



Table of Performance Values¹

Glass Thickness		Transmittance ²			Reflectance ²		U-Value ⁴ (Imperial)		K-Value ⁴ (Metric)		Shading Coefficient ⁵	Solar Heat Gain Coefficient ⁶	Light to Solar Gain (LSG) ⁷
Inches	mm	Ultra-violet %	Visible %	Total Solar Energy %	Visible Light %	Total Solar Energy %	Winter Night-time	Summer Day-time	Winter Night-time	Summer Day-time			
Uncoated													
STARPHIRE® Glass													
1/8	3	67	91	90	8	8	1.04	0.94	5.91	5.34	1.04	0.91	1.00
3/16	5	62	91	90	8	8	1.03	0.93	5.85	5.28	1.04	0.89	1.02
1/4	6	59	91	89	8	8	1.03	0.93	5.85	5.28	1.03	0.89	1.03
5/16	8	55	91	88	8	8	1.01	0.91	5.74	5.17	1.03	0.89	1.03
3/8	10	53	91	87	8	8	1.00	0.91	5.68	5.17	1.02	0.88	1.04
1/2	12	49	91	86	8	8	0.98	0.89	5.57	5.06	1.01	0.87	1.05
5/8	15	46	90	84	8	8	0.97	0.87	5.48	4.97	1.00	0.87	1.03
3/4	19	44	90	83	8	8	0.95	0.86	5.39	4.89	0.99	0.86	1.05
CLEAR Glass													
3/32	2.5	77	90	85	9	9	1.04	0.94	5.91	5.34	1.00	0.87	1.03
1/8	3	73	90	83	9	8	1.04	0.94	5.91	5.34	0.98	0.85	1.06
5/32	4	71	90	81	9	8	1.04	0.93	5.91	5.28	0.97	0.84	1.07
3/16	5	69	89	79	9	7	1.03	0.93	5.85	5.28	0.96	0.83	1.08
1/4	6	66	89	77	9	7	1.03	0.93	5.85	5.28	0.94	0.81	1.10
5/16	8	61	88	72	8	7	1.01	0.91	5.74	5.17	0.90	0.77	1.14
3/8	10	58	87	69	8	7	1.00	0.91	5.68	5.17	0.88	0.76	1.15
1/2	12	53	85	64	8	6	0.98	0.89	5.57	5.06	0.84	0.72	1.18
5/8	15	48	84	59	8	6	0.97	0.87	5.48	4.97	0.80	0.69	1.22
3/4	19	45	82	55	8	6	0.95	0.86	5.39	4.89	0.77	0.67	1.22
SOLEXIA™ Glass													
1/8	3	43	83	60	8	6	1.04	0.94	5.91	5.34	0.81	0.70	1.19
5/32	4	39	81	56	8	6	1.04	0.93	5.91	5.28	0.78	0.67	1.21
3/16	5	35	79	52	8	6	1.03	0.93	5.85	5.28	0.75	0.65	1.22
1/4	6	31	77	47	8	6	1.02	0.93	5.79	5.28	0.71	0.61	1.26
ATLANTICA™ Glass													
1/8	3	28	77	48	8	6	1.04	0.94	5.91	5.34	0.72	0.62	1.24
3/16	5	20	71	39	7	5	1.03	0.93	5.85	5.28	0.65	0.56	1.27
