

Product Performance and Characteristics

All simulations completed with 2" airspace between shade and glass

															Compared to window w/o shade			
			% Total Solar Transmittance	% Total Solar Reflectance	% Total Solar Absorbance	% Visible Transmittance	% Visible Reflectance (exterior)	% Visible Reflectance (interior)	Winter U-value	Shading Coefficient	% UV Rejected	Emissivity	Solar Heat Gain Coefficient (SHGC)	% Total Solar Energy Rejected	Light-to-Solar Heat Gain Ratio (LSG)	% Summer Solar Heat Gain Reduction	% Winter Heat Loss Reduction	% Glare Reduction
CHART 1: Single-Pane, 1/8 inch (3mm), Clear																		
Window without shade applied:			83	8	9	90	8	8	1.03	1.00	29	0.84	0.86	14	1.05	-	-	-
Window with shade applied:																		
Neutral	RS-10 B/B	Bronze/Bronze	20	22	58	11	17	11	0.46	0.60	99.9	0.72	0.51	49	0.21	40	55	88
	RS-10 G/G	Grey/Grey	20	21	59	7	16	9	0.46	0.60	99.9	0.72	0.51	49	0.14	40	55	92
	RSN 1050	Light Grey	42	16	42	47	18	17	0.48	0.74	99.9	0.81	0.64	36	0.74	26	54	48
Silver	RS-2 B/CW	Bronze/Silver	3	65	32	2	77	17	0.46	0.19	99.9	0.68	0.16	84	0.13	81	55	98
	RS-2 G/CW	Grey/Silver	3	63	34	3	74	18	0.46	0.20	99.9	0.65	0.17	83	0.18	80	55	97
	RS-10 G/GO	Grey/Gold	6	48	46	5	47	15	0.45	0.33	99.9	0.64	0.28	72	0.18	67	56	94
Specialty	RS-4 BG/BG	Steel Blue/Steel Blue	19	19	62	4	13	7	0.48	0.62	99.9	0.77	0.54	46	0.07	38	54	96
	RS-0 WH/WH	White/White	0.1	81	19	0.1	99	98	0.50	0.10	100	0.77	0.10	91	0.01	90	52	100
CHART 2: Single-Pane, 1/4 inch (6mm), Clear																		
Window without shade applied:			77	7	16	88	8	8	1.03	0.94	38	0.84	0.82	18	1.07	-	-	-
Window with shade applied:																		
Neutral	RS-10 B/B	Bronze/Bronze	18	19	63	11	16	11	0.46	0.57	99.9	0.72	0.49	51	0.22	43	56	88
	RS-10 G/G	Grey/Grey	17	18	65	7	15	9	0.46	0.57	99.9	0.72	0.49	51	0.14	43	55	92
	RSN 1050	Light Grey	39	14	47	46	18	17	0.47	0.70	99.9	0.81	0.60	40	0.76	30	54	49
Silver	RS-2 B/CW	Bronze/Silver	2	56	42	2	74	17	0.46	0.19	99.9	0.68	0.17	84	0.12	81	55	98
	RS-2 G/CW	Grey/Silver	3	55	42	2	72	18	0.45	0.20	99.9	0.65	0.17	83	0.12	80	56	98
	RS-10 G/GO	Grey/Gold	6	41	53	5	46	15	0.44	0.32	99.9	0.64	0.28	72	0.18	68	57	94
Specialty	RS-4 BG/BG	Steel Blue/Steel Blue	17	16	67	4	13	7	0.47	0.59	99.9	0.77	0.51	49	0.08	41	54	96
	RS-0 WH/WH	White/White	0.1	81	19	0.1	99	98	0.50	0.10	100	0.77	0.10	91	0.01	90	52	100
CHART 3: Dual-Pane, 1/8 inch (3mm), Clear																		
Window without shade applied:			70	13	17	81	15	15	0.48	0.88	44	0.84	0.76	24	1.07	-	-	-
Window with shade applied:																		
Neutral	RS-10 B/B	Bronze/Bronze	17	23	60	10	22	11	0.30	0.60	99.9	0.72	0.52	48	0.19	40	71	89
	RS-10 G/G	Grey/Grey	16	22	62	7	21	9	0.30	0.60	99.9	0.72	0.52	48	0.14	40	71	92
	RSN 1050	Light Grey	36	19	45	43	23	19	0.30	0.70	99.9	0.81	0.60	40	0.72	30	71	52
Silver	RS-2 B/CW	Bronze/Silver	2	56	42	2	72	18	0.29	0.23	99.9	0.67	0.20	80	0.10	77	72	98
	RS-2 G/CW	Grey/Silver	2	56	42	2	73	18	0.29	0.23	99.9	0.69	0.20	80	0.10	77	72	98
	RS-10 G/GO	Grey/Gold	5	42	53	4	48	15	0.29	0.37	99.9	0.64	0.31	69	0.13	63	72	96
Specialty	RS-4 BG/BG SR	Steel Blue/Steel Blue	16	20	64	3	19	7	0.30	0.63	99.9	0.77	0.54	46	0.06	37	71	97
	RS-0 WH/WH	White/White	0.1	81	19	0.1	99	98	0.50	0.10	100	0.77	0.10	91	0.01	90	52	100
CHART 4: Dual-Pane, 1/4 inch (6mm), Clear																		
Window without shade applied:			61	11	28	79	14	14	0.47	0.81	54	0.84	0.70	30	1.13	-	-	-
Window with shade applied:																		
Neutral	RS-10 B/B	Bronze/Bronze	14	18	68	10	21	11	0.29	0.56	99.9	0.72	0.48	52	0.21	44	72	89
	RS-10 G/G	Grey/Grey	13	18	69	6	20	9	0.30	0.56	99.9	0.72	0.48	52	0.12	44	71	93
	RSN 1050	Light Grey	31	16	53	42	22	19	0.30	0.64	99.9	0.81	0.55	45	0.77	36	71	53
Silver	RS-2 B/CW	Bronze/Silver	2	44	54	2	68	18	0.28	0.25	99.9	0.67	0.21	79	0.09	75	73	98
	RS-2 G/CW	Grey/Silver	1	44	55	2	68	18	0.28	0.25	99.9	0.69	0.21	79	0.09	75	73	98
	RS-10 G/GO	Grey/Gold	4	33	63	4	45	15	0.29	0.37	99.9	0.64	0.31	69	0.13	64	72	96
Specialty	RS-4 BG/BG SR	Steel Blue/Steel Blue	12	16	72	3	18	7	0.30	0.58	99.9	0.77	0.50	50	0.06	42	71	97
	RS-0 WH/WH	White/White	0.1	81	19	0.1	99	98	0.50	0.10	100	0.77	0.10	91	0.01	90	52	100

