Clear   | 95 | 5  | 32 | 10 | 15 | 18 | 15 | 0.22 | 0.22 | 0.25 | 1.66 | 1.38 | 1.60 | 1.29 | 1.6 | 1.3 | 1.48 |
| SOLARBAN 67 (2) OPTIGRAY + Clear      | 90 | 6  | 38 | 12 | 15 | 17 | 17 | 0.25 | 0.24 | 0.27 | 1.66 | 1.38 | 1.60 | 1.29 | 1.6 | 1.3 | 1.60 |
| SOLARBAN 67 (2) SOLARGRAY + Clear     | 90 | 5  | 27 | 8  | 15 | 14 | 13 | 0.20 | 0.20 | 0.23 | 1.66 | 1.38 | 1.60 | 1.29 | 1.6 | 1.3 | 1.34 |

**SOLARBAN® 60 Double Silver Neutral Low-e Glasses**

|                                       |    |    |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---------------------------------------|----|----|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN 60 (2) STARPHIRE + STARPHIRE | 98 | 24 | 74 | 11 | 12 | 41 | 39 | 0.45 | 0.41 | 0.48 | 1.66 | 1.38 | 1.60 | 1.29 | 1.6 | 1.3 | 1.80 |
| SOLARBAN 60 (2) ACUITY + ACUITY       | 97 | 22 | 73 | 11 | 12 | 36 | 37 | 0.44 | 0.41 | 0.47 | 1.66 | 1.38 | 1.60 | 1.29 | 1.6 | 1.3 | 1.80 |
| SOLARBAN 60 (2) Clear + Clear         | 95 | 18 | 70 | 11 | 12 | 28 | 34 | 0.42 | 0.39 | 0.45 | 1.66 | 1.38 | 1.60 | 1.29 | 1.6 | 1.3 | 1.80 |
| SOLARBAN 60 (2) AZURIA + Clear        | 78 | 13 | 54 | 8  | 11 | 6  | 21 | 0.30 | 0.28 | 0.32 | 1.66 | 1.38 | 1.60 | 1.29 | 1.6 | 1.3 | 1.94 |
| SOLARBAN 60 (2) ATLANTICA + Clear     | 86 | 6  | 53 | 8  | 11 | 7  | 20 | 0.29 | 0.28 | 0.32 | 1.66 | 1.38 | 1.60 | 1.29 | 1.6 | 1.3 | 1.93 |
| SOLARBAN 60 (2) SOLEXIA + Clear       | 90 | 10 | 61 | 9  | 12 | 10 | 25 | 0.34 | 0.32 | 0.37 | 1.66 | 1.38 | 1.60 | 1.29 | 1.6 | 1.3 | 1.90 |
| SOLARBAN 60 (2) OPTIBLUE + Clear      | 91 | 14 | 51 | 8  | 11 | 23 | 26 | 0.35 | 0.33 | 0.37 | 1.66 | 1.38 | 1.60 | 1.29 | 1.6 | 1.3 | 1.56 |
| SOLARBAN 60 (2) PACIFICA + Clear      | 86 | 5  | 34 | 6  | 10 | 6  | 15 | 0.23 | 0.23 | 0.26 | 1.66 | 1.38 | 1.60 | 1.29 | 1.6 | 1.3 | 1.49 |
| SOLARBAN 60 (2) SOLARBLUE + Clear     | 94 | 10 | 45 | 7  | 11 | 12 | 21 | 0.30 | 0.29 | 0.33 | 1.66 | 1.38 | 1.60 | 1.29 | 1.6 | 1.3 | 1.56 |
| SOLARBAN 60 (2) SOLARBRONZE + Clear   | 95 | 8  | 42 | 7  | 11 | 15 | 21 | 0.29 | 0.28 | 0.32 | 1.66 | 1.38 | 1.60 | 1.29 | 1.6 | 1.3 | 1.51 |
| SOLARBAN 60 (2) OPTIGRAY + Clear      | 94 | 10 | 50 | 8  | 11 | 14 | 23 | 0.32 | 0.30 | 0.35 | 1.66 | 1.38 | 1.60 | 1.29 | 1.6 | 1.3 | 1.65 |
| SOLARBAN 60 (2) SOLARGRAY + Clear     | 95 | 8  | 35 | 6  | 10 | 12 | 18 | 0.26 | 0.25 | 0.29 | 1.66 | 1.38 | 1.60 | 1.29 | 1.6 | 1.3 | 1.40 |

Please see pages 1 and 2 for performance value definitions, product information, recommendations and simulation conditions. Visit vitrogazings.com for more product information.

Performance for Insulating Glass Units of 6 mm Outer Lite + 12 mm Airspace + 6 mm Inner Lite

| Glass Configuration<br>6 mm + 12 mm Gap + 6 mm | CRI | UV % | Visible Light |               |     | Solar Energy |         |       |      |    | U-Values W/m <sup>2</sup> *°K |       |          |       |        |       | LSG |
|--|-----|------|---------------|---------------|-----|--------------|---------|-------|------|----|-------------------------------|-------|----------|-------|--------|-------|-----|
|  |     |      | Trans %       | Reflectance % |     | Refl %       | Trans % | EN410 | SHGC | SC | Win-NFRC                      |       | Sum-NFRC |       | EN 673 |       |     |
|  |     |      |               | Ext           | Int |              |         |       |      |    | air                           | argon | air      | argon | air    | argon |     |
|  |     |      |               |               |     |              |         |       |      |    |                               |       |          |       |        |       |     |

**VISTACOOOL® Subtly Reflective Glasses**

|   |    |    |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---|----|----|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| VISTACOOOL(2) AZURIA + Clear                    | 76 | 29 | 47 | 21 | 32 | 11 | 22 | 0.35 | 0.34 | 0.39 | 2.70 | 2.54 | 2.84 | 2.71 | 2.8 | 2.7 | 1.39 |
| VISTACOOOL(2) AZURIA + SOLARBAN 60 (3) Clear    | 78 | 11 | 42 | 20 | 24 | 11 | 16 | 0.28 | 0.26 | 0.30 | 1.66 | 1.38 | 1.60 | 1.29 | 1.6 | 1.3 | 1.60 |
| VISTACOOOL(2) AZURIA + SOLARBAN 70 (3) Clear    | 76 | 4  | 38 | 21 | 23 | 12 | 14 | 0.26 | 0.24 | 0.28 | 1.62 | 1.34 | 1.56 | 1.23 | 1.5 | 1.2 | 1.59 |
| VISTACOOOL (2) PACIFICA + Clear                 | 73 | 10 | 29 | 11 | 31 | 7  | 19 | 0.31 | 0.32 | 0.37 | 2.70 | 2.54 | 2.85 | 2.71 | 2.8 | 2.7 | 0.92 |
| VISTACOOOL (2) PACIFICA + SOLARBAN 60 (3) Clear | 73 | 4  | 26 | 11 | 23 | 9  | 12 | 0.21 | 0.22 | 0.25 | 1.66 | 1.38 | 1.60 | 1.29 | 1.6 | 1.3 | 1.20 |
| VISTACOOOL (2) PACIFICA + SOLARBAN 70 (3) Clear | 71 | 1  | 24 | 11 | 22 | 9  | 9  | 0.19 | 0.19 | 0.22 | 1.62 | 1.34 | 1.56 | 1.23 | 1.5 | 1.2 | 1.22 |

**SOLARCOOL® Reflective Glasses**

|                                   |    |    |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|-----------------------------------|----|----|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARCOOL (2) AZURIA + Clear      | 85 | 10 | 24 | 20 | 38 | 10 | 12 | 0.23 | 0.25 | 0.29 | 2.71 | 2.55 | 2.85 | 2.72 | 2.8 | 2.7 | 0.96 |
| SOLARCOOL (2) SOLEXIA + Clear     | 94 | 7  | 27 | 24 | 38 | 12 | 19 | 0.29 | 0.32 | 0.36 | 2.71 | 2.55 | 2.85 | 2.72 | 2.8 | 2.7 | 0.84 |
| SOLARCOOL (2) PACIFICA + Clear    | 81 | 4  | 15 | 10 | 38 | 7  | 11 | 0.22 | 0.25 | 0.29 | 2.71 | 2.55 | 2.85 | 2.72 | 2.8 | 2.7 | 0.60 |
| SOLARCOOL (2) SOLARBLUE + Clear   | 95 | 7  | 20 | 15 | 38 | 11 | 19 | 0.33 | 0.33 | 0.37 | 2.71 | 2.55 | 2.85 | 2.72 | 2.8 | 2.7 | 0.61 |
| SOLARCOOL (2) SOLARBRONZE + Clear | 85 | 6  | 19 | 14 | 38 | 12 | 21 | 0.35 | 0.35 | 0.40 | 2.71 | 2.55 | 2.85 | 2.72 | 2.8 | 2.7 | 0.54 |
| SOLARCOOL (2) SOLARGRAY + Clear   | 92 | 6  | 16 | 11 | 38 | 10 | 18 | 0.32 | 0.32 | 0.36 | 2.71 | 2.55 | 2.85 | 2.72 | 2.8 | 2.7 | 0.50 |

**Uncoated Glasses**

|                       |    |    |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|-----------------------|----|----|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| STARPHIRE + STARPHIRE | 99 | 77 | 84 | 15 | 15 | 14 | 80 | 0.82 | 0.82 | 0.94 | 2.70 | 2.55 | 2.85 | 2.72 | 2.8 | 2.7 | 1.02 |
| ACUITY + ACUITY       | 98 | 63 | 82 | 15 | 15 | 13 | 73 | 0.78 | 0.78 | 0.90 | 2.70 | 2.55 | 2.85 | 2.72 | 2.8 | 2.7 | 1.05 |
| Clear + Clear         | 95 | 50 | 79 | 15 | 15 | 12 | 61 | 0.71 | 0.70 | 0.81 | 2.70 | 2.55 | 2.85 | 2.72 | 2.8 | 2.7 | 1.13 |
| AZURIA + Clear        | 77 | 34 | 61 | 11 | 14 | 7  | 28 | 0.41 | 0.39 | 0.45 | 2.70 | 2.55 | 2.85 | 2.72 | 2.8 | 2.7 | 1.55 |
| ATLANTICA + Clear     | 84 | 13 | 60 | 11 | 14 | 6  | 29 | 0.41 | 0.41 | 0.47 | 2.70 | 2.55 | 2.85 | 2.72 | 2.8 | 2.7 | 1.48 |
| SOLEXIA + Clear       | 86 | 25 | 69 | 13 | 15 | 8  | 39 | 0.50 | 0.50 | 0.57 | 2.70 | 2.55 | 2.85 | 2.72 | 2.8 | 2.7 | 1.38 |
| PACIFICA + Clear      | 72 | 12 | 38 | 7  | 13 | 6  | 23 | 0.36 | 0.36 | 0.41 | 2.70 | 2.55 | 2.85 | 2.72 | 2.8 | 2.7 | 1.06 |
| SOLARBLUE + Clear     | 84 | 25 | 50 | 9  | 13 | 7  | 37 | 0.49 | 0.49 | 0.56 | 2.70 | 2.55 | 2.85 | 2.72 | 2.8 | 2.7 | 1.02 |
| SOLARBRONZE + Clear   | 95 | 21 | 47 | 8  | 13 | 7  | 39 | 0.49 | 0.51 | 0.59 | 2.70 | 2.55 | 2.85 | 2.72 | 2.8 | 2.7 | 0.93 |
| OPTIGRAY + Clear      | 94 | 27 | 56 | 10 | 13 | 8  | 41 | 0.52 | 0.52 | 0.60 | 2.70 | 2.55 | 2.85 | 2.72 | 2.8 | 2.7 | 1.07 |
| SOLARGRAY + Clear     | 93 | 20 | 40 | 7  | 13 | 7  | 33 | 0.44 | 0.46 | 0.53 | 2.70 | 2.55 | 2.85 | 2.72 | 2.8 | 2.7 | 0.87 |
| GRAYLITE II + Clear   | 85 | 2  | 8  | 4  | 12 | 4  | 7  | 0.19 | 0.22 | 0.25 | 2.70 | 2.55 | 2.85 | 2.72 | 2.8 | 2.7 | 0.36 |

Please see pages 1 and 2 for performance value definitions, product information, recommendations and simulation conditions. Visit [vitroglazings.com](http://vitroglazings.com) for more product information.