1/4	6	16	67	34	7	5	1.02	0.93	5.79	5.28	0.61	0.52	1.28
CARIBIA® Glass													
1/8	3	36	77	46	7	6	1.04	0.94	5.91	5.34	0.70	0.60	1.28
3/16	5	28	71	37	7	5	1.03	0.93	5.85	5.28	0.63	0.54	1.31
1/4	6	24	68	32	7	5	1.02	0.93	5.79	5.28	0.60	0.52	1.32
AZURIA™ Glass													
1/8	3	53	77	45	7	6	1.04	0.94	5.91	5.34	0.69	0.59	1.30
3/16	5	46	72	36	7	5	1.03	0.93	5.85	5.28	0.62	0.53	1.35
1/4	6	42	68	32	7	5	1.02	0.93	5.79	5.28	0.59	0.51	1.34
5/16	8	35	61	26	6	5	1.01	0.91	5.74	5.17	0.55	0.47	1.29
3/8	10	31	57	23	6	5	1.00	0.91	5.68	5.17	0.53	0.46	1.25
SOLARBRONZE® Glass													
1/8	3	39	67	64	7	6	1.04	0.94	5.91	5.34	0.88	0.76	0.88
5/32	4	35	63	60	7	6	1.04	0.93	5.91	5.28	0.81	0.70	0.90
3/16	5	30	58	55	6	6	1.03	0.93	5.85	5.28	0.77	0.66	0.88
1/4	6	26	53	50	6	6	1.02	0.93	5.79	5.28	0.73	0.63	0.84
5/16	8	18	43	39	6	5	1.01	0.91	5.74	5.17	0.65	0.56	0.77
3/8	10	14	37	34	5	5	1.00	0.91	5.68	5.17	0.61	0.52	0.71
1/2	12	9	27	24	5	5	0.98	0.89	5.57	5.06	0.54	0.46	0.58
SOLARGRAY® Glass													
1/8	3	37	60	58	6	6	1.04	0.94	5.91	5.34	0.79	0.68	0.88
5/32	4	33	56	53	6	6	1.04	0.93	5.91	5.28	0.75	0.65	0.87
3/16	5	29	50	48	6	5	1.03	0.93	5.85	5.28	0.71	0.61	0.82
1/4	6	24	44	42	6	5	1.02	0.93	5.79	5.28	0.67	0.58	0.76
5/16	8	17	33	31	5	5	1.01	0.91	5.74	5.17	0.59	0.51	0.65
3/8	10	13	28	26	5	5	1.00	0.91	5.68	5.17	0.55	0.47	0.59
1/2	12	8	18	17	5	5	0.98	0.89	5.57	5.06	0.49	0.42	0.43
OPTIGRAY® 23 Glass													
1/4	6	8	23	19	5	5	1.02	0.93	5.79	5.28	0.50	0.43	0.53
GL-20® Glass													
1/8	3	8	24	22	5	4	1.04	0.94	5.91	5.34	0.51	0.44	0.55
5/32	4	5	18	17	5	4	1.04	0.94	5.91	5.34	0.48	0.41	0.44
3/16	5	3	13	12	4	4	1.03	0.93	5.85	5.28	0.44	0.38	0.32
1/4	6	2	9	8	4	4	1.02	0.93	5.79	5.28	0.41	0.35	0.26
GRAYLITE® Glass													
1/8	3	17	30	43	5	5	1.04	0.94	5.91	5.34	0.68	0.58	0.52
1/4	6	7	14	26	5	5	1.02	0.93	5.79	5.28	0.55	0.47	0.30