Definitions

Total Solar Spectrum Wavelength of 300-2100 Nanometers (nm) (contains all of below)

Solar Ultraviolet Spectrum Wavelengths of 300-380 nm (causes fading/sunburn)

Solar Visible Spectrum Wavelengths of 380-780 nm (what is seen by eyesight)

Solar Infrared Spectrum Wavelengths of 700-2100 nm (causes temperate rise) Solar energy is transmitted/passed through, absorbed/collected by and/or reflected/rejected outwards as it relates to windows and window treatments.

- Total Solar Transmission: Percentage of total solar energy (ultraviolet, visible and infrared) that is allowed to pass through a window and associated window treatments.
- Total Solar Reflection: Percentage to total solar energy (ultraviolet, visible, and infrared) that is reflected outwards by the window and associated window treatments.
- Total Solar Absorptance: Percentage of total solar energy (ultraviolet, visible and infrared) that is absorbed or built up in the window and associated window treatments compared to the total available energy in the full solar spectrum. This is the amount of total solar energy that is neither reflected outside nor transmitted inside.
- Shading Coefficient: A factor that defines the performance of a window and associated window treatments to control total solar energy by a measurement system based on clear, 3 millimeter thick glass. The lower the value the better the control.
- Visible Light Transmission: Percentage of visible solar energy that is allowed to pass through a window and associated window treatments.
- Ultraviolet Light Rejected: Percentage of ultraviolet solar energy that is rejected.
- Glare Reduction: Percentage of visible solar energy that is not allowed (rejected) to pass through a window and associated window treatments. The near opposite of Visible Light Transmission.
- Total Solar Energy Rejected: Percentage of the solar energy in the total solar spectrum that is reflected or absorbed by the window and associated window treatments.
- Color Rendering: A general expression for the appearance of surface colors when illuminated by light from a given source compared with the appearance when lit by some reference source.

Test Methods

- The Total Solar Transmittance and Total Solar Reflectance have been determined from spectrophotometric data on the glazing system. The solar spectrum at air mass 2 is given by Moon1 and the reflectance values corrected to absolute have been used.
- The Visible Light Transmittance and Visible Light Reflectance have been calculated from spectrophotometric data using the C.I.E. standard observer (C.I.E., 1924 and 1931) and D-65 daylight.
- The Ultraviolet Transmittance has been calculated for the passage of solar ultra-violet radiation from 300 to 380 nm at air mass 2.
- The Shading Coefficient and Total Solar Energy Rejected were calculated from summer conditions in accordance with methods given by ASHRAE. The conditions used were: Indoor temperature of 75F, outdoor of 90F, indoor air movement by natural convection, outdoor air velocity 6.3 m.p.h. and solar intensity of 248 btu/hr.-ft.2.
- All of the data was obtained from typical production materials and are subject to normal film manufacturing tolerances. All the values given are intended from design use only. Performance data was obtained from internal tests performed 1-03/6-04 representing film specifications only (does not include glass). Where applicable, the film is tested with reflective surface facing outward.
- Performance numbers are for shade materials applied to specific window types. Residential single-pane and dual pane 1/8 " (3mm) clear glass. Commercial single-pane and dual-pane 1/4 " (6mm) clear glass.
- Testing performed to ASTM Standards and performance values determined using LBNL Window 5.2 software.
- The designer series meets the requirements of NFPA 701 Test Method 1-2004 Edition.
- Gauge on the textured shades is specified before embossing.