Performance for Insulating Glass Units of 6 mm Outer Lite + 16 mm Airspace + 6 mm Inner Lite

| Glass Configuration<br>6 mm + 16 mm Gap + 6 mm | CRI | UV % | Visible Light |               |     | Solar Energy |         |             |      |    | U-Values W/m <sup>2</sup> *°K |       |          |       |        |       | LSG |
|--|-----|------|---------------|---------------|-----|--------------|---------|-------------|------|----|-------------------------------|-------|----------|-------|--------|-------|-----|
|  |     |      | Trans %       | Reflectance % |     | Refl %       | Trans % | SF<br>EN410 | SHGC | SC | Win-NFRC                      |       | Sum-NFRC |       | EN 673 |       |     |
|  |     |      |               | Ext           | Int |              |         |             |      |    | air                           | argon | air      | argon | air    | argon |     |

**SOLARBAN® 90 Quad Silver Neutral Low-E Glasses**

|                                       |    |    |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---------------------------------------|----|----|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN 90 (2) STARPHIRE + STARPHIRE | 95 | 10 | 54 | 13 | 20 | 54 | 21 | 0.26 | 0.23 | 0.26 | 1.63 | 1.41 | 1.57 | 1.03 | 1.3 | 1.1 | 2.34 |
| SOLARBAN 90 (2) ACUITY + ACUITY       | 94 | 9  | 53 | 12 | 19 | 48 | 20 | 0.26 | 0.23 | 0.27 | 1.63 | 1.41 | 1.57 | 1.03 | 1.3 | 1.1 | 2.28 |
| SOLARBAN 90 (2) Clear + Clear         | 92 | 7  | 51 | 12 | 19 | 37 | 19 | 0.25 | 0.23 | 0.27 | 1.63 | 1.41 | 1.57 | 1.03 | 1.3 | 1.1 | 2.18 |
| SOLARBAN 90 (2) OPTIBLUE + Clear      | 88 | 5  | 37 | 8  | 19 | 30 | 14 | 0.21 | 0.20 | 0.23 | 1.63 | 1.41 | 1.57 | 1.03 | 1.3 | 1.1 | 1.87 |
| SOLARBAN 90 (2) OPTIGRAY + Clear      | 90 | 4  | 36 | 8  | 19 | 18 | 13 | 0.20 | 0.20 | 0.23 | 1.63 | 1.41 | 1.57 | 1.03 | 1.3 | 1.1 | 1.83 |
| SOLARBAN 90 (2) SOLARGRAY + Clear     | 90 | 3  | 26 | 6  | 18 | 15 | 10 | 0.16 | 0.17 | 0.19 | 1.63 | 1.41 | 1.57 | 1.03 | 1.3 | 1.1 | 1.53 |

**SOLARBAN® 72 Triple Silver Neutral Low-Iron Ultra-Clear Low-E Glasses**

|                                       |    |   |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---------------------------------------|----|---|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN 72 (2) STARPHIRE + STARPHIRE | 95 | 9 | 68 | 13 | 14 | 54 | 26 | 0.31 | 0.28 | 0.32 | 1.62 | 1.40 | 1.56 | 1.01 | 1.3 | 1.1 | 2.45 |
| SOLARBAN 72 (2) ACUITY + ACUITY       | 94 | 8 | 67 | 13 | 14 | 49 | 25 | 0.31 | 0.28 | 0.32 | 1.62 | 1.40 | 1.56 | 1.01 | 1.3 | 1.1 | 2.40 |

**SOLARBAN® 70 Triple Silver Neutral Low-E Glasses**

|                                   |    |   |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|-----------------------------------|----|---|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN 70 (2) Clear + Clear     | 91 | 6 | 64 | 13 | 14 | 40 | 24 | 0.30 | 0.27 | 0.32 | 1.62 | 1.40 | 1.56 | 1.01 | 1.3 | 1.1 | 2.34 |
| SOLARBAN 70 (2) OPTIBLUE + Clear  | 87 | 5 | 46 | 9  | 13 | 30 | 18 | 0.24 | 0.23 | 0.26 | 1.62 | 1.40 | 1.56 | 1.01 | 1.3 | 1.1 | 2.04 |
| SOLARBAN 70 (2) OPTIGRAY + Clear  | 89 | 4 | 46 | 9  | 13 | 18 | 17 | 0.24 | 0.23 | 0.26 | 1.62 | 1.40 | 1.56 | 1.01 | 1.3 | 1.1 | 2.01 |
| SOLARBAN 70 (2) SOLARGRAY + Clear | 89 | 3 | 32 | 7  | 13 | 15 | 12 | 0.19 | 0.19 | 0.22 | 1.62 | 1.40 | 1.56 | 1.01 | 1.3 | 1.1 | 1.72 |

**SOLARBAN® R100 Triple Silver Reflective Low-E Glasses**

|   |    |    |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---|----|----|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN R100 (2) STARPHIRE + STARPHIRE | 93 | 16 | 44 | 33 | 14 | 57 | 21 | 0.26 | 0.24 | 0.27 | 1.66 | 1.44 | 1.61 | 1.08 | 1.4 | 1.1 | 1.86 |
| SOLARBAN R100 (2) ACUITY + ACUITY       | 92 | 14 | 43 | 33 | 13 | 51 | 21 | 0.26 | 0.24 | 0.27 | 1.66 | 1.44 | 1.61 | 1.08 | 1.4 | 1.1 | 1.83 |
| SOLARBAN R100 (2) Clear + Clear         | 90 | 12 | 42 | 32 | 14 | 41 | 19 | 0.25 | 0.23 | 0.27 | 1.66 | 1.44 | 1.61 | 1.08 | 1.4 | 1.1 | 1.78 |
| SOLARBAN R100 (2) OPTIBLUE + Clear      | 86 | 8  | 30 | 19 | 13 | 31 | 14 | 0.21 | 0.20 | 0.23 | 1.66 | 1.44 | 1.61 | 1.08 | 1.4 | 1.1 | 1.48 |
| SOLARBAN R100 (2) OPTIGRAY + Clear      | 89 | 6  | 29 | 18 | 13 | 20 | 13 | 0.20 | 0.20 | 0.23 | 1.66 | 1.44 | 1.61 | 1.08 | 1.4 | 1.1 | 1.48 |
| SOLARBAN R100 (2) SOLARGRAY + Clear     | 89 | 5  | 21 | 12 | 13 | 16 | 10 | 0.16 | 0.17 | 0.20 | 1.66 | 1.44 | 1.61 | 1.08 | 1.4 | 1.1 | 1.21 |

**SOLARBAN® 67 Double Silver Subtly Reflective Low-E Glasses**

|                                       |    |    |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---------------------------------------|----|----|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN 67 (2) STARPHIRE + STARPHIRE | 95 | 15 | 57 | 20 | 16 | 49 | 28 | 0.33 | 0.30 | 0.35 | 1.66 | 1.44 | 1.60 | 1.08 | 1.4 | 1.1 | 1.89 |
| SOLARBAN 67 (2) ACUITY + ACUITY       | 94 | 14 | 56 | 19 | 16 | 44 | 27 | 0.32 | 0.30 | 0.34 | 1.66 | 1.44 | 1.60 | 1.08 | 1.4 | 1.1 | 1.87 |
| SOLARBAN 67 (2) Clear + Clear         | 92 | 11 | 54 | 19 | 16 | 34 | 24 | 0.31 | 0.29 | 0.34 | 1.66 | 1.44 | 1.60 | 1.08 | 1.4 | 1.1 | 1.84 |
| SOLARBAN 67 (2) OPTIBLUE + Clear      | 88 | 8  | 39 | 12 | 15 | 27 | 19 | 0.26 | 0.25 | 0.28 | 1.66 | 1.44 | 1.60 | 1.08 | 1.4 | 1.1 | 1.57 |
| SOLARBAN 67 (2) OPTIGRAY + Clear      | 90 | 6  | 38 | 12 | 15 | 17 | 17 | 0.24 | 0.24 | 0.27 | 1.66 | 1.44 | 1.60 | 1.08 | 1.4 | 1.1 | 1.60 |
| SOLARBAN 67 (2) SOLARGRAY + Clear     | 90 | 5  | 27 | 8  | 15 | 14 | 13 | 0.20 | 0.20 | 0.23 | 1.66 | 1.44 | 1.60 | 1.08 | 1.4 | 1.1 | 1.34 |

**SOLARBAN® 60 Double Silver Neutral Low-E Glasses**

|                                       |    |    |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---------------------------------------|----|----|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN 60 (2) STARPHIRE + STARPHIRE | 98 | 24 | 74 | 11 | 12 | 41 | 39 | 0.45 | 0.41 | 0.48 | 1.66 | 1.44 | 1.60 | 1.08 | 1.4 | 1.1 | 1.80 |
| SOLARBAN 60 (2) ACUITY + ACUITY       | 97 | 22 | 73 | 11 | 12 | 36 | 37 | 0.44 | 0.41 | 0.47 | 1.66 | 1.44 | 1.60 | 1.08 | 1.4 | 1.1 | 1.80 |
| SOLARBAN 60 (2) Clear + Clear         | 95 | 18 | 70 | 11 | 12 | 28 | 34 | 0.42 | 0.39 | 0.45 | 1.66 | 1.44 | 1.60 | 1.08 | 1.4 | 1.1 | 1.80 |
| SOLARBAN 60 (2) OPTIBLUE + Clear      | 91 | 14 | 51 | 8  | 11 | 23 | 26 | 0.34 | 0.33 | 0.37 | 1.66 | 1.44 | 1.60 | 1.08 | 1.4 | 1.1 | 1.56 |
| SOLARBAN 60 (2) OPTIGRAY + Clear      | 93 | 10 | 50 | 8  | 11 | 14 | 23 | 0.31 | 0.30 | 0.35 | 1.66 | 1.44 | 1.60 | 1.08 | 1.4 | 1.1 | 1.65 |
| SOLARBAN 60 (2) SOLARGRAY + Clear     | 93 | 8  | 35 | 6  | 10 | 12 | 18 | 0.26 | 0.25 | 0.29 | 1.66 | 1.44 | 1.60 | 1.08 | 1.4 | 1.1 | 1.40 |

Please see pages 1 and 2 for performance value definitions, product information, recommendations and simulation conditions. Visit vitroglazings.com for more product information.

