



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 4 mm + 12 mm Gap + 4 mm	UV %	Visible Light			Solar Energy					U-Values W/m ² *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) ACUIITY + ACUIITY	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) ACUIITY + ACUIITY	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) ACUIITY + ACUIITY	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® R77 Double Silver Subtly Reflective Low-e Glasses

SOLARBAN R77 (2) STARPHIRE + STARPHIRE	17	50	26	16	58	24	0.28	0.25	0.29	1.65	1.36	1.59	1.26	1.6	1.2	1.98
SOLARBAN R77 (2) ACUIITY + ACUIITY	16	49	26	16	53	23	0.28	0.25	0.29	1.65	1.36	1.59	1.26	1.6	1.2	1.95
SOLARBAN R77 (2) Clear + Clear	15	48	26	16	45	22	0.28	0.25	0.29	1.65	1.36	1.59	1.26	1.6	1.2	1.91
SOLARBAN R77 (2) OPTIBLUE + Clear	12	38	18	16	37	18	0.24	0.22	0.26	1.65	1.36	1.59	1.26	1.6	1.2	1.71
SOLARBAN R77 (2) OPTIGRAY + Clear	9	38	17	16	26	17	0.24	0.22	0.26	1.65	1.36	1.59	1.26	1.6	1.2	1.70
SOLARBAN R77 (2) SOLARGRAY + Clear	8	30	13	16	22	14	0.21	0.20	0.23	1.65	1.36	1.59	1.26	1.6	1.2	1.50

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) ACUIITY + ACUIITY	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) ACUIITY + ACUIITY	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 Tower

Product: Solarban® R100 on Optiblu®

Location: Singapore

Architect: Aurecon

Vitro Certified™ Fabricator: Wujiang Golden Glass

Glassing 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/m²*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 4 mm + 16 mm Gap + 4 mm	CRI	UV %	Visible Light			Solar Energy					U-Values W/m ² *K						LSG
			Trans %	Reflectance %		Refl %	Trans %	SF 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® R77 Double Silver Subtly Reflective Low-e Glasses

SOLARBAN R77 (2) STARPHIRE + STARPHIRE	98	17	50	26	16	58	23.52	0.28	0.25	0.29	1.70	1.42	1.32	1.04	1.30	1.10	1.99
SOLARBAN R77 (2) ACUIITY + ACUIITY	97	16	49	26	16	53	22.89	0.28	0.25	0.29	1.70	1.42	1.32	1.04	1.30	1.10	1.97
SOLARBAN R77 (2) Clear + Clear	95	15	48	26	16	45	21.59	0.27	0.25	0.29	1.70	1.42	1.32	1.04	1.30	1.10	1.94
SOLARBAN R77 (2) OPTIBLUE + Clear	93	12	38	18	16	37	17.93	0.24	0.22	0.25	1.70	1.42	1.32	1.04	1.30	1.10	1.74
SOLARBAN R77 (2) OPTIGRAY + Clear	95	9	38	17	16	26	16.75	0.23	0.22	0.25	1.70	1.42	1.32	1.04	1.30	1.10	1.74
SOLARBAN R77 (2) SOLARGRAY + Clear	95	8	30	13	16	22	13.79	0.20	0.19	0.22	1.70	1.42	1.32	1.04	1.30	1.10	1.55

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 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. Construct custom glass units from a virtually unlimited number of glazing configurations at construct.vitroglazings.com.

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

Glass Configuration 6 mm + 12 mm Gap + 6 mm	CRI	UV %	Visible Light			Solar Energy					U-Values W/m ² *K						LSG
			Trans %	Reflectance %		Refl %	Trans %	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	1.35	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® R77 Double Silver Subtly Reflective Low-e Glasses

