

### Aesthetic Description

**Solarban**® z50 glass by PPG, features a steel blue-gray appearance together with minimal exterior reflectance and high levels of visible light transmittance. **Solarban** z50 glass has been engineered to complement the architectural design of a building, not to overpower it. **Solarban** z50 glass can also be combined in an insulating unit with other PPG tinted glasses to open up a broader array of colors and performance (see table on back).

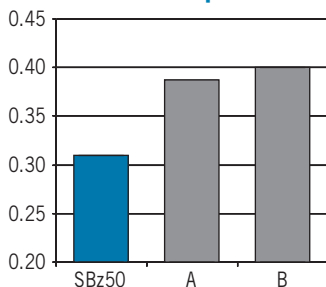
**Solarban** z50 glass was developed by PPG to meet the growing demand for a neutral-gray architectural glass that manages glare control, while providing the daylighting and solar control properties required to support the principles of sustainable design. While delivering a Solar Heat Gain Coefficient (SHGC) that is up to 23 percent better than competing products (see chart below), **Solarban** z50 glass also maintains a low interior reflectance level of just 11%, providing interior building occupants with a clear, natural view of the outdoors.

While delivering a range of superior solar control performance features, **Solarban** z50 glass is price-competitive with other architectural glasses offering similar aesthetics.

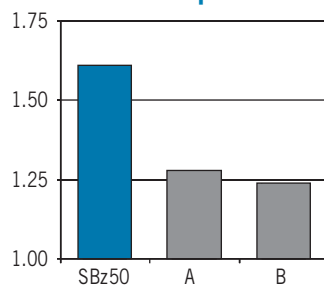


*The neutral-gray appearance of Solarban z50 glass demonstrates minimal exterior reflectance and provides high levels of visible light transmittance. Solarban z50 glass' combination of excellent solar control performance and pleasing aesthetics make it the perfect fit for many designs.*

SHGC Comparison



LSG Comparison



As these charts demonstrate, **Solarban** z50 glass has a lower Solar Heat Gain Coefficient (left chart) and a higher Light to Solar Gain ratio (right chart) than leading competitive products with similar aesthetics, labeled A and B respectively.

### Sustainable Design and Architectural Glass

Sustainable design, green building, safeguarding the environment and the long-term management of energy costs are vital considerations for contemporary building

designers. Like other high-performance architectural glasses from PPG, including **Solarban**® 70XL glass and **Solarban**® 60 glass, **Solarban** z50 glass gives architects and building owners a tool to reach their design objectives. Sustainable design and LEED credit support is provided according to the following criteria:

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

**Performance Characteristics**

**Solarban** z50 glass offers an exceptional Light to Solar Gain (LSG) ratio, combining a Visible Light Transmittance (VLT) of 51% and a Solar Heat Gain Coefficient (SHGC) of 0.31 in a standard 1" insulating unit with clear glass. The resulting LSG ratio of 1.64 is 28 to 30 percent higher than the current competitive products in the same category (see chart on previous page). The excellent LSG ratio of **Solarban** z50 glass surpasses by far the minimum threshold for spectral selectivity established by the U.S. Department of Energy\*. Some glasses in this category do not meet this required minimum. To provide year-round comfort, **Solarban** z50 glass delivers an outstanding winter nighttime U-Value of 0.29.

\*The U.S. Department of Energy defines spectrally selective glass as any glass with a Light to Solar Gain (LSG) ratio of 1.25 or better. LSG is a derivative of Solar Heat Gain Coefficient (SHGC) and Visible Light Transmittance (VLT).

**Fabrication**

Manufactured with an MSVD coating, **Solarban** z50 glass is available exclusively through PPG's certified fabricator network and can be annealed, heat-strengthened, tempered and laminated. More than 60 locations of the PPG Certified Fabricator Network. PPG Certified Fabricators can meet tight construction deadlines and accelerate the delivery of replacement glass before, during and after construction.



**Additional Resources**

PPG created **EcoLogical Building Solutions**, a collection of glass, coatings and paint products, such as **Solarban** z50 glass, to help architects and building owners practice the principles of sustainable design. For more information on **EcoLogical Building Solutions** from PPG, or to obtain samples of **Solarban** z50 glass, call 1-888-PPG-IDEA or visit [www.ppgideascales.com](http://www.ppgideascales.com). All PPG architectural glass is Cradle to Cradle Certified.<sup>CM</sup>



**PPG IdeaScapes™** Integrated products, people and services to inspire your design and color vision.

**Solarban® z50 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											
	Glass Type	Transmittance			Reflectance		U-Value (Imperial)		European U-Value	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>Coated</b>												
<b>SOLARBAN® Glass with z50 Solar Control Low-E</b>												
SOLARBAN z50 (2) OPTIBLUE + Clear	14	51	26	8	23	0.29	0.27	1.55	0.36	0.31	1.64	
SOLARBAN z50 (2) OPTIBLUE + OPTIBLUE	11	37	20	7	23	0.29	0.27	1.55	0.35	0.31	1.18	
AZURIA + SOLARBAN z50 (3) OPTIBLUE	10	39	16	8	7	0.29	0.27	1.55	0.35	0.30	1.31	
ATLANTICA + SOLARBAN z50 (3) OPTIBLUE	4	39	15	8	7	0.29	0.27	1.55	0.34	0.30	1.28	
CARIBIA + SOLARBAN z50 (3) OPTIBLUE	6	39	15	8	7	0.29	0.27	1.55	0.34	0.30	1.29	
SOLEXIA + SOLARBAN z50 (3) OPTIBLUE	8	44	19	10	11	0.29	0.27	1.55	0.41	0.35	1.26	
PACIFICA + SOLARBAN z50 (3) OPTIBLUE	4	25	12	6	7	0.29	0.27	1.55	0.28	0.24	1.01	
SOLARBLUE + SOLARBAN z50 (3) OPTIBLUE	8	32	17	7	13	0.29	0.27	1.55	0.36	0.31	1.03	
SOLARBRONZE + SOLARBAN z50 (3) OPTIBLUE	7	30	16	7	17	0.29	0.27	1.55	0.35	0.31	0.98	
SOLARGRAY + SOLARBAN z50 (3) OPTIBLUE	6	25	14	6	13	0.29	0.27	1.55	0.32	0.28	0.91	
<b>VISTACOOL™ Subtly Reflective, Color-Enriched Glass with SOLARBAN z50 Solar Control Low-E</b>												
VISTACOOL (2) AZURIA + SOLARBAN z50 (3) OPTIBLUE	9	30	12	20	11	0.29	0.27	1.55	0.29	0.25	1.20	
VISTACOOL (2) CARIBIA + SOLARBAN z50 (3) OPTIBLUE	5	30	12	19	11	0.29	0.27	1.55	0.29	0.25	1.20	
VISTACOOL (2) PACIFICA + SOLARBAN z50 (3) OPTIBLUE	4	19	9	11	9	0.29	0.27	1.55	0.24	0.21	0.91	
VISTACOOL (2) SOLARGRAY + SOLARBAN z50 (3) OPTIBLUE	5	20	11	11	15	0.29	0.27	1.55	0.27	0.24	0.82	

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.ppgideascales.com](http://www.ppgideascales.com) or request our Architectural Glass Catalog.

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