Performance for Insulating Glass Units of 8 mm Outer Lite + 12 mm Airspace + 8 mm Inner Lite

| Glass Configuration<br>8 mm + 12 mm Gap + 8 mm | CRI | UV % | Visible Light |     |     | Solar Energy |         |       |      |    | U-Values W/m <sup>2</sup> *K |       |          |       |        |       | LSG |
|--|-----|------|---------------|-----|-----|--------------|---------|-------|------|----|------------------------------|-------|----------|-------|--------|-------|-----|
|  |     |      | Reflectance % |     |     | Refll %      | Trans % | EN410 | SHGC | SC | Win-NFRC                     |       | Sum-NFRC |       | EN 673 |       |     |
|  |     |      | Trans %       | Ext | Int |              |         |       |      |    | air                          | argon | air      | argon | air    | argon |     |
|  |     |      | Trans %       | Ext | Int | Refll %      | Trans % | EN410 | SHGC | SC | air                          | argon | air      | argon | air    | argon |     |

**SOLARBAN® 90 Quad Silver Neutral Low-E Glasses**

|                                       |    |   |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---------------------------------------|----|---|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN 90 (2) STARPHIRE + STARPHIRE | 95 | 9 | 54 | 13 | 19 | 53 | 21 | 0.26 | 0.23 | 0.27 | 1.62 | 1.34 | 1.56 | 1.24 | 1.5 | 1.2 | 2.31 |
| SOLARBAN 90 (2) ACUITY + ACUITY       | 93 | 8 | 52 | 12 | 19 | 45 | 20 | 0.26 | 0.23 | 0.27 | 1.62 | 1.34 | 1.56 | 1.24 | 1.5 | 1.2 | 2.26 |
| SOLARBAN 90 (2) Clear + Clear         | 90 | 6 | 50 | 12 | 19 | 32 | 18 | 0.26 | 0.24 | 0.27 | 1.62 | 1.34 | 1.56 | 1.24 | 1.5 | 1.2 | 2.11 |
| SOLARBAN 90 (2) AZURIA + Clear        | 68 | 4 | 35 | 8  | 18 | 6  | 12 | 0.21 | 0.20 | 0.23 | 1.62 | 1.34 | 1.56 | 1.24 | 1.5 | 1.2 | 1.77 |
| SOLARBAN 90 (2) ATLANTICA + Clear     | 76 | 1 | 34 | 8  | 18 | 6  | 11 | 0.19 | 0.19 | 0.22 | 1.62 | 1.34 | 1.56 | 1.24 | 1.5 | 1.2 | 1.79 |
| SOLARBAN 90 (2) SOLEXIA + Clear       | 82 | 3 | 41 | 10 | 18 | 9  | 14 | 0.22 | 0.22 | 0.25 | 1.62 | 1.34 | 1.56 | 1.24 | 1.5 | 1.2 | 1.86 |
| SOLARBAN 90 (2) OPTIBLUE + Clear      | 85 | 4 | 32 | 7  | 18 | 23 | 12 | 0.20 | 0.19 | 0.21 | 1.62 | 1.34 | 1.56 | 1.24 | 1.5 | 1.2 | 1.70 |
| SOLARBAN 90 (2) PACIFICA + Clear      | 60 | 1 | 18 | 5  | 18 | 6  | 7  | 0.15 | 0.15 | 0.17 | 1.62 | 1.34 | 1.56 | 1.24 | 1.5 | 1.2 | 1.21 |
| SOLARBAN 90 (2) SOLARBLUE + Clear     | 75 | 3 | 26 | 7  | 18 | 11 | 10 | 0.18 | 0.18 | 0.20 | 1.62 | 1.34 | 1.56 | 1.24 | 1.5 | 1.2 | 1.50 |
| SOLARBAN 90 (2) SOLARBRONZE + Clear   | 92 | 2 | 24 | 6  | 18 | 14 | 9  | 0.16 | 0.16 | 0.19 | 1.62 | 1.34 | 1.56 | 1.24 | 1.5 | 1.2 | 1.49 |
| SOLARBAN 90 (2) OPTIGRAY + Clear      | 88 | 3 | 31 | 7  | 18 | 13 | 11 | 0.19 | 0.19 | 0.21 | 1.62 | 1.34 | 1.56 | 1.24 | 1.5 | 1.2 | 1.66 |
| SOLARBAN 90 (2) SOLARGRAY + Clear     | 88 | 2 | 19 | 6  | 18 | 10 | 7  | 0.15 | 0.15 | 0.17 | 1.62 | 1.34 | 1.56 | 1.24 | 1.5 | 1.2 | 1.26 |

**SOLARBAN® 72 Triple Silver Neutral Low-Iron Ultra-Clear Low-E Glasses**

|                                       |    |   |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---------------------------------------|----|---|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN 72 (2) STARPHIRE + STARPHIRE | 95 | 9 | 68 | 13 | 14 | 53 | 26 | 0.31 | 0.28 | 0.32 | 1.62 | 1.34 | 1.56 | 1.24 | 1.5 | 1.2 | 2.43 |
| SOLARBAN 72 (2) ACUITY + ACUITY       | 93 | 8 | 66 | 13 | 14 | 45 | 25 | 0.31 | 0.28 | 0.32 | 1.62 | 1.34 | 1.56 | 1.24 | 1.5 | 1.2 | 2.36 |

**SOLARBAN® 70 Triple Silver Neutral Low-E Glasses**

|                                     |    |   |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|-------------------------------------|----|---|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN 70 (2) Clear + Clear       | 90 | 6 | 63 | 12 | 13 | 51 | 24 | 0.31 | 0.27 | 0.32 | 1.61 | 1.33 | 1.55 | 1.23 | 1.5 | 1.2 | 2.29 |
| SOLARBAN 70 (2) AZURIA + Clear      | 68 | 4 | 46 | 8  | 12 | 6  | 16 | 0.26 | 0.23 | 0.27 | 1.61 | 1.33 | 1.55 | 1.23 | 1.5 | 1.2 | 1.97 |
| SOLARBAN 70 (2) ATLANTICA + Clear   | 76 | 1 | 45 | 8  | 12 | 6  | 15 | 0.23 | 0.22 | 0.25 | 1.61 | 1.33 | 1.55 | 1.23 | 1.5 | 1.2 | 2.02 |
| SOLARBAN 70 (2) SOLEXIA + Clear     | 81 | 3 | 54 | 10 | 12 | 9  | 19 | 0.28 | 0.26 | 0.30 | 1.61 | 1.33 | 1.55 | 1.23 | 1.5 | 1.2 | 2.09 |
| SOLARBAN 70 (2) OPTIBLUE + Clear    | 84 | 5 | 41 | 7  | 12 | 23 | 16 | 0.25 | 0.23 | 0.26 | 1.61 | 1.33 | 1.55 | 1.23 | 1.5 | 1.2 | 1.82 |
| SOLARBAN 70 (2) PACIFICA + Clear    | 60 | 1 | 24 | 5  | 11 | 6  | 9  | 0.17 | 0.17 | 0.19 | 1.61 | 1.33 | 1.55 | 1.23 | 1.5 | 1.2 | 1.39 |
| SOLARBAN 70 (2) SOLARBLUE + Clear   | 75 | 3 | 34 | 7  | 12 | 11 | 13 | 0.22 | 0.21 | 0.24 | 1.61 | 1.33 | 1.55 | 1.23 | 1.5 | 1.2 | 1.66 |
| SOLARBAN 70 (2) SOLARBRONZE + Clear | 91 | 2 | 32 | 6  | 11 | 13 | 12 | 0.20 | 0.19 | 0.22 | 1.61 | 1.33 | 1.55 | 1.23 | 1.5 | 1.2 | 1.65 |
| SOLARBAN 70 (2) OPTIGRAY + Clear    | 87 | 3 | 40 | 7  | 12 | 12 | 15 | 0.23 | 0.22 | 0.25 | 1.61 | 1.33 | 1.55 | 1.23 | 1.5 | 1.2 | 1.82 |
| SOLARBAN 70 (2) SOLARGRAY + Clear   | 87 | 2 | 25 | 5  | 11 | 10 | 10 | 0.18 | 0.17 | 0.20 | 1.61 | 1.33 | 1.55 | 1.23 | 1.5 | 1.2 | 1.43 |

