

Product Data Sheet



Aesthetic Description

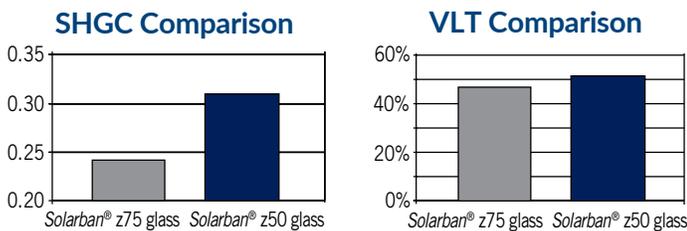
Solarban® z75 and *Solarban*® z50 glasses combine the exceptional solar control performance of the *Solarban*® family of solar control, low-e glasses with the light-bodied, neutral color of *Optiblu*® tinted glass. *Solarban*® z75 glass consists of *Solarban*® 70 solar control, low-e coating on *Optiblu*® tinted glass with clear glass as the inboard lite. *Solarban*® z50 glass consists of *Solarban*® 60 solar control, low-e coating on *Optiblu*® tinted glass with clear glass as the inboard lite.

Solarban® z75 and *Solarban*® z50 glasses provide a neutral, cool blue-gray appearance due to the use of *Optiblu*® glass, with high levels of visible light transmittance. While the two glasses have a similar appearance, the coatings for each are tuned to provide different levels of solar control performance, enabling architects to specify the optimal choice for local climate and building code demands. Their cool, neutral aesthetic is designed to complement surrounding building materials, including other high-performance glazings.

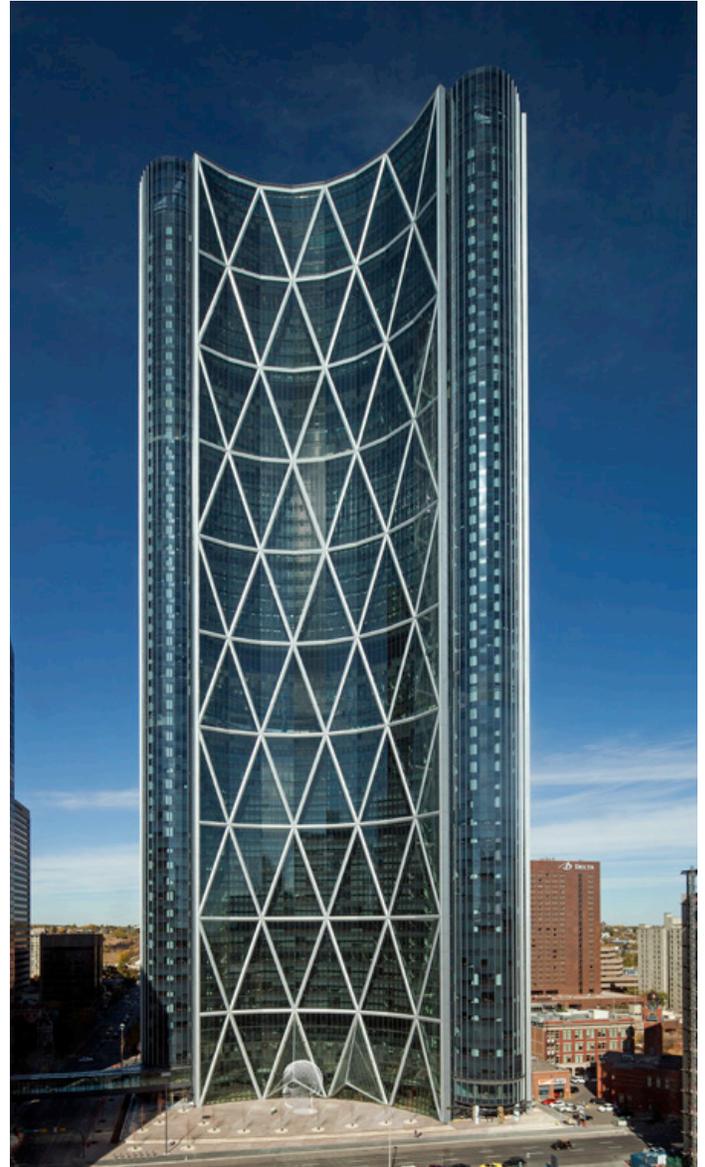
Performance Characteristics

Neutral, cool blue-gray *Solarban*® z75 and *Solarban*® z50 glasses excel at controlling glare while offering superior daylighting and solar control properties to support sustainable design. The result is a pair of products that complement a wide range of design scenarios with visible light transmittance (VLT) and solar heat gain coefficients (SHGC) that are as good as or better than competing architectural glasses with the same aesthetic.

In a standard 1-inch insulating glass unit (IGU) with clear glass, *Solarban*® z75 glass has a SHGC of 0.24 and VLT of 48 percent, which combine to yield a light to solar gain (LSG) ratio of 2.00. These exceptional solar control characteristics make *Solarban*® z75 glass an excellent choice for warmer climate zones with high air-conditioning demands.