PPG Monolithic Glass Comparisons*

Specialty Applications

Table of Performance Values ¹														
Glass Thickness		Transmittance ²			Reflectance ²		U-Value ⁴ (Imperial)		K-Value ⁴ (Metric)		Shading Coefficient ⁵	Solar Heat Gain Coefficient ⁶	Light to Solar Gain (LSG) ⁷	
Inches	mm	Ultra-violet %	Visible %	Total Solar Energy %	Visible Light %	Total Solar Energy %	Winter Night-time	Summer Day-time	Winter Night-time	Summer Day-time				
Coated														
VISTACOO™ (2) AZURIA™ Glass														
1/4	6	29	47	22	21	11	0.47	0.50	2.67	2.84	0.39	0.34	1.38	
VISTACOO™ (2) CARIBIA® Glass														
1/4	6	20	52	26	19	9	1.02	0.92	5.80	5.23	0.53	0.45	1.15	
VISTACOO™ (2) SOLARGRAY® Glass														
1/4	6	20	34	35	11	8	1.02	0.92	5.80	5.23	0.47	0.52	0.65	
SOLARCOOL® (1) SOLEXIA™ Glass														
1/4	6	9	30	23	37	30	1.03	0.93	5.85	5.28	0.44	0.38	0.79	
SOLARCOOL® (2) SOLEXIA™ Glass														
1/4	6	9	30	23	23	37	1.03	0.93	5.85	5.28	0.50	0.43	0.70	
SOLARCOOL® (1) CARIBIA® Glass														
1/4	6	7	26	14	36	30	1.03	0.93	5.85	5.28	0.36	0.31	0.84	
SOLARCOOL® (2) CARIBIA® Glass														
1/4	6	7	26	14	19	9	1.03	0.93	5.85	5.28	0.44	0.38	0.69	
SOLARCOOL® (1) AZURIA™ Glass														
3/16	5	13	27	16	36	30	1.03	0.93	5.85	5.28	0.37	0.32	0.85	
1/4	6	12	26	14	36	30	1.03	0.93	5.85	5.28	0.36	0.31	0.84	
SOLARCOOL® (2) AZURIA™ Glass														
3/16	5	13	27	16	36	10	1.03	0.94	5.85	5.34	0.45	0.39	0.70	
1/4	6	12	26	14	19	10	1.03	0.93	5.85	5.28	0.44	0.38	0.69	
SOLARCOOL® (1) Bronze Glass														
5/32	4	10	24	33	36	30	1.04	0.94	5.91	5.34	0.51	0.44	0.55	
1/4	6	7	21	27	36	30	1.03	0.93	5.85	5.28	0.46	0.40	0.53	
SOLARCOOL® (2) Bronze Glass														
5/32	4	10	24	33	17	14	1.04	0.94	5.91	5.34	0.57	0.49	0.49	
1/4	6	7	21	27	13	11	1.03	0.93	5.85	5.28	0.53	0.46	0.46	
SOLARCOOL® (1) Gray Glass														
1/4	6	7	17	23	36	30	1.03	0.93	5.85	5.28	0.43	0.37	0.46	
SOLARCOOL® (2) Gray Glass														
1/4	6	7	17	23	11	9	1.03	0.93	5.85	5.28	0.51	0.44	0.39	
SOLARCOOL® (1) GRAYLITE® Glass														
1/4	6	2	5	16	36	30	1.03	0.93	5.85	5.28	0.37	0.32	0.16	
SOLARCOOL® (2) GRAYLITE® Glass														
1/4	6	2	5	16	5	6	1.03	0.93	5.85	5.28	0.46	0.40	0.13	

* Performance data is based on representative samples of factory production. Actual values may vary slightly due to variations in the production process.

- Figures may vary due to manufacturing tolerances. All tabulated data is based on NFRC methodology using the LBL's Window 5.2 software.
- Transmittance and reflectance values based on spectrophotometric measurements and energy distribution of solar radiation.
- Solar infrared transmittance between 800 and 2150 nm (Parry Moon AM 2 irradiance).
- U-value (K-value)** is the overall coefficient of heat transmittance or heat flow measured in BTU/hr. • ft² • °F (watts/m²•°C). Lower U-values indicate better insulating performance. Winter nighttime U-values are calculated using an outdoor air temperature of 0°F (-17.8°C), indoor air temperature of 70°F (21°C), outdoor air velocity of 15 mph (6.7 m/s), indoor air velocity of 0 mph (0 m/s) and a solar intensity of 0 BTU/hour/square foot (0 w/m²). Summer daytime U-values are calculated using an outdoor air temperature of 89°F (32°C), indoor air temperature of 75°F (24°C), outdoor air velocity of 7.5 mph (3.4 m/s), indoor air velocity of 0 mph (0 m/s), and a solar intensity of 248 BTU/hour/square foot (783 w/m²).
- Shading Coefficient** is the ratio of the total amount of solar energy that passes through a glass relative to 1/8-in. (3.0 mm) thick clear glass under the same design conditions. It includes both solar energy transmitted directly plus any absorbed solar energy re-radiated and converted. Lower shading coefficient values indicate better performance in reducing summer heat gain. Shading coefficients at outdoor air temperature of 89°F (32°C), outdoor air velocity of 7.5 mph (3.4 m/s), indoor air temperature of 75°F (24°C), indoor air velocity of 0 mph (0 m/s) and solar intensity of 248 BTU/hour/square foot (783 w/m²).
- Solar Heat Gain Coefficient (SHGC)** represents the solar heat gain through the glass relative to the incident solar radiation. It is equal to 86% of the shading coefficient.
- Light to Solar Gain (LSG) ratio** is the ratio of visible light transmittance to solar heat gain coefficient.



One-inch insulating glass data and comparisons can be found at www.ppgideasces.com or by calling the PPG Solutions Hotline at 1-888-774-4332.

For data on: Solargreen® Glass — see Atlantica™ Glass, Solex® Glass — see Solexia™ Glass
Azurlite® Glass — see Azuria™ Glass

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