**SOLARBAN® R100 Triple Silver Reflective Low-E Glasses**

|   |    |    |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---|----|----|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN R100 (2) STARPHIRE + STARPHIRE | 93 | 16 | 43 | 33 | 14 | 55 | 21 | 0.26 | 0.24 | 0.27 | 1.65 | 1.37 | 1.60 | 1.28 | 1.6 | 1.3 | 1.84 |
| SOLARBAN R100 (2) ACUITY + ACUITY       | 91 | 13 | 43 | 32 | 14 | 48 | 20 | 0.26 | 0.24 | 0.27 | 1.65 | 1.37 | 1.60 | 1.28 | 1.6 | 1.3 | 1.79 |
| SOLARBAN R100 (2) Clear + Clear         | 88 | 10 | 40 | 31 | 13 | 36 | 18 | 0.26 | 0.23 | 0.27 | 1.65 | 1.37 | 1.60 | 1.28 | 1.6 | 1.3 | 1.74 |
| SOLARBAN R100 (2) AZURIA + Clear        | 65 | 6  | 28 | 18 | 13 | 9  | 11 | 0.19 | 0.18 | 0.21 | 1.65 | 1.37 | 1.60 | 1.28 | 1.6 | 1.3 | 1.55 |
| SOLARBAN R100 (2) ATLANTICA + Clear     | 74 | 2  | 28 | 17 | 13 | 9  | 10 | 0.18 | 0.18 | 0.20 | 1.65 | 1.37 | 1.60 | 1.28 | 1.6 | 1.3 | 1.56 |
| SOLARBAN R100 (2) SOLEXIA + Clear       | 79 | 4  | 33 | 23 | 13 | 13 | 13 | 0.21 | 0.20 | 0.23 | 1.65 | 1.37 | 1.60 | 1.28 | 1.6 | 1.3 | 1.65 |
| SOLARBAN R100 (2) OPTIBLUE + Clear      | 83 | 7  | 26 | 15 | 13 | 24 | 12 | 0.20 | 0.19 | 0.22 | 1.65 | 1.37 | 1.60 | 1.28 | 1.6 | 1.3 | 1.34 |
| SOLARBAN R100 (2) PACIFICA + Clear      | 57 | 2  | 15 | 8  | 13 | 7  | 6  | 0.15 | 0.15 | 0.17 | 1.65 | 1.37 | 1.60 | 1.28 | 1.6 | 1.3 | 1.01 |
| SOLARBAN R100 (2) SOLARBLUE + Clear     | 73 | 5  | 21 | 12 | 13 | 12 | 10 | 0.18 | 0.18 | 0.20 | 1.65 | 1.37 | 1.60 | 1.28 | 1.6 | 1.3 | 1.22 |
| SOLARBAN R100 (2) SOLARBRONZE + Clear   | 95 | 3  | 20 | 11 | 13 | 14 | 9  | 0.17 | 0.17 | 0.19 | 1.65 | 1.37 | 1.60 | 1.28 | 1.6 | 1.3 | 1.18 |
| SOLARBAN R100 (2) OPTIGRAY + Clear      | 86 | 5  | 25 | 15 | 13 | 14 | 11 | 0.20 | 0.18 | 0.21 | 1.65 | 1.37 | 1.60 | 1.28 | 1.6 | 1.3 | 1.35 |
| SOLARBAN R100 (2) SOLARGRAY + Clear     | 87 | 3  | 15 | 9  | 13 | 11 | 7  | 0.15 | 0.15 | 0.18 | 1.65 | 1.37 | 1.60 | 1.28 | 1.6 | 1.3 | 1.00 |

**SOLARBAN® 67 Double Silver Subtly Reflective Low-E Glasses**

|                                       |    |    |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---------------------------------------|----|----|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN 67 (2) STARPHIRE + STARPHIRE | 95 | 15 | 56 | 20 | 16 | 47 | 27 | 0.33 | 0.30 | 0.35 | 1.64 | 1.37 | 1.59 | 1.28 | 1.6 | 1.3 | 1.88 |
| SOLARBAN 67 (2) ACUITY + ACUITY       | 93 | 13 | 55 | 19 | 16 | 41 | 26 | 0.32 | 0.29 | 0.34 | 1.64 | 1.37 | 1.59 | 1.28 | 1.6 | 1.3 | 1.90 |
| SOLARBAN 67 (2) Clear + Clear         | 90 | 10 | 52 | 19 | 16 | 29 | 23 | 0.32 | 0.29 | 0.33 | 1.64 | 1.37 | 1.59 | 1.28 | 1.6 | 1.3 | 1.81 |
| SOLARBAN 67 (2) AZURIA + Clear        | 66 | 6  | 37 | 12 | 15 | 7  | 13 | 0.23 | 0.21 | 0.24 | 1.64 | 1.37 | 1.59 | 1.28 | 1.6 | 1.3 | 1.75 |
| SOLARBAN 67 (2) ATLANTICA + Clear     | 76 | 2  | 36 | 11 | 15 | 7  | 13 | 0.21 | 0.20 | 0.23 | 1.64 | 1.37 | 1.59 | 1.28 | 1.6 | 1.3 | 1.76 |
| SOLARBAN 67 (2) SOLEXIA + Clear       | 81 | 4  | 43 | 15 | 15 | 10 | 16 | 0.25 | 0.24 | 0.28 | 1.64 | 1.37 | 1.59 | 1.28 | 1.6 | 1.3 | 1.81 |
| SOLARBAN 67 (2) OPTIBLUE + Clear      | 84 | 7  | 33 | 10 | 15 | 21 | 16 | 0.24 | 0.23 | 0.26 | 1.64 | 1.37 | 1.59 | 1.28 | 1.6 | 1.3 | 1.45 |
| SOLARBAN 67 (2) PACIFICA + Clear      | 58 | 2  | 19 | 6  | 15 | 6  | 8  | 0.17 | 0.16 | 0.19 | 1.64 | 1.37 | 1.59 | 1.28 | 1.6 | 1.3 | 1.17 |
| SOLARBAN 67 (2) SOLARBLUE + Clear     | 75 | 5  | 28 | 9  | 15 | 10 | 13 | 0.21 | 0.20 | 0.23 | 1.64 | 1.37 | 1.59 | 1.28 | 1.6 | 1.3 | 1.36 |
| SOLARBAN 67 (2) SOLARBRONZE + Clear   | 94 | 3  | 26 | 8  | 15 | 13 | 12 | 0.20 | 0.19 | 0.22 | 1.64 | 1.37 | 1.59 | 1.28 | 1.6 | 1.3 | 1.32 |
| SOLARBAN 67 (2) OPTIGRAY + Clear      | 88 | 5  | 32 | 10 | 15 | 12 | 14 | 0.24 | 0.22 | 0.25 | 1.64 | 1.37 | 1.59 | 1.28 | 1.6 | 1.3 | 1.49 |
| SOLARBAN 67 (2) SOLARGRAY + Clear     | 88 | 3  | 20 | 7  | 15 | 10 | 9  | 0.18 | 0.18 | 0.20 | 1.64 | 1.37 | 1.59 | 1.28 | 1.6 | 1.3 | 1.14 |

**SOLARBAN® 60 Double Silver Neutral Low-E Glasses**

|                                       |    |    |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---------------------------------------|----|----|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN 60 (2) STARPHIRE + STARPHIRE | 98 | 24 | 74 | 11 | 12 | 39 | 39 | 0.44 | 0.41 | 0.47 | 1.64 | 1.37 | 1.59 | 1.28 | 1.6 | 1.3 | 1.79 |
| SOLARBAN 60 (2) ACUITY + ACUITY       | 97 | 21 | 72 | 11 | 12 | 34 | 36 | 0.43 | 0.40 | 0.46 | 1.64 | 1.37 | 1.59 | 1.28 | 1.6 | 1.3 | 1.80 |
| SOLARBAN 60 (2) Clear + Clear         | 93 | 16 | 69 | 11 | 12 | 24 | 31 | 0.42 | 0.38 | 0.44 | 1.64 | 1.37 | 1.59 | 1.28 | 1.6 | 1.3 | 1.80 |
| SOLARBAN 60 (2) AZURIA + Clear        | 69 | 11 | 48 | 8  | 11 | 6  | 18 | 0.27 | 0.25 | 0.29 | 1.64 | 1.37 | 1.59 | 1.28 | 1.6 | 1.3 | 1.90 |
| SOLARBAN 60 (2) ATLANTICA + Clear     | 78 | 3  | 47 | 7  | 11 | 6  | 17 | 0.26 | 0.24 | 0.28 | 1.64 | 1.37 | 1.59 | 1.28 | 1.6 | 1.3 | 1.92 |
| SOLARBAN 60 (2) SOLEXIA + Clear       | 84 | 7  | 57 | 9  | 11 | 8  | 22 | 0.32 | 0.30 | 0.34 | 1.64 | 1.37 | 1.59 | 1.28 | 1.6 | 1.3 | 1.92 |
| SOLARBAN 60 (2) OPTIBLUE + Clear      | 88 | 11 | 44 | 7  | 11 | 18 | 22 | 0.32 | 0.30 | 0.34 | 1.64 | 1.37 | 1.59 | 1.28 | 1.6 | 1.3 | 1.47 |
| SOLARBAN 60 (2) PACIFICA + Clear      | 62 | 3  | 25 | 5  | 10 | 5  | 11 | 0.20 | 0.19 | 0.22 | 1.64 | 1.37 | 1.59 | 1.28 | 1.6 | 1.3 | 1.31 |
| SOLARBAN 60 (2) SOLARBLUE + Clear     | 78 | 7  | 36 | 6  | 10 | 9  | 17 | 0.26 | 0.25 | 0.29 | 1.64 | 1.37 | 1.59 | 1.28 | 1.6 | 1.3 | 1.45 |
| SOLARBAN 60 (2) SOLARBRONZE + Clear   | 93 | 6  | 34 | 6  | 10 | 11 | 16 | 0.25 | 0.24 | 0.28 | 1.64 | 1.37 | 1.59 | 1.28 | 1.6 | 1.3 | 1.39 |
| SOLARBAN 60 (2) OPTIGRAY + Clear      | 91 | 8  | 42 | 7  | 10 | 10 | 19 | 0.29 | 0.27 | 0.31 | 1.64 | 1.37 | 1.59 | 1.28 | 1.6 | 1.3 | 1.57 |
| SOLARBAN 60 (2) SOLARGRAY + Clear     | 90 | 5  | 26 | 5  | 10 | 8  | 13 | 0.22 | 0.21 | 0.24 | 1.64 | 1.37 | 1.59 | 1.28 | 1.6 | 1.3 | 1.23 |

Please see pages 1 and 2 for performance value definitions, product information, recommendations and simulation conditions. Visit vitroglazings.com for more product information.

Performance for Insulating Glass Units of 8 mm Outer Lite + 16 mm Airspace + 8 mm Inner Lite

| Glass Configuration<br>8 mm + 16 mm Gap + 8 mm | CRI | UV % | Visible Light |               |     | Solar Energy |         |             |      |    | U-Values W/m <sup>2</sup> *°K |       |          |       |        |       | LSG |
|--|-----|------|---------------|---------------|-----|--------------|---------|-------------|------|----|-------------------------------|-------|----------|-------|--------|-------|-----|
|  |     |      | Trans %       | Reflectance % |     | Refl %       | Trans % | SF<br>EN410 | SHGC | SC | Win-NFRC                      |       | Sum-NFRC |       | EN 673 |       |     |
|  |     |      |               | Ext           | Int |              |         |             |      |    | air                           | argon | air      | argon | air    | argon |     |
|  |     |      |               |               |     |              |         |             |      |    |                               |       |          |       |        |       |     |