In the same configuration, *Solarban*® z50 glass registers a SHGC of 0.32 and VLT of 51, producing an LSG ratio of 1.59.



Location: Calgary, Alberta, Canada | Product: *Solarban*® z50 Glass | Design Architect: Foster + Partners | Vitro Certified™ Fabricator: Oldcastle BuildingEnvelope | Glazier: Antamex

Consequently, *Solarban*® z50 glass may be better suited to climate zones that are more equally balanced between heating and cooling seasons.

With interior reflectance levels below 12 percent, *Solarban*® z75 and *Solarban*® z50 glasses provide building occupants with clear, natural outdoor views. Similarly, because of their neutral color, *Solarban*® z75 and *Solarban*® z50 glasses harmonize well with other clear and color-neutral solar control, low-e glasses such as *Solarban*® 67 and *Solarban*® R100 glasses.

Solarban® z75 & z50 Glass

Supporting Sustainable Design

Vitro Architectural Glass provides abundant opportunities for architects and building owners to realize their sustainability objectives.

Energy Use & Operating Cost Reduction: High-performance glasses by Vitro are engineered to facilitate downsized mechanical equipment costs, leading to reduced long-term energy costs. Visit tools.vitroglazings.com for glass comparison and configuration tools for analyzing glass products.

Sustainability Documentation: Vitro Architectural Glass is the first U.S. float glass manufacturer to have its entire selection of products recognized by the *Cradle to Cradle Certified™* program, and the first in North America to publish third-party verified EPDs for its Flat Glass and Processed Glass products.

For additional credit opportunities and supporting documentation, visit vitroglazings.com/LEED

LEED Credit Opportunities			
Possible Points	LEED Credit	Solarban® z50/z75 Feature	Path/Option Satisfied
18	Energy & Atmosphere (EA) Optimize Energy Performance	Excellent SHGC, U-value and Tvis performance	Whole Building Energy Simulation (Option 1) or Prescriptive Compliance: ASHRAE Advanced Energy Design Guide (Option 2)
5	Innovation (IN) Innovation in Design	Exceeds minimum performance mandated by local energy codes	Innovation (Option 1), Pilot (Option 2) and Exemplary Performance (Option 3)
3	Indoor Environmental Quality (EQ) Daylight	Exhibits high light transmission	Simulation: Spatial Daylight Autonomy and Annual Sunlight Exposure (Option 1), Simulation: Illuminance Calculations (Option 2) or Measurement (Option 3)
2	Materials & Resources (MR) Building Product Disclosure & Optimization - Material Ingredients	<i>Cradle to Cradle Certified™</i>	Material Ingredient Reporting (Option 1) or Product Manufacturer Supply Chain Optimization (Option 3)
2	Materials & Resources (MR) Building Product Disclosure & Optimization-Environmental Product Declarations	Environmental Product Declaration (EPD)	Environmental Product Declarations (EPD) (Option 1)

Insulating Glass Unit Performance Comparisons 1-inch (25mm) units with 1/2-inch (13mm) airspace and two 1/4-inch (6mm) lites							
Glass Type	Visible Light Transmittance (VLT)	Visible Light Reflectance		(BTU/hr°ft²°F) NFRC U-Value		Solar Heat Gain Coefficient (SHGC)	Light to Solar Gain (LSG)
		Exterior %	Interior %	Winter Nighttime	Winter Argon		
Solarban® z75 Solar Control Low-E Glass (Solarban® 70 Glass on Optiblu® Glass)							
Solarban® 70 (2) Optiblu® + Clear	48	9	12	0.28	0.24	0.24	2.00
Solarban® z50 Solar Control Low-E Glass (Solarban® 60 Glass on Optiblu® Glass)							
Solarban® 60 (2) Optiblu® + Clear	51	8	11	0.29	0.24	0.32	1.59

All performance data calculated using LBNL Window 7.3 software and represents center of glass performance data. For detailed information on the methodologies used to calculate the aesthetic and performance values in this table, please visit vitroglazings.com or request our Architectural Glass Catalog.

Fabrication and Availability

Solarban® z75 and Solarban® z50 glasses are available exclusively through the *Vitro Certified™* Network. *Vitro Certified™* Fabricators can meet tight construction deadlines and accelerate the delivery of replacement glass before, during and after construction. Solarban® z75 and Solarban® z50 glasses are manufactured using the sputter-coating process and can be heat-strengthened, tempered and laminated. Solarban® z50 glass also is available annealed.

For more information about Solarban® low-e-glass and other *Cradle to Cradle Certified™* architectural glasses by Vitro Glass, visit vitroglazings.com, or call 1-855-VTRO-GLS (887-6457).

Additional Resources

To obtain samples of any Vitro Glass product, call 1-855-VTRO-GLS (877-6457) or visit samples.vitroglazings.com. For videos, design insights and technical education, visit the Vitro Glass Education Center at glossed.vitroglazings.com. For glass comparison and configuration tools, visit tools.vitroglazings.com.