SOLARBAN R77 (2) STARPHIRE + STARPHIRE	98	19	50	26	16	56	23	0.28	0.25	0.29	1.64	1.36	1.58	1.25	1.6	1.2	1.96
SOLARBAN R77 (2) ACUITY + ACUITY	95	16	49	26	16	51	22	0.28	0.25	0.29	1.64	1.36	1.58	1.25	1.6	1.2	1.93
SOLARBAN R77 (2) Clear + Clear	94	13	47	25	16	40	21	0.27	0.25	0.29	1.64	1.36	1.58	1.25	1.6	1.2	1.88
SOLARBAN R77 (2) AZURIA + Clear	76	9	36	17	16	10	14	0.22	0.21	0.24	1.64	1.36	1.58	1.25	1.6	1.2	1.74
SOLARBAN R77 (2) ATLANTICA + Clear	83	4	35	16	16	10	13	0.21	0.20	0.23	1.64	1.36	1.58	1.25	1.6	1.2	1.74
SOLARBAN R77 (2) SOLEXIA + Clear	87	7	41	20	16	15	16	0.24	0.23	0.26	1.64	1.36	1.58	1.25	1.6	1.2	1.80
SOLARBAN R77 (2) OPTIBLUE + Clear	90	10	34	15	16	31	16	0.23	0.21	0.24	1.64	1.36	1.58	1.25	1.6	1.2	1.59
SOLARBAN R77 (2) PACIFICA + Clear	70	4	23	9	15	8	10	0.17	0.17	0.20	1.64	1.36	1.58	1.25	1.6	1.2	1.32
SOLARBAN R77 (2) SOLARBLUE + Clear	83	7	30	13	16	17	13	0.21	0.20	0.23	1.64	1.36	1.58	1.25	1.6	1.2	1.48
SOLARBAN R77 (2) SOLARBRONZE + Clear	96	6	28	12	16	20	13	0.19	0.19	0.22	1.64	1.36	1.58	1.25	1.6	1.2	1.47
SOLARBAN R77 (2) OPTIGRAY + Clear	93	7	33	15	16	19	14	0.22	0.21	0.24	1.64	1.36	1.58	1.25	1.6	1.2	1.59
SOLARBAN R77 (2) SOLARGRAY + Clear	93	6	23	10	15	16	11	0.18	0.18	0.20	1.64	1.36	1.58	1.25	1.6	1.2	1.32

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

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

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

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) ACUIITY + ACUIITY	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

VISTACOOl® Subtly Reflective Glasses

VISTACOOl(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
VISTACOOl(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
VISTACOOl(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
VISTACOOl(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
VISTACOOl(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
VISTACOOl(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
ACUIITY + ACUIITY	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

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

Glass Configuration 6 mm + 16 mm Gap + 6 mm	CRI	UV %	Visible Light			Solar Energy					U-Values W/m ² *K						LSG
			Trans %	Reflectance %		Refl %	Trans %	SF 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® R77 Double Silver Subtly Reflective Low-e Glasses

SOLARBAN R77 (2) STARPHIRE + STARPHIRE	98	19	50	26	16	56	23	0.28	0.25	0.29	1.68	1.41	1.31	1.04	1.3	1.1	1.98
SOLARBAN R77 (2) ACUITY + ACUITY	95	16	49	26	16	51	22	0.28	0.25	0.29	1.68	1.41	1.31	1.04	1.3	1.1	1.96
SOLARBAN R77 (2) Clear + Clear	94	13	47	25	16	40	21	0.27	0.25	0.28	1.68	1.41	1.31	1.04	1.3	1.1	1.91
SOLARBAN R77 (2) OPTIBLUE + Clear	90	10	34	15	16	31	16	0.22	0.21	0.24	1.68	1.41	1.31	1.04	1.3	1.1	1.63
SOLARBAN R77 (2) OPTIGRAY + Clear	93	7	33	15	16	19	14	0.21	0.20	0.23	1.68	1.41	1.31	1.04	1.3	1.1	1.64
SOLARBAN R77 (2) SOLARGRAY + Clear	93	6	23	10	15	16	11	0.17	0.17	0.20	1.68	1.41	1.31	1.04	1.3	1.1	1.36

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 8 mm + 12 mm Gap + 8 mm	CRI	UV %	Visible Light			Solar Energy					U-Values W/m ² *K						LSG
			Reflectance %			Refl %	Trans %	SF EN410	SHGC	SC	Win-NFRC		Sum-NFRC		EN 673		
			Trans %	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	0.27	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® R77 Double Silver Subtly Reflective Low-e Glasses

SOLARBAN R77 (2) STARPHIRE + STARPHIRE	98	19	49	26	16	55	23	0.28	0.25	0.29	1.62	1.35	1.57	1.25	1.6	1.2	1.95
SOLARBAN R77 (2) ACUITY + ACUITY	96	16	48	26	16	47	22	0.28	0.25	0.29	1.62	1.35	1.57	1.25	1.6	1.2	1.91
SOLARBAN R77 (2) Clear + Clear	92	12	46	25	16	34	20	0.27	0.25	0.29	1.62	1.35	1.57	1.25	1.6	1.2	1.84
SOLARBAN R77 (2) AZURIA + Clear	68	8	32	15	15	8	12	0.20	0.19	0.22	1.62	1.35	1.57	1.25	1.6	1.2	1.66
SOLARBAN R77 (2) ATLANTICA + Clear	78	2	31	14	15	8	11	0.19	0.19	0.21	1.62	1.35	1.57	1.25	1.6	1.2	1.67
SOLARBAN R77 (2) SOLEXIA + Clear	83	5	38	19	16	12	14	0.22	0.22	0.25	1.62	1.35	1.57	1.25	1.6	1.2	1.76
SOLARBAN R77 (2) OPTIBLUE + Clear	87	8	29	13	15	24	13	0.21	0.20	0.23	1.62	1.35	1.57	1.25	1.6	1.2	1.45
SOLARBAN R77 (2) PACIFICA + Clear	60	2	17	7	15	6	7	0.15	0.15	0.17	1.62	1.35	1.57	1.25	1.6	1.2	1.10
SOLARBAN R77 (2) SOLARBLUE + Clear	77	5	24	10	15	12	11	0.19	0.18	0.21	1.62	1.35	1.57	1.25	1.6	1.2	1.33
SOLARBAN R77 (2) SOLARBRONZE + Clear	95	4	22	10	15	14	10	0.17	0.17	0.20	1.62	1.35	1.57	1.25	1.6	1.2	1.29
SOLARBAN R77 (2) OPTIGRAY + Clear	90	6	28	12	15	14	12	0.20	0.19	0.22	1.62	1.35	1.57	1.25	1.6	1.2	1.46
SOLARBAN R77 (2) SOLARGRAY + Clear	90	5	23	10	15	16	11	0.15	0.18	0.20	1.62	1.35	1.57	1.25	1.6	1.2	1.31