**SOLARBAN® 90 Quad Silver Neutral Low-E Glasses**

|                                       |    |   |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---------------------------------------|----|---|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN 90 (2) STARPHIRE + STARPHIRE | 95 | 9 | 54 | 13 | 19 | 53 | 21 | 0.26 | 0.23 | 0.26 | 1.66 | 1.40 | 1.30 | 1.03 | 1.3 | 1.1 | 2.35 |
| SOLARBAN 90 (2) ACUITY + ACUITY       | 93 | 8 | 52 | 12 | 19 | 45 | 20 | 0.26 | 0.23 | 0.26 | 1.66 | 1.40 | 1.30 | 1.03 | 1.3 | 1.1 | 2.28 |
| SOLARBAN 90 (2) Clear + Clear         | 90 | 6 | 50 | 12 | 19 | 32 | 18 | 0.25 | 0.23 | 0.27 | 1.66 | 1.40 | 1.30 | 1.03 | 1.3 | 1.1 | 2.15 |
| SOLARBAN 90 (2) OPTIBLUE + Clear      | 85 | 4 | 32 | 7  | 18 | 23 | 12 | 0.19 | 0.18 | 0.21 | 1.66 | 1.40 | 1.30 | 1.03 | 1.3 | 1.1 | 1.75 |
| SOLARBAN 90 (2) OPTIGRAY + Clear      | 88 | 3 | 31 | 7  | 18 | 13 | 11 | 0.18 | 0.18 | 0.21 | 1.66 | 1.40 | 1.30 | 1.03 | 1.3 | 1.1 | 1.72 |
| SOLARBAN 90 (2) SOLARGRAY + Clear     | 88 | 2 | 19 | 6  | 18 | 10 | 7  | 0.14 | 0.14 | 0.16 | 1.66 | 1.40 | 1.30 | 1.03 | 1.3 | 1.1 | 1.32 |

**SOLARBAN® 72 Triple Silver Neutral Low-Iron Ultra-Clear Low-E Glasses**

|                                       |    |   |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---------------------------------------|----|---|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN 72 (2) STARPHIRE + STARPHIRE | 95 | 9 | 68 | 13 | 14 | 53 | 26 | 0.31 | 0.28 | 0.32 | 1.65 | 1.39 | 1.28 | 1.00 | 1.3 | 1.1 | 2.46 |
| SOLARBAN 72 (2) ACUITY + ACUITY       | 93 | 7 | 66 | 13 | 14 | 45 | 25 | 0.31 | 0.28 | 0.32 | 1.65 | 1.39 | 1.28 | 1.00 | 1.3 | 1.1 | 2.40 |

**SOLARBAN® 70 Triple Silver Neutral Low-E Glasses**

|                                   |    |   |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|-----------------------------------|----|---|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN 70 (2) Clear + Clear     | 90 | 6 | 63 | 13 | 14 | 34 | 23 | 0.30 | 0.27 | 0.31 | 1.65 | 1.39 | 1.28 | 1.00 | 1.3 | 1.1 | 2.32 |
| SOLARBAN 70 (2) OPTIBLUE + Clear  | 84 | 4 | 46 | 9  | 13 | 30 | 17 | 0.22 | 0.22 | 0.25 | 1.65 | 1.39 | 1.28 | 1.00 | 1.3 | 1.1 | 2.07 |
| SOLARBAN 70 (2) OPTIGRAY + Clear  | 87 | 3 | 39 | 8  | 13 | 13 | 14 | 0.21 | 0.20 | 0.23 | 1.65 | 1.39 | 1.28 | 1.00 | 1.3 | 1.1 | 1.91 |
| SOLARBAN 70 (2) SOLARGRAY + Clear | 87 | 2 | 24 | 6  | 12 | 10 | 9  | 0.16 | 0.16 | 0.18 | 1.65 | 1.39 | 1.28 | 1.00 | 1.3 | 1.1 | 1.51 |

**SOLARBAN® R100 Triple Silver Reflective Low-E Glasses**

|   |    |    |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---|----|----|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN R100 (2) STARPHIRE + STARPHIRE | 93 | 16 | 43 | 33 | 14 | 55 | 21 | 0.26 | 0.23 | 0.27 | 1.69 | 1.43 | 1.34 | 1.07 | 1.4 | 1.1 | 1.87 |
| SOLARBAN R100 (2) ACUITY + ACUITY       | 91 | 13 | 43 | 32 | 13 | 48 | 20 | 0.25 | 0.23 | 0.27 | 1.69 | 1.43 | 1.34 | 1.07 | 1.4 | 1.1 | 1.83 |
| SOLARBAN R100 (2) Clear + Clear         | 88 | 10 | 40 | 31 | 13 | 36 | 18 | 0.25 | 0.23 | 0.26 | 1.69 | 1.43 | 1.34 | 1.07 | 1.4 | 1.1 | 1.77 |
| SOLARBAN R100 (2) OPTIBLUE + Clear      | 83 | 7  | 26 | 15 | 13 | 24 | 12 | 0.19 | 0.18 | 0.21 | 1.69 | 1.43 | 1.34 | 1.07 | 1.4 | 1.1 | 1.38 |
| SOLARBAN R100 (2) OPTIGRAY + Clear      | 86 | 5  | 25 | 14 | 13 | 14 | 11 | 0.18 | 0.18 | 0.20 | 1.69 | 1.43 | 1.34 | 1.07 | 1.4 | 1.1 | 1.40 |
| SOLARBAN R100 (2) SOLARGRAY + Clear     | 87 | 3  | 15 | 9  | 13 | 11 | 7  | 0.14 | 0.15 | 0.17 | 1.69 | 1.43 | 1.34 | 1.07 | 1.4 | 1.1 | 1.04 |

**SOLARBAN® 67 Double Silver Subtly Reflective Low-E Glasses**

|                                       |    |    |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---------------------------------------|----|----|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN 67 (2) STARPHIRE + STARPHIRE | 95 | 15 | 56 | 20 | 16 | 47 | 27 | 0.32 | 0.30 | 0.34 | 1.69 | 1.43 | 1.34 | 1.07 | 1.4 | 1.1 | 1.90 |
| SOLARBAN 67 (2) ACUITY + ACUITY       | 93 | 13 | 55 | 19 | 16 | 41 | 26 | 0.32 | 0.29 | 0.34 | 1.69 | 1.43 | 1.34 | 1.07 | 1.4 | 1.1 | 1.88 |
| SOLARBAN 67 (2) Clear + Clear         | 90 | 10 | 52 | 19 | 16 | 29 | 23 | 0.31 | 0.28 | 0.33 | 1.69 | 1.43 | 1.34 | 1.07 | 1.4 | 1.1 | 1.84 |
| SOLARBAN 67 (2) OPTIBLUE + Clear      | 84 | 7  | 33 | 10 | 15 | 21 | 16 | 0.23 | 0.22 | 0.26 | 1.69 | 1.43 | 1.34 | 1.07 | 1.4 | 1.1 | 1.48 |
| SOLARBAN 67 (2) OPTIGRAY + Clear      | 88 | 5  | 32 | 10 | 15 | 12 | 14 | 0.21 | 0.21 | 0.24 | 1.69 | 1.43 | 1.34 | 1.07 | 1.4 | 1.1 | 1.54 |
| SOLARBAN 67 (2) SOLARGRAY + Clear     | 88 | 3  | 20 | 7  | 15 | 10 | 9  | 0.16 | 0.17 | 0.19 | 1.69 | 1.43 | 1.34 | 1.07 | 1.4 | 1.1 | 1.18 |

**SOLARBAN® 60 Double Silver Neutral Low-E Glasses**

|                                       |    |    |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---------------------------------------|----|----|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN 60 (2) STARPHIRE + STARPHIRE | 98 | 24 | 74 | 11 | 12 | 39 | 39 | 0.45 | 0.41 | 0.47 | 1.69 | 1.43 | 1.33 | 1.07 | 1.3 | 1.1 | 1.80 |
| SOLARBAN 60 (2) ACUITY + ACUITY       | 97 | 21 | 72 | 11 | 12 | 34 | 36 | 0.44 | 0.40 | 0.46 | 1.69 | 1.43 | 1.33 | 1.07 | 1.3 | 1.1 | 1.81 |
| SOLARBAN 60 (2) Clear + Clear         | 93 | 16 | 69 | 11 | 12 | 24 | 31 | 0.43 | 0.38 | 0.43 | 1.69 | 1.43 | 1.33 | 1.07 | 1.3 | 1.1 | 1.81 |
| SOLARBAN 60 (2) OPTIBLUE + Clear      | 88 | 11 | 44 | 7  | 11 | 18 | 22 | 0.31 | 0.29 | 0.34 | 1.69 | 1.43 | 1.33 | 1.07 | 1.3 | 1.1 | 1.49 |
| SOLARBAN 60 (2) OPTIGRAY + Clear      | 91 | 8  | 42 | 7  | 10 | 10 | 19 | 0.27 | 0.26 | 0.30 | 1.69 | 1.43 | 1.33 | 1.07 | 1.3 | 1.1 | 1.61 |
| SOLARBAN 60 (2) SOLARGRAY + Clear     | 90 | 5  | 26 | 5  | 10 | 8  | 13 | 0.21 | 0.21 | 0.24 | 1.69 | 1.43 | 1.33 | 1.07 | 1.3 | 1.1 | 1.26 |

Please see pages 1 and 2 for performance value definitions, product information, recommendations and simulation conditions. Visit vitroglazings.com for more product information.



Performance for Insulating Glass Units of 10 mm Outer Lite + 12 mm Airspace + 10 mm Inner Lite

| Glass Configuration<br>10 mm + 12 mm Gap + 10 mm | UV % | Visible Light |               |     | Solar Energy |         |    |      |    | U-Values W/m <sup>2</sup> *K |          |        |  |  | LSG |
|--|------|---------------|---------------|-----|--------------|---------|----|------|----|------------------------------|----------|--------|--|--|-----|
|  |      | Trans %       | Reflectance % |     | Refl %       | Trans % | SF | SHGC | SC | Win-NFRC                     | Sum-NFRC | EN 673 |  |  |     |
|  |      |               | Ext           | Int |              |         |    |      |    |                              |          |        |  |  |     |

**SOLARBAN® 90 Quad Silver Neutral Low-E Glasses**

|                                       |   |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---------------------------------------|---|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN 90 (2) STARPHIRE + STARPHIRE | 9 | 53 | 12 | 19 | 51 | 21 | 0.26 | 0.23 | 0.27 | 1.61 | 1.34 | 1.55 | 1.24 | 1.6 | 1.2 | 2.30 |
| SOLARBAN 90 (2) ACUITY + ACUITY       | 8 | 52 | 12 | 19 | 43 | 20 | 0.24 | 0.23 | 0.27 | 1.61 | 1.34 | 1.55 | 1.24 | 1.6 | 1.2 | 2.21 |
| SOLARBAN 90 (2) Clear + Clear         | 9 | 49 | 12 | 19 | 29 | 18 | 0.25 | 0.24 | 0.27 | 1.61 | 1.34 | 1.55 | 1.24 | 1.6 | 1.2 | 2.07 |
| SOLARBAN 90 (2) OPTIBLUE + Clear      | 4 | 29 | 7  | 18 | 20 | 11 | 0.19 | 0.18 | 0.21 | 1.61 | 1.34 | 1.55 | 1.24 | 1.6 | 1.2 | 1.59 |
| SOLARBAN 90 (2) OPTIGRAY + Clear      | 3 | 28 | 7  | 18 | 11 | 10 | 0.18 | 0.18 | 0.20 | 1.61 | 1.34 | 1.55 | 1.24 | 1.6 | 1.2 | 1.56 |
| SOLARBAN 90 (2) SOLARGRAY + Clear     | 2 | 16 | 5  | 18 | 9  | 6  | 0.13 | 0.14 | 0.16 | 1.61 | 1.34 | 1.55 | 1.24 | 1.6 | 1.2 | 1.12 |

