

# Solar Performance Data for Panel Only & System - per NFRC Standards

NFRC 100 - Insulated U-Factor 10mm / 10mm			
Glazing Panel Options	Panel Only (Center of Glass)	System - Panel & Frame (width x height)	
		2000mm x 2000mm (79" x 79"), mill	2000mm x 6096 mm (79" x 240"), mill
10mm/10mm - no added insulation insert	0.23	0.28	0.26
10mm/10mm - with nano 228 insulation insert	0.13	0.17	0.16
10mm/10mm - with super nano insulation insert	0.07	0.11	0.09

NFRC 202 & 201 - 10mm/10mm - Visible Transmittance & Solar Heat Gain								
-- Refer to the table above for the insulation value that corresponds with each insert type --								
Glazing Panel Combination			Panel Only (Center of Glass)		System - Panel & Frame (width x height)			
					2000mm x 2000mm (79" x 79"), mill		2000mm x 6096 mm (79" x 240"), mill	
Exterior	Interior	Additional Insert	VT%	SHGC	VT%	SHGC	VT%	SHGC
Clear	Clear	-	42%	0.44	37%	0.40	39%	0.41
Clear Matte	Ice White Matte	-	*30%	*0.37	*27%	*0.33	*28%	*0.34
Ice White Matte	Ice White Matte	-	25%	0.35	22%	0.32	23%	0.33
Green	Clear Matte	-	*40%	*0.42	*35%	*0.38	*37%	*0.39
Clear Matte	Clear Matte	-	35%	0.39	31%	0.35	33%	0.37
Blue	Clear Matte	-	25%	0.40	22%	0.36	23%	0.38
White Pearl Low-E	Clear Matte	-	18%	0.24	16%	0.22	17%	0.23
Clear Matte	White Matte	-	*24%	*0.32	*21%	*0.29	*22%	0.30
Ice White Matte	White Matte	-	*19%	*0.30	*17%	*0.27	*18%	*0.28
White Matte	White Matte	-	13%	0.25	11%	0.23	12%	0.23
Clear Matte	Clear Matte	nano 228 insulation	11%	0.18	10%	0.17	10%	0.17
Clear Matte	Clear Matte	super nano insulation	12%	0.19	11%	0.18	11%	0.18

Solar Performance Data - Panel Only (Center of Glass) per ASTM/Calorimeter				
Glazing Panel Color Combinations <sup>a</sup>		Visible Light Transmittance <sup>b</sup>	Solar Heat Gain Coefficient <sup>c</sup>	U-Factor Panel Only (Center of Glass)
Exterior	Interior	VT%	SHGC	
Clear	Ice White Matte	41%	0.41	0.23
Ice White	Ice White Matte	38%	0.34	0.23
Green	Ice White Matte	37%	0.34	0.23
Ice White Matte	Ice White Matte	36%	0.31	0.23
Bronze	Ice White Matte	24%	0.32	0.23
Blue	Ice White Matte	23%	0.32	0.23
White	Ice White Matte	17%	0.24	0.23
Clear	Clear Matte	52%	0.41	0.23
Clear Matte	Clear Matte	50%	0.39	0.23
Ice White	Clear Matte	44%	0.37	0.23
Green	Clear Matte	43%	0.37	0.23
Ice White Matte	Clear Matte	38%	0.34	0.23
Bronze	Clear Matte	27%	0.33	0.23
Blue	Clear Matte	27%	0.35	0.23
White	Clear Matte	18%	0.28	0.23
Clear	White Matte	19%	0.18	0.23
Ice White	White Matte	17%	0.17	0.23
Green	White Matte	15%	0.17	0.23
Bronze	White Matte	8%	0.15	0.23
Blue	White Matte	8%	0.17	0.23
White	White Matte	7%	0.13	0.23
White Pearl Low E	Clear Matte	30%	0.22	0.23
White Pearl Low E	Ice White Matte	24%	0.21	0.23
White Pearl Low E	White Matte	10%	0.12	0.23

**Notes:**

- a. Color tint variations effect the solar performances of the glazing. Color tints and insulation levels may be adjusted or customized to achieve other desired solar, optical, insulation and solar heat gain coefficient performance results.
- b. The visible optical properties were measured using a Licor visible light meter, and a blackened TRA box, under clear sky conditions, with the sun as the energy source, following the ASTM E 972-88 standard.
- c. The Solar Heat Gain Coefficients were measured using two side-by-sides, water-flow solar calorimeters. The calorimeter test system and the procedure used follow the methodology and procedures given in the NFRC/ASTM Calorimeter Standard, NFRC 200, or other acceptable calculation method.

\*Indicates values that are calculated based on NFRC certification and the methodologies and procedures per NFRC 100/200/500.