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 8 mm + 12 mm Gap + 8 mm	CRI	UV %	Visible Light			Solar Energy					U-Values W/m ² *°K						LSG
			Reflectance %			Refl %	Trans %	SF EN410	SHGC	SC	Win-NFRC		Sum-NFRC		EN 673		
			Trans %	Ext	Int						air	argon	air	argon	air	argon	

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 8 mm + 16 mm Gap + 8 mm	CRI	UV %	Visible Light			Solar Energy					U-Values W/m ² *K						LSG
			Trans %	Reflectance %		Refl %	Trans %	SF 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® R77 Double Silver Subtly Reflective Low-e Glasses

SOLARBAN R77 (2) STARPHIRE + STARPHIRE	98	19	49	26	16	55	23	0.28	0.25	0.29	1.67	1.41	1.30	1.04	1.3	1.1	1.97
SOLARBAN R77 (2) ACUITY + ACUITY	96	12	46	25	16	34	20	0.28	0.25	0.28	1.67	1.41	1.30	1.04	1.3	1.1	1.87
SOLARBAN R77 (2) Clear + Clear	92	12	46	25	16	34	20	0.27	0.25	0.28	1.67	1.41	1.30	1.04	1.3	1.1	1.87
SOLARBAN R77 (2) OPTIBLUE + Clear	87	8	29	13	15	24	13	0.20	0.19	0.22	1.67	1.41	1.30	1.04	1.3	1.1	1.49
SOLARBAN R77 (2) OPTIGRAY + Clear	90	6	28	12	15	14	12	0.19	0.19	0.21	1.67	1.41	1.30	1.04	1.3	1.1	1.51
SOLARBAN R77 (2) SOLARGRAY + Clear	90	5	23	10	15	16	11	0.14	0.17	0.20	1.67	1.41	1.30	1.04	1.3	1.1	1.35

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 10 mm + 12 mm Gap + 10 mm	UV %	Visible Light			Solar Energy					U-Values W/m ² *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® R77 Double Silver Subtly Reflective Low-e Glasses

SOLARBAN R77 (2) STARPHIRE + STARPHIRE	18	49	26	16	53	23	0.28	0.25	0.29	1.61	1.34	1.56	1.24	1.6	1.2	1.94
SOLARBAN R77 (2) ACUITY + ACUITY	15	48	25	16	45	22	0.27	0.25	0.29	1.61	1.34	1.56	1.24	1.6	1.2	1.89
SOLARBAN R77 (2) Clear + Clear	11	45	25	16	31	19	0.26	0.25	0.29	1.61	1.34	1.56	1.24	1.6	1.2	1.81
SOLARBAN R77 (2) OPTIBLUE + Clear	7	26	11	15	21	12	0.19	0.19	0.22	1.61	1.34	1.56	1.24	1.6	1.2	1.36
SOLARBAN R77 (2) OPTIGRAY + Clear	5	25	11	15	11	11	0.17	0.18	0.21	1.61	1.34	1.56	1.24	1.6	1.2	1.38
SOLARBAN R77 (2) SOLARGRAY + Clear	3	14	7	15	9	7	0.13	0.15	0.17	1.61	1.34	1.56	1.24	1.6	1.2	0.97

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 6 mm + 1.52 mm PVB + 6 mm	UV %	Visible Light			Solar Energy					U-Values W/m ² *°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 for more product information.

Performance for Monolithic Glasses

Glass	Thickness (mm)	Visible Light			Solar Energy			U-Values W/m ² *K			LSG
		Trans %	Reflectance %		SF	SHGC	SC	Win-NFRC	Sum-NFRC	EN 673	
			Ext	Int	EN410						
Uncoated											
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
Reflective Coated Tinted Glasses											
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

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