**SOLARBAN® 72 Triple Silver Neutral Low-Iron Ultra-Clear Low-E Glasses**

|                                       |   |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---------------------------------------|---|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN 72 (2) STARPHIRE + STARPHIRE | 9 | 68 | 13 | 14 | 52 | 26 | 0.31 | 0.28 | 0.32 | 1.60 | 1.32 | 1.54 | 1.22 | 1.5 | 1.2 | 2.42 |
| SOLARBAN 72 (2) ACUITY + ACUITY       | 7 | 66 | 13 | 14 | 43 | 25 | 0.31 | 0.28 | 0.32 | 1.60 | 1.32 | 1.54 | 1.22 | 1.5 | 1.2 | 2.35 |

**SOLARBAN® 70 Triple Silver Neutral Low-E Glasses**

|                                   |   |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|-----------------------------------|---|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN 70 (2) Clear + Clear     | 5 | 62 | 13 | 14 | 31 | 22 | 0.30 | 0.27 | 0.32 | 1.60 | 1.32 | 1.54 | 1.22 | 1.5 | 1.2 | 2.24 |
| SOLARBAN 70 (2) OPTIBLUE + Clear  | 3 | 36 | 7  | 12 | 20 | 14 | 0.21 | 0.20 | 0.23 | 1.60 | 1.32 | 1.54 | 1.22 | 1.5 | 1.2 | 1.77 |
| SOLARBAN 70 (2) OPTIGRAY + Clear  | 2 | 35 | 7  | 12 | 11 | 12 | 0.20 | 0.20 | 0.23 | 1.60 | 1.32 | 1.54 | 1.22 | 1.5 | 1.2 | 1.76 |
| SOLARBAN 70 (2) SOLARGRAY + Clear | 1 | 20 | 6  | 12 | 9  | 7  | 0.15 | 0.15 | 0.18 | 1.60 | 1.32 | 1.54 | 1.22 | 1.5 | 1.2 | 1.29 |

**SOLARBAN® R100 Triple Silver Reflective Low-E Glasses**

|   |    |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---|----|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN R100 (2) STARPHIRE + STARPHIRE | 16 | 43 | 33 | 14 | 54 | 21 | 0.26 | 0.24 | 0.27 | 1.64 | 1.37 | 1.59 | 1.28 | 1.6 | 1.3 | 1.83 |
| SOLARBAN R100 (2) ACUITY + ACUITY       | 13 | 42 | 32 | 13 | 46 | 20 | 0.26 | 0.24 | 0.27 | 1.64 | 1.37 | 1.59 | 1.28 | 1.6 | 1.3 | 1.79 |
| SOLARBAN R100 (2) Clear + Clear         | 10 | 40 | 31 | 13 | 33 | 17 | 0.25 | 0.23 | 0.27 | 1.64 | 1.37 | 1.59 | 1.28 | 1.6 | 1.3 | 1.71 |
| SOLARBAN R100 (2) OPTIBLUE + Clear      | 6  | 23 | 13 | 13 | 21 | 11 | 0.19 | 0.18 | 0.21 | 1.64 | 1.37 | 1.59 | 1.28 | 1.6 | 1.3 | 1.25 |
| SOLARBAN R100 (2) OPTIGRAY + Clear      | 4  | 22 | 13 | 13 | 12 | 10 | 0.17 | 0.17 | 0.20 | 1.64 | 1.37 | 1.59 | 1.28 | 1.6 | 1.3 | 1.27 |
| SOLARBAN R100 (2) SOLARGRAY + Clear     | 3  | 13 | 7  | 13 | 9  | 6  | 0.13 | 0.14 | 0.16 | 1.64 | 1.37 | 1.59 | 1.28 | 1.6 | 1.3 | 0.88 |

**SOLARBAN® 67 Double Silver Subtly Reflective Low-E Glasses**

|                                       |    |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---------------------------------------|----|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN 67 (2) STARPHIRE + STARPHIRE | 15 | 56 | 20 | 16 | 46 | 27 | 0.33 | 0.30 | 0.35 | 1.63 | 1.36 | 1.59 | 1.28 | 1.6 | 1.3 | 1.87 |
| SOLARBAN 67 (2) ACUITY + ACUITY       | 12 | 55 | 19 | 16 | 39 | 25 | 0.32 | 0.30 | 0.34 | 1.63 | 1.36 | 1.59 | 1.28 | 1.6 | 1.3 | 1.85 |
| SOLARBAN 67 (2) Clear + Clear         | 9  | 51 | 18 | 16 | 27 | 22 | 0.31 | 0.29 | 0.33 | 1.63 | 1.36 | 1.59 | 1.28 | 1.6 | 1.3 | 1.80 |
| SOLARBAN 67 (2) OPTIBLUE + Clear      | 6  | 30 | 9  | 15 | 18 | 14 | 0.23 | 0.22 | 0.25 | 1.63 | 1.36 | 1.59 | 1.28 | 1.6 | 1.3 | 1.37 |
| SOLARBAN 67 (2) OPTIGRAY + Clear      | 4  | 29 | 9  | 15 | 10 | 12 | 0.20 | 0.20 | 0.23 | 1.63 | 1.36 | 1.59 | 1.28 | 1.6 | 1.3 | 1.42 |
| SOLARBAN 67 (2) SOLARGRAY + Clear     | 4  | 16 | 6  | 14 | 8  | 8  | 0.15 | 0.16 | 0.19 | 1.63 | 1.36 | 1.59 | 1.28 | 1.6 | 1.3 | 1.01 |

**SOLARBAN® 60 Double Silver Neutral Low-E Glasses**

|                                       |    |    |    |    |    |    |      |      |      |      |      |      |      |     |     |      |
|---------------------------------------|----|----|----|----|----|----|------|------|------|------|------|------|------|-----|-----|------|
| SOLARBAN 60 (2) STARPHIRE + STARPHIRE | 24 | 74 | 11 | 12 | 38 | 38 | 0.45 | 0.41 | 0.47 | 1.63 | 1.36 | 1.58 | 1.28 | 1.6 | 1.3 | 1.79 |
| SOLARBAN 60 (2) ACUITY + ACUITY       | 19 | 72 | 11 | 12 | 32 | 35 | 0.43 | 0.40 | 0.46 | 1.63 | 1.36 | 1.58 | 1.28 | 1.6 | 1.3 | 1.79 |
| SOLARBAN 60 (2) Clear + Clear         | 15 | 67 | 10 | 12 | 22 | 30 | 0.40 | 0.38 | 0.43 | 1.63 | 1.36 | 1.58 | 1.28 | 1.6 | 1.3 | 1.79 |
| SOLARBAN 60 (2) OPTIBLUE + Clear      | 10 | 39 | 6  | 10 | 15 | 20 | 0.29 | 0.28 | 0.32 | 1.63 | 1.36 | 1.58 | 1.28 | 1.6 | 1.3 | 1.40 |
| SOLARBAN 60 (2) OPTIGRAY + Clear      | 7  | 38 | 6  | 10 | 9  | 17 | 0.26 | 0.25 | 0.29 | 1.63 | 1.36 | 1.58 | 1.28 | 1.6 | 1.3 | 1.52 |
| SOLARBAN 60 (2) SOLARGRAY + Clear     | 4  | 21 | 5  | 10 | 7  | 11 | 0.19 | 0.19 | 0.22 | 1.63 | 1.36 | 1.58 | 1.28 | 1.6 | 1.3 | 1.11 |

Please see pages 1 and 2 for performance value definitions, product information, recommendations and simulation conditions. Visit vitroglazings.com for more product information.

Performance for Monolithic Laminates in 6 mm Outer Lite + 1.52 PVB + 6 mm Inner Lite

| Glass Configuration<br>6 mm + 1.52 mm PVB + 6 mm | UV % | Visible Light |               |     | Solar Energy |         |       |      |    | U-Values W/m <sup>2</sup> *K |          |        | LSG |
|--|------|---------------|---------------|-----|--------------|---------|-------|------|----|------------------------------|----------|--------|-----|
|  |      | Trans %       | Reflectance % |     | Refl %       | Trans % | SF    |      | SC | Win-NFRC                     | Sum-NFRC | EN 673 |     |
|  |      |               | Ext           | Int |              |         | EN410 | SHGC |    |                              |          |        |     |

**SOLARBAN® 90 Quad Silver Neutral Low-E Glasses**

|                                       |   |    |    |    |    |    |      |      |      |      |      |     |      |
|---------------------------------------|---|----|----|----|----|----|------|------|------|------|------|-----|------|
| SOLARBAN 90 (2) STARPHIRE + STARPHIRE | 0 | 48 | 15 | 27 | 56 | 18 | 0.28 | 0.26 | 0.30 | 5.40 | 4.91 | 5.4 | 1.85 |
| SOLARBAN 90 (2) ACUITY + ACUITY       | 0 | 47 | 15 | 26 | 50 | 17 | 0.29 | 0.28 | 0.32 | 5.40 | 4.91 | 5.4 | 1.68 |
| SOLARBAN 90 (2) Clear + Clear         | 0 | 45 | 14 | 25 | 39 | 16 | 0.31 | 0.31 | 0.36 | 5.40 | 4.91 | 5.4 | 1.45 |
| SOLARBAN 90 (2) OPTIBLUE + Clear      | 0 | 33 | 10 | 25 | 30 | 12 | 0.29 | 0.31 | 0.35 | 5.40 | 4.91 | 5.4 | 1.06 |
| SOLARBAN 90 (2) OPTIGRAY + Clear      | 0 | 32 | 9  | 25 | 19 | 11 | 0.31 | 0.34 | 0.40 | 5.40 | 4.91 | 5.4 | 0.94 |
| SOLARBAN 90 (2) SOLARGRAY + Clear     | 0 | 23 | 7  | 25 | 16 | 8  | 0.29 | 0.33 | 0.38 | 5.40 | 4.91 | 5.4 | 0.70 |

**SOLARBAN® 72 Triple Silver Neutral Low-Iron Ultra-Clear Low-E Glasses**

|                                       |   |    |    |    |    |    |      |      |      |      |      |     |      |
|---------------------------------------|---|----|----|----|----|----|------|------|------|------|------|-----|------|
| SOLARBAN 72 (2) STARPHIRE + STARPHIRE | 0 | 69 | 15 | 17 | 54 | 26 | 0.36 | 0.32 | 0.37 | 5.40 | 4.91 | 5.4 | 2.12 |
| SOLARBAN 72 (2) ACUITY + ACUITY       | 0 | 65 | 16 | 17 | 50 | 24 | 0.35 | 0.32 | 0.38 | 5.40 | 4.91 | 5.4 | 2.03 |

