

For decades, architects have relied on the ever-expanding **Solarban®** family of solar control, low-e glass to meet their design and performance needs. With its versatile, neutral-reflective appearance, **Solarban R100** solar control, low-e glass represents the latest addition to this collection of high-performance architectural glasses.

### Aesthetic Description

**Solarban R100** glass is a neutral-reflective, low-e glass that provides significant improvements in solar performance compared to competing products in the same architectural glass category.

Because **Solarban R100** glass uniquely balances reflectivity and color-neutrality, it can function both as a privacy glass and as a non-tinted material that harmonizes with spandrels and other building materials.

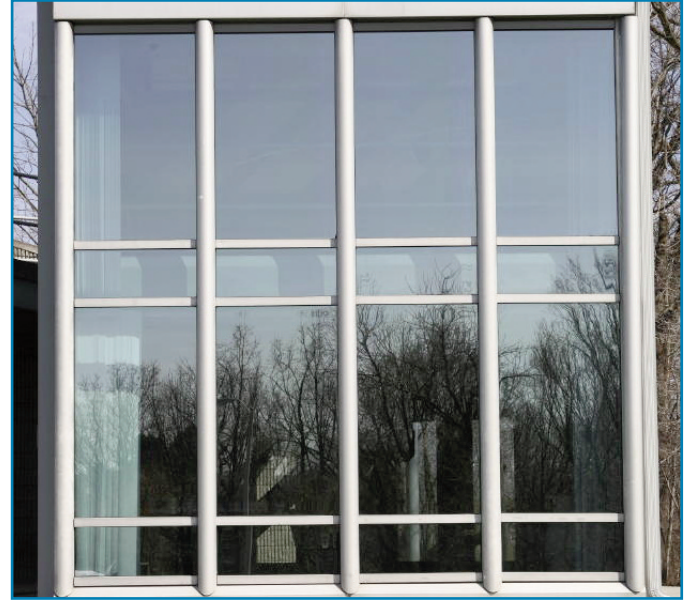
Inside the building, **Solarban R100** glass has reflectance of just 14 percent and transmits a pleasant cool blue-gray appearance that reduces glare without creating an obtrusive reflected color for building occupants.

Outside, **Solarban R100** glass has exterior reflectance of 32 percent that combines with the neutral aesthetic to deliver a clean, crisp exterior for any building project.

### Performance Options

**Solarban R100** glass has an excellent Solar Heat Gain Coefficient (SHGC) of 0.23 and Visible Light Transmittance (VLT) of 42 percent. The resulting Light to Solar Gain (LSG) ratio of 1.79 is up to 29 percent greater than competitive reflective, low-e glasses, making **Solarban R100** glass one of the best-performing architectural glass products on the market.

Because of its color-neutral appearance, **Solarban R100** glass can be applied to a variety of tints from PPG's **Oceans of Color®** collection of nautically-inspired tints or the **Earth & Sky** family of nature-inspired tints. When used on the second surface in one-inch insulating glass units, these tints combine with **Solarban R100** glass to achieve Light to Solar Gain (LSG) ratios of up to 1.72, while providing an exceptional array of aesthetic options.



*Solarban R100 glass is a neutral-reflective, solar control, low-e glass with a Light to Solar Gain (LSG) ratio that is up to 29 percent greater than similar competing products.*

### Sustainable Design and Architectural Glass

Sustainable design, green building, safeguarding the environment and the long-term management of energy costs are vital considerations for today's building designers. **Solarban R100** glass is another tool architects and building owners can use to reach their design objectives.

In addition to making products that support sustainable design, PPG is a pioneer of innovative technologies that reduce energy consumption during the glass-making process. PPG promotes environmentally responsible manufacturing by recovering and reusing virtually all its glass manufacturing byproducts and by shipping its materials on reusable steel racks.

The only company to have its entire collection of architectural glasses Cradle to Cradle Certified™, PPG also promotes regional sourcing through its worldwide network of certified glass fabricators and laminators.

