

GLASS PERFORMANCE COMPARISON CHART

A Note about the Glass Performance Chart: Below you will see what appears at first glance to be a somewhat overwhelming chart. We've included this chart for the more technically inclined consumer to show the performance characteristics of various types of glass used in sunrooms on the market. Unlike NFRC ratings, which measure the performance of the entire window assembly, this chart indicates the Center of Glass values, without the frames or sashes. The values in this chart are taken from Lawrence Berkley National Lab's Windows 4.1, the industry standard program for measuring glass performance. Please be aware that the numbers cited here will be different from the NFRC label that comes on your window, as that label indicates that specific window size and configuration.

Code	Description Construction	Transmittance (%)			Reflectivity (%)		Shading Coefficient THE LOWER THE BETTER	Solar Heat Gain Coefficient THE LOWER THE BETTER	Relative Heat Gain THE LOWER THE BETTER	ASHRAE Winter			European	
		Visible (glare) THE LOWER THE BETTER	Solar	Ultraviolet THE LOWER THE BETTER	Visible Outside	Visible Inside				U-Value THE LOWER THE BETTER	R-Value THE HIGHER THE BETTER	K W/m ² /°C	Heat Gain W/m ²	

NOTES BY COLUMN:
 ● BEST PERFORMANCE

(E.) **VISIBLE LIGHT (Glare)** – The lower the better. A measure of that portion of total solar radiation visible to the human eye. Note: the glare caused by too much light can cause discomfort. Codes 7E and 7B have excellent glare control.

(G.) **UV (Ultraviolet)** – The lower the better. Accounts for about 50% of fabric fading. Eliminating all UV reduces fading by 50%.

(H. & I.) **REFLECTIVITY** – Choose a low number in the vertical area for best clarity and lowest reflectivity.

(L.) **SHADING COEFFICIENT** – The lower the better. Ratio of solar gain to 1/8" clear glass.

(M.) **SOLAR HEAT GAIN COEFFICIENT** – The lower the better. Ratio of total solar heat energy transmitted and absorbed by each layer of a glazing system.

(N.) **RELATIVE HEAT GAIN** – The lower the better. Amount of BTU's gained per hour per square foot of glass.

(O.) **U-VALUE** – BTU/HR/SQ. FT./°F. The lower the better (R = 1/U).

(R.) **R-VALUE** – The higher the better.

(Q. & R.) **EUROPEAN RATINGS** – Similar to US (O. & R) European Environmental Conditions are: Winter Temp Out=32F, Temp In=68F, Wind=7.8mph, Direct Solar=0, T Sky=32F, Summer, Temp Out=89F, Temp In=68F, Wind=7.8mph, Direct Solar=248.2 Btu/h ft. sq, T Sky=89F.

SOURCE: LAWRENCE BERKELEY LAB Windows 4.1 ALL values are center of glass for vertical glass. Calculations based on 90% gas fill rate. All values are based on 1/8" lites of glass with a 5/8" airspace (7/8" overall).

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The use of breather tubes for higher altitudes may impact the performance values documented in this chart.

Four Seasons' Standard Glass – CONSERVAGLASS SELECT™ Exclusive High Performance Insulated Safety Glass

Tempered safety glass which incorporates advanced exotic coating technology with Argon gas filling and exterior glass cleaning and protection features. Ensures superior performance and life expectancy for years of comfortable, cost-effective year-round living.

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7E	MC-7E / Argon / Clear	65	25	5	11	12	0.31	0.27	65	0.25	4.0	1.13	204
7B	MC-16 / Argon / Clear	16	10	7	11	25	0.18	0.15	39	0.25	4.0	1.20	123
7BL	MC-16 / Argon / Laminated	15	9	1	11	24	0.17	0.15	38	0.24	4.2	1.21	120
9E	MC-7E / Argon / Clear / Argon/MC-79	57	21	2	14	17	0.29	0.25	61	0.20	5	1.19	199
9K	MC-7E / Krypton / Clear / Krypton / MC-79	57	21	2	14	17	0.29	0.25	59	0.14	7.1	0.80	191
97A	MC-16 / Argon / Clear / Argon / MC-72	13	6	2	11	19	0.15	0.13	33	0.20	5	1.16	119
97K	MC-16 / Krypton / Clear / Krypton / MC-72	13	6	2	11	19	0.14	0.12	29	0.13	7.7	0.76	102

The Competition's Standard Glass – Single Glazing

Can only be used in unconditioned rooms designed for "part-time" use!

1	Clear Single Glazing	90	83	73	9	9	0.99	0.85	213	1.10	0.9	5.60	672
2	Bronze Single Glazing	67	64	39	7	7	0.84	0.72	183	1.10	0.9	5.60	577
4	Azurlite Single Glazing (Blue)	77	43	36	8	8	0.67	0.57	149	1.10	0.9	5.60	469
7	Green Single Glazing	76	48	28	7	8	0.71	0.61	158	1.10	0.9	5.60	498

The Competition's Standard Glass – Double Glazing

Does not allow for comfortable, cost-effective year-round living. Better than Single Glazing but still not energy efficient.

20	Clear / Clear	81	69	58	16	16	0.88	0.75	183	0.49	2.0	2.60	576
21	Bronze / Clear	61	54	33	11	14	0.72	0.62	151	0.49	2.0	2.60	475
23	Azurlite / Clear (Blue)	70	37	31	13	15	0.54	0.46	115	0.49	2.0	2.60	361

The Competition's Optional Glass – High-Performance Double Glazing

Offers comfortable year-round living but at a significant price increase and an extended lead time.

30	Solar Cool Bronze / SG 500	22	23	8	37	24	0.38	0.32	81	0.35	2.8	1.90	254
	Solar Cool Bronze / Argon / SB60VT	21	11	3	37	17	0.23	0.20	52	0.34	2.9	1.80	165
	Solar Bronze / HM-44 / Clear	28	14	0	30	14	0.24	0.21	53	0.31	3.2	1.70	167
	LoE ² / Argon / Clear	72	38	16	11	12	0.47	0.41	97	0.26	3.85	1.40	309



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