**SOLARBAN® 70 Triple Silver Neutral Low-E Glasses**

|                                   |   |    |    |    |    |    |      |      |      |      |      |     |      |
|-----------------------------------|---|----|----|----|----|----|------|------|------|------|------|-----|------|
| SOLARBAN 70 (2) Clear + Clear     | 0 | 60 | 14 | 16 | 50 | 23 | 0.34 | 0.32 | 0.36 | 5.40 | 4.91 | 5.4 | 1.92 |
| SOLARBAN 70 (2) OPTIBLUE + Clear  | 0 | 47 | 10 | 16 | 30 | 18 | 0.35 | 0.35 | 0.40 | 5.40 | 4.91 | 5.4 | 1.34 |
| SOLARBAN 70 (2) OPTIGRAY + Clear  | 0 | 42 | 9  | 15 | 17 | 15 | 0.35 | 0.38 | 0.43 | 5.40 | 4.91 | 5.4 | 1.10 |
| SOLARBAN 70 (2) SOLARGRAY + Clear | 0 | 30 | 7  | 15 | 14 | 11 | 0.29 | 0.36 | 0.41 | 5.40 | 4.91 | 5.4 | 0.83 |

**SOLARBAN® R100 Triple Silver Reflective Low-e Glasses**

|   |   |    |    |    |    |    |      |      |      |      |      |     |      |
|---|---|----|----|----|----|----|------|------|------|------|------|-----|------|
| SOLARBAN R100 (2) STARPHIRE + STARPHIRE | 0 | 44 | 29 | 11 | 58 | 20 | 0.29 | 0.27 | 0.31 | 5.40 | 4.91 | 5.4 | 1.66 |
| SOLARBAN R100 (2) ACUITY + ACUITY       | 0 | 44 | 28 | 11 | 52 | 19 | 0.29 | 0.28 | 0.32 | 5.40 | 4.91 | 5.4 | 1.57 |
| SOLARBAN R100 (2) Clear + Clear         | 0 | 42 | 28 | 11 | 42 | 17 | 0.31 | 0.31 | 0.35 | 5.40 | 4.91 | 5.4 | 1.38 |
| SOLARBAN R100 (2) OPTIBLUE + Clear      | 0 | 30 | 16 | 11 | 31 | 13 | 0.31 | 0.31 | 0.36 | 5.40 | 4.91 | 5.4 | 0.98 |
| SOLARBAN R100 (2) OPTIGRAY + Clear      | 0 | 30 | 16 | 11 | 20 | 12 | 0.31 | 0.34 | 0.40 | 5.40 | 4.91 | 5.4 | 0.87 |
| SOLARBAN R100 (2) SOLARGRAY + Clear     | 0 | 21 | 10 | 10 | 16 | 9  | 0.29 | 0.34 | 0.39 | 5.40 | 4.91 | 5.4 | 0.62 |

**SOLARBAN® 67 Double Silver Subtly Reflective Low-E Glasses**

|                                       |   |    |    |    |    |    |      |      |      |      |      |     |      |
|---------------------------------------|---|----|----|----|----|----|------|------|------|------|------|-----|------|
| SOLARBAN 67 (2) STARPHIRE + STARPHIRE | 0 | 56 | 16 | 14 | 50 | 25 | 0.34 | 0.33 | 0.38 | 5.40 | 4.91 | 5.4 | 1.70 |
| SOLARBAN 67 (2) ACUITY + ACUITY       | 0 | 55 | 15 | 14 | 45 | 24 | 0.35 | 0.34 | 0.39 | 5.40 | 4.91 | 5.4 | 1.62 |
| SOLARBAN 67 (2) Clear + Clear         | 0 | 52 | 15 | 13 | 35 | 22 | 0.35 | 0.36 | 0.41 | 5.40 | 4.91 | 5.4 | 1.44 |
| SOLARBAN 67 (2) OPTIBLUE + Clear      | 0 | 38 | 10 | 13 | 28 | 17 | 0.32 | 0.35 | 0.40 | 5.40 | 4.91 | 5.4 | 1.09 |
| SOLARBAN 67 (2) OPTIGRAY + Clear      | 0 | 37 | 10 | 13 | 17 | 15 | 0.34 | 0.37 | 0.43 | 5.40 | 4.91 | 5.4 | 1.00 |
| SOLARBAN 67 (2) SOLARGRAY + Clear     | 0 | 26 | 7  | 13 | 14 | 11 | 0.32 | 0.36 | 0.41 | 5.40 | 4.91 | 5.4 | 0.72 |

**SOLARBAN® 60 Double Silver Neutral Low-E Glasses**

|                                       |   |    |   |    |    |    |      |      |      |      |      |     |      |
|---------------------------------------|---|----|---|----|----|----|------|------|------|------|------|-----|------|
| SOLARBAN 60 (2) STARPHIRE + STARPHIRE | 0 | 76 | 9 | 10 | 40 | 38 | 0.48 | 0.45 | 0.51 | 5.40 | 4.91 | 5.4 | 1.69 |
| SOLARBAN 60 (2) ACUITY + ACUITY       | 0 | 75 | 9 | 9  | 36 | 36 | 0.47 | 0.45 | 0.52 | 5.40 | 4.91 | 5.4 | 1.67 |
| SOLARBAN 60 (2) Clear + Clear         | 0 | 72 | 9 | 10 | 28 | 33 | 0.47 | 0.45 | 0.52 | 5.40 | 4.91 | 5.4 | 1.59 |
| SOLARBAN 60 (2) OPTIBLUE + Clear      | 0 | 52 | 7 | 8  | 22 | 25 | 0.43 | 0.42 | 0.49 | 5.40 | 4.91 | 5.4 | 1.22 |
| SOLARBAN 60 (2) OPTIGRAY + Clear      | 0 | 51 | 7 | 8  | 14 | 23 | 0.41 | 0.50 | 0.44 | 5.40 | 4.91 | 5.4 | 1.02 |
| SOLARBAN 60 (2) SOLARGRAY + Clear     | 0 | 36 | 6 | 8  | 12 | 17 | 0.37 | 0.46 | 0.40 | 5.40 | 4.91 | 5.4 | 0.78 |

**VISTACOOl® Subtly Reflective Glasses**

|                                |   |    |    |    |   |    |      |      |      |      |      |     |      |
|--------------------------------|---|----|----|----|---|----|------|------|------|------|------|-----|------|
| VISTACOOl(2) AZURIA + Clear    | 0 | 56 | 14 | 20 | 8 | 24 | 0.45 | 0.46 | 0.53 | 5.40 | 4.91 | 5.4 | 1.22 |
| VISTACOOl (2) PACIFICA + Clear | 0 | 35 | 8  | 19 | 6 | 20 | 0.42 | 0.44 | 0.51 | 5.40 | 4.91 | 5.4 | 0.79 |

**SOLARCOOL® Reflective Glasses**

|                                   |   |    |    |    |   |    |      |      |      |      |      |     |      |
|-----------------------------------|---|----|----|----|---|----|------|------|------|------|------|-----|------|
| SOLARCOOL (2) AZURIA + Clear      | 0 | 30 | 16 | 23 | 8 | 13 | 0.34 | 0.39 | 0.45 | 5.40 | 4.91 | 5.3 | 0.77 |
| SOLARCOOL (2) PACIFICA + Clear    | 0 | 19 | 9  | 23 | 6 | 12 | 0.33 | 0.39 | 0.45 | 5.40 | 4.91 | 5.3 | 0.49 |
| SOLARCOOL (2) SOLARBLUE + Clear   | 0 | 25 | 12 | 23 | 9 | 21 | 0.39 | 0.44 | 0.51 | 5.40 | 4.91 | 5.3 | 0.57 |
| SOLARCOOL (2) SOLARBRONZE + Clear | 0 | 24 | 11 | 23 | 9 | 23 | 0.40 | 0.45 | 0.52 | 5.40 | 4.91 | 5.3 | 0.53 |
| SOLARCOOL (2) SOLARGRAY + Clear   | 0 | 20 | 9  | 23 | 8 | 19 | 0.37 | 0.43 | 0.50 | 5.40 | 4.91 | 5.3 | 0.47 |

Please see pages 1 and 2 for performance value definitions, product information, recommendations and simulation conditions. Visit [vitroglazings.com](http://vitroglazings.com) for more product information.