The **Solarban R100** coating on clear glass and tinted substrates promotes sustainable design and provides LEED credit opportunities according to the following criteria:

LEED / Green Design Category	Feature	Benefit
Optimize Energy Performance Daylight & Views Innovation in Design	Excellent SHGC, U-value, and Tvis performance Good visible light transmittance MBDC Cradle to Cradle Certification	Enhance energy performance of building Connectivity to natural lighting and the outdoors Selection of environmentally focused product evaluation



**Fabrication**

Using **Solarban® R100** glass as a second-surface coating on a clear or tinted substrate requires that the glass be heat-treated. These products, which are made to order, are sold exclusively through the more than 65 members of the PPG Certified Fabricator Network. All PPG Certified Fabricators are equipped to meet tight construction deadlines and can accelerate the delivery of replacement glass during and after construction.



**Additional Resources**

**Solarban R100** solar control, low-e glass is just one of the **EcoLogical Building Solutions** from PPG. For more information or to obtain samples of **Solarban R100** glass, call **1-888-PPG-IDEA**, or visit [www.ppgideascape.com](http://www.ppgideascape.com). All PPG architectural glass is Cradle to Cradle Certified.™



*Solarban R100 glass balances reflectivity and color-neutrality to harmonize with colorful spandrels and other building materials. The sample on the left has been opacified to simulate the exterior appearance of Solarban R100 glass on a building during daylight hours.*

**Solarban® R100 Glass Performance — Commercial Insulating Glass Unit Comparisons Using 1/4" (6mm) Glass**

Insulating Vision Unit Performance Comparisons 1-inch (25mm) units with 1/2-inch (13mm) airspace and two 1/4-inch (6mm) lites; as shown below											
Glass Type	Transmittance			Reflectance		(BTU/hr•ft²•F) NFRC U-Value		U-Value EN 673 (W/m²•K)	Shading Coefficient	Solar Heat Gain Coefficient	Light to Solar Gain (LSG)
	Ultra-violet %	Visible %	Total Solar Energy %	Visible Light %	Total Solar Energy %	Winter Night-time	Summer Day-time				
<b>SOLARBAN® R100 Solar Control Low-E Glass</b>											
SOLARBAN R100 (2) STARPHIRE*	16	44	21	33	57	0.29	0.27	1.55	0.27	0.23	1.87
SOLARBAN R100 (2) + Clear	12	42	19	32	41	0.29	0.27	1.55	0.27	0.23	1.79
SOLARBAN R100 (2) SOLEXIA + Clear	6	36	15	25	17	0.29	0.27	1.55	0.24	0.21	1.72
SOLARBAN R100 (2) ATLANTICA + Clear	3	32	12	21	11	0.29	0.27	1.55	0.22	0.19	1.67
SOLARBAN R100 (2) CARIBIA + Clear	5	32	12	20	11	0.29	0.27	1.55	0.22	0.19	1.67
SOLARBAN R100 (2) AZURIA + Clear	8	32	12	21	11	0.29	0.27	1.55	0.22	0.19	1.66
SOLARBAN R100 (2) OPTIBLUE + Clear	8	30	15	19	31	0.29	0.27	1.55	0.23	0.20	1.50
SOLARBAN R100 (2) PACIFICA + Clear	3	20	9	11	9	0.29	0.27	1.55	0.19	0.16	1.24
SOLARBAN R100 (2) SOLARBLUE + Clear	6	26	12	15	17	0.29	0.27	1.55	0.22	0.19	1.40
SOLARBAN R100 (2) SOLARBRONZE + Clear	5	25	12	15	21	0.29	0.27	1.55	0.21	0.18	1.38
SOLARBAN R100 (2) SOLARGRAY + Clear	5	21	10	12	16	0.29	0.27	1.55	0.19	0.17	1.23

\* Data based on using Starphire glass for both interior and exterior lites.

All performance data calculated using LBNL Window 5.2 software, except European U-Value, which is calculated using WinDat version 3.0.1 software. For detailed information on the methodologies used to calculate the aesthetic and performance values in this table, please visit [www.ppgideascape.com](http://www.ppgideascape.com) or request our Architectural Glass Catalog.

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