Performance for Monolithic Glasses

| Glass                                   | Thickness (mm) | Visible Light |               |     | Solar Energy |      |      | U-Values W/m <sup>2</sup> *K |          |        | LSG  |
|---|----------------|---------------|---------------|-----|--------------|------|------|------------------------------|----------|--------|------|
|   |                | Trans %       | Reflectance % |     | SF           | SHGC | SC   | Win-NFRC                     | Sum-NFRC | EN 673 |      |
|   |                |               | Ext           | Int | EN410        |      |      |                              |          |        |      |
| <b>Uncoated</b>                         |                |               |               |     |              |      |      |                              |          |        |      |
| STARPHIRE® Glass                        | 3              | 91            | 8             | 8   | 0.91         | 0.91 | 1.05 | 5.90                         | 5.32     | 5.8    | 1.00 |
| STARPHIRE® Glass                        | 4              | 91            | 8             | 8   | 0.91         | 0.91 | 1.05 | 5.88                         | 5.31     | 5.8    | 1.00 |
| STARPHIRE® Glass                        | 5              | 91            | 8             | 8   | 0.90         | 0.90 | 1.03 | 5.86                         | 5.28     | 5.8    | 1.01 |
| STARPHIRE® Glass                        | 6              | 91            | 8             | 8   | 0.90         | 0.90 | 1.03 | 5.82                         | 5.27     | 5.7    | 1.01 |
| STARPHIRE® Glass                        | 8              | 91            | 8             | 8   | 0.89         | 0.89 | 1.02 | 5.74                         | 5.20     | 5.6    | 1.02 |
| STARPHIRE® Glass                        | 10             | 91            | 8             | 8   | 0.89         | 0.89 | 1.02 | 5.69                         | 5.16     | 5.6    | 1.02 |
| STARPHIRE® Glass                        | 12             | 90            | 8             | 8   | 0.88         | 0.88 | 1.01 | 5.59                         | 5.05     | 5.5    | 1.02 |
| STARPHIRE® Glass                        | 16             | 90            | 8             | 8   | 0.87         | 0.87 | 1.00 | 5.49                         | 4.97     | 5.4    | 1.03 |
| STARPHIRE® Glass                        | 19             | 90            | 8             | 8   | 0.86         | 0.86 | 0.99 | 5.39                         | 4.89     | 5.3    | 1.05 |
| ACUITY™ Glass                           | 6              | 90            | 8             | 8   | 0.87         | 0.87 | 1.00 | 5.82                         | 5.25     | 5.7    | 1.03 |
| ACUITY™ Glass                           | 8              | 90            | 8             | 8   | 0.86         | 0.86 | 0.98 | 5.74                         | 5.19     | 5.7    | 1.05 |
| ACUITY™ Glass                           | 10             | 90            | 8             | 8   | 0.84         | 0.85 | 0.97 | 5.69                         | 5.14     | 5.6    | 1.06 |
| Clear                                   | 3              | 90            | 9             | 9   | 0.85         | 0.86 | 0.99 | 5.90                         | 5.32     | 5.8    | 1.05 |
| Clear                                   | 4              | 90            | 9             | 9   | 0.84         | 0.84 | 0.97 | 5.88                         | 5.31     | 5.8    | 1.07 |
| Clear                                   | 5              | 89            | 9             | 9   | 0.83         | 0.83 | 0.95 | 5.86                         | 5.28     | 5.8    | 1.07 |
| Clear                                   | 6              | 89            | 8             | 9   | 0.82         | 0.82 | 0.94 | 5.82                         | 5.27     | 5.7    | 1.08 |
| Clear                                   | 8              | 87            | 8             | 8   | 0.79         | 0.79 | 0.90 | 5.74                         | 5.20     | 5.6    | 1.11 |
| Clear                                   | 10             | 87            | 8             | 8   | 0.77         | 0.77 | 0.88 | 5.69                         | 5.16     | 5.6    | 1.13 |
| Clear                                   | 12             | 85            | 8             | 8   | 0.73         | 0.73 | 0.84 | 5.59                         | 5.05     | 5.5    | 1.16 |
| Clear                                   | 16             | 84            | 8             | 8   | 0.69         | 0.70 | 0.80 | 5.49                         | 4.97     | 5.4    | 1.20 |
| Clear                                   | 19             | 83            | 8             | 8   | 0.67         | 0.67 | 0.77 | 5.39                         | 4.89     | 5.3    | 1.24 |
| AZURIA® Glass                           | 4              | 75            | 7             | 7   | 0.57         | 0.57 | 0.66 | 5.88                         | 5.31     | 5.8    | 1.32 |
| AZURIA® Glass                           | 5              | 72            | 7             | 7   | 0.55         | 0.54 | 0.62 | 5.86                         | 5.28     | 5.8    | 1.33 |
| AZURIA® Glass                           | 6              | 68            | 7             | 7   | 0.52         | 0.52 | 0.59 | 5.82                         | 5.27     | 5.7    | 1.31 |
| AZURIA® Glass                           | 8              | 61            | 6             | 6   | 0.48         | 0.48 | 0.55 | 5.74                         | 5.20     | 5.6    | 1.28 |
| AZURIA® Glass                           | 10             | 57            | 6             | 6   | 0.45         | 0.46 | 0.53 | 5.69                         | 5.16     | 5.6    | 1.24 |
| ATLANTICA® Glass                        | 6              | 67            | 7             | 7   | 0.53         | 0.53 | 0.61 | 5.82                         | 5.27     | 5.7    | 1.27 |
| SOLEXIA® Glass                          | 3              | 83            | 8             | 8   | 0.70         | 0.70 | 0.80 | 5.90                         | 5.32     | 5.8    | 1.19 |
| SOLEXIA® Glass                          | 4              | 81            | 8             | 8   | 0.67         | 0.68 | 0.78 | 5.88                         | 5.31     | 5.8    | 1.19 |
| SOLEXIA® Glass                          | 5              | 79            | 8             | 8   | 0.65         | 0.65 | 0.75 | 5.86                         | 5.28     | 5.8    | 1.22 |
| SOLEXIA® Glass                          | 6              | 77            | 8             | 8   | 0.61         | 0.62 | 0.71 | 5.82                         | 5.27     | 5.7    | 1.25 |
| PACIFICA® Glass                         | 6              | 42            | 5             | 5   | 0.48         | 0.49 | 0.56 | 5.82                         | 5.27     | 5.7    | 0.87 |
| PACIFICA® Glass                         | 8              | 32            | 5             | 5   | 0.41         | 0.43 | 0.49 | 5.74                         | 5.20     | 5.6    | 0.73 |
| SOLARBLUE® Glass                        | 6              | 56            | 6             | 6   | 0.60         | 0.61 | 0.71 | 5.82                         | 5.27     | 5.7    | 0.91 |
| SOLARBRONZE® Glass                      | 3              | 67            | 7             | 7   | 0.71         | 0.73 | 0.84 | 5.90                         | 5.32     | 5.8    | 0.92 |
| SOLARBRONZE® Glass                      | 4              | 63            | 7             | 7   | 0.68         | 0.70 | 0.80 | 5.88                         | 5.31     | 5.8    | 0.90 |
| SOLARBRONZE® Glass                      | 5              | 58            | 6             | 6   | 0.65         | 0.67 | 0.77 | 5.86                         | 5.28     | 5.8    | 0.87 |
| SOLARBRONZE® Glass                      | 6              | 53            | 6             | 6   | 0.61         | 0.63 | 0.73 | 5.82                         | 5.27     | 5.7    | 0.84 |
| SOLARBRONZE® Glass                      | 8              | 43            | 6             | 6   | 0.53         | 0.57 | 0.66 | 5.74                         | 5.20     | 5.6    | 0.75 |
| SOLARBRONZE® Glass                      | 10             | 37            | 5             | 6   | 0.49         | 0.53 | 0.61 | 5.69                         | 5.16     | 5.6    | 0.70 |
| SOLARBRONZE® Glass                      | 12             | 27            | 5             | 5   | 0.42         | 0.47 | 0.54 | 5.59                         | 5.05     | 5.5    | 0.57 |
| OPTIGRAY® Glass                         | 6              | 63            | 6             | 6   | 0.41         | 0.65 | 0.74 | 5.82                         | 5.25     | 5.7    | 0.97 |
| SOLARGRAY® Glass                        | 3              | 60            | 6             | 7   | 0.67         | 0.69 | 0.79 | 5.90                         | 5.32     | 5.8    | 0.87 |
| SOLARGRAY® Glass                        | 4              | 56            | 6             | 7   | 0.64         | 0.66 | 0.76 | 5.88                         | 5.31     | 5.8    | 0.85 |
| SOLARGRAY® Glass                        | 5              | 50            | 6             | 6   | 0.60         | 0.62 | 0.71 | 5.86                         | 5.28     | 5.8    | 0.81 |
| SOLARGRAY® Glass                        | 6              | 44            | 6             | 6   | 0.55         | 0.58 | 0.67 | 5.82                         | 5.27     | 5.7    | 0.76 |
| SOLARGRAY® Glass                        | 8              | 33            | 5             | 6   | 0.48         | 0.51 | 0.59 | 5.74                         | 5.20     | 5.7    | 0.65 |
| SOLARGRAY® Glass                        | 10             | 28            | 5             | 5   | 0.44         | 0.48 | 0.55 | 5.69                         | 5.16     | 5.6    | 0.58 |
| SOLARGRAY® Glass                        | 12             | 18            | 5             | 5   | 0.37         | 0.42 | 0.48 | 5.59                         | 5.05     | 5.5    | 0.43 |
| GRAYLITE® II Glass                      | 3              | 24            | 5             | 5   | 0.41         | 0.45 | 0.52 | 5.90                         | 5.32     | 5.8    | 0.53 |
| GRAYLITE® II Glass                      | 4              | 18            | 4             | 5   | 0.37         | 0.41 | 0.47 | 5.88                         | 5.31     | 5.8    | 0.44 |
| GRAYLITE® II Glass                      | 5              | 13            | 4             | 5   | 0.34         | 0.39 | 0.45 | 5.86                         | 5.28     | 5.8    | 0.33 |
| GRAYLITE® II Glass                      | 6              | 9             | 4             | 5   | 0.31         | 0.36 | 0.41 | 5.82                         | 5.27     | 5.7    | 0.25 |
| <b>Reflective Coated Tinted Glasses</b> |                |               |               |     |              |      |      |                              |          |        |      |
| VISTACOOl® (2) AZURIA® Glass            | 6              | 52            | 19            | 29  | 0.44         | 0.46 | 0.52 | 5.80                         | 5.23     | 5.7    | 1.14 |
| VISTACOOl® (2) AZURIA® Glass            | 8              | 46            | 16            | 29  | 0.41         | 0.43 | 0.49 | 5.72                         | 5.17     | 5.6    | 1.09 |
| VISTACOOl® (2) PACIFICA® Glass          | 6              | 32            | 10            | 28  | 0.41         | 0.44 | 0.51 | 5.82                         | 5.25     | 5.7    | 0.73 |
| VISTACOOl® (2) PACIFICA® Glass          | 8              | 24            | 8             | 28  | 0.36         | 0.40 | 0.46 | 5.72                         | 5.16     | 5.6    | 0.60 |
| SOLARCOOl® (2) AZURIA® Glass            | 6              | 26            | 19            | 36  | 0.34         | 0.38 | 0.44 | 5.85                         | 5.30     | 5.7    | 0.68 |
| SOLARCOOl® (1) AZURIA® Glass            | 6              | 26            | 36            | 19  | 0.29         | 0.31 | 0.36 | 5.85                         | 5.30     | 5.7    | 0.84 |
| SOLARCOOl® (2) PACIFICA® Glass          | 6              | 16            | 10            | 36  | 0.34         | 0.38 | 0.44 | 5.85                         | 5.30     | 5.7    | 0.42 |
| SOLARCOOl® (1) PACIFICA® Glass          | 6              | 16            | 36            | 10  | 0.28         | 0.31 | 0.36 | 5.85                         | 5.30     | 5.7    | 0.52 |
| SOLARCOOl® (2) SOLARBLUE® Glass         | 6              | 21            | 14            | 36  | 0.40         | 0.45 | 0.51 | 5.85                         | 5.30     | 5.7    | 0.48 |
| SOLARCOOl® (1) SOLARBLUE® Glass         | 6              | 21            | 36            | 14  | 0.35         | 0.38 | 0.44 | 5.85                         | 5.30     | 5.7    | 0.55 |
| SOLARCOOl® (2) SOLARBRONZE® Glass       | 6              | 21            | 13            | 36  | 0.41         | 0.47 | 0.53 | 5.85                         | 5.30     | 5.7    | 0.44 |
| SOLARCOOl® (1) SOLARBRONZE® Glass       | 6              | 21            | 36            | 13  | 0.37         | 0.40 | 0.46 | 5.85                         | 5.30     | 5.7    | 0.53 |
| SOLARCOOl® (2) SOLARGRAY® Glass         | 6              | 17            | 11            | 36  | 0.40         | 0.44 | 0.51 | 5.85                         | 5.30     | 5.7    | 0.39 |
| SOLARCOOl® (1) SOLARGRAY® Glass         | 6              | 17            | 36            | 11  | 0.34         | 0.37 | 0.43 | 5.85                         | 5.30     | 5.7    | 0.46 |

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