

PRODUCT DESCRIPTION

Optiblu[®] glass by Vitro Architectural Glass is a soda-lime float glass product and part of Vitro Glass's earth-inspired collection of blue tints that can be paired with its exceptional range of advanced low-e and reflective coatings to offer more performance and aesthetic options.

APPROXIMATE WEIGHTS

Per m ²		Per ft ²	
thickness	weight	thickness	weight
6.0 mm	14.2 kg	¼	2.9 lbs

MECHANICAL PROPERTIES

Knoop Hardness Number (indentation hardness) indenter load--500 gm	470 kgf/mm ²	
Poisson's Ratio	0.22	
Modulus of Elasticity (Young's)	73.1 GPa	10,600,000 psi
Tensile Strength (Determined as Modulus of Rupture, ultimate)	41.4 MPa	6,000 psi
Density at 21°C (70°F)	2.51 g/cm ³	157 lb/ft ³

COLOR

	6.0mm
Transmitted Color: D65, 10° L*	84.2
a*	-1.2
b*	-6.5
Hue Angle (°)	260
Dominant wavelength: C, 2°	479 nm

THERMAL PROPERTIES

Hemispherical Emissivity at -18 to 66 °C (0 to 150°F) glass / coating	0.84 / 0.14	
Expansion Coefficient (linear) 20 to 300°C (68 to 572°F)	8.6*10 ⁻⁶ / °C	4.8*10 ⁻⁶ / °F
Specific heat at 0 to 100°C (32 to 212°F)	858 J/kg-K	0.205 Btu/lb-°F
Thermal Conductivity (k) at 50°C (122°F)	0.937 W/m-K	0.542 Btu/hr-ft-°F
Softening Point	722°C	1332°F
Annealing Point	546°C	1015°F
Strain Point	510°C	950°F

CHEMICAL COMPOSITION

SiO ₂	73%
Na ₂ O	14%
CaO	9%
MgO and Trace elements	4%

SUSTAINABILITY

To provide architects with the assurance and documentation they need to meet and verify their sustainability goals, Vitro Architectural Glass participates in a range of programs and initiatives. Resources available include, but are not limited to:

- Type III Environmental Product Declarations
- Cradle to Cradle Certified™ Bronze with associated Gold Material Health Certificate
- LEED® and Living Building Challenge documentation
- Material Ingredient Disclosure and Safety Data Sheets
- Annual Corporate Sustainability Report

Further information is available through VitroGlazings.com or by calling 855-887-6457 (VTRO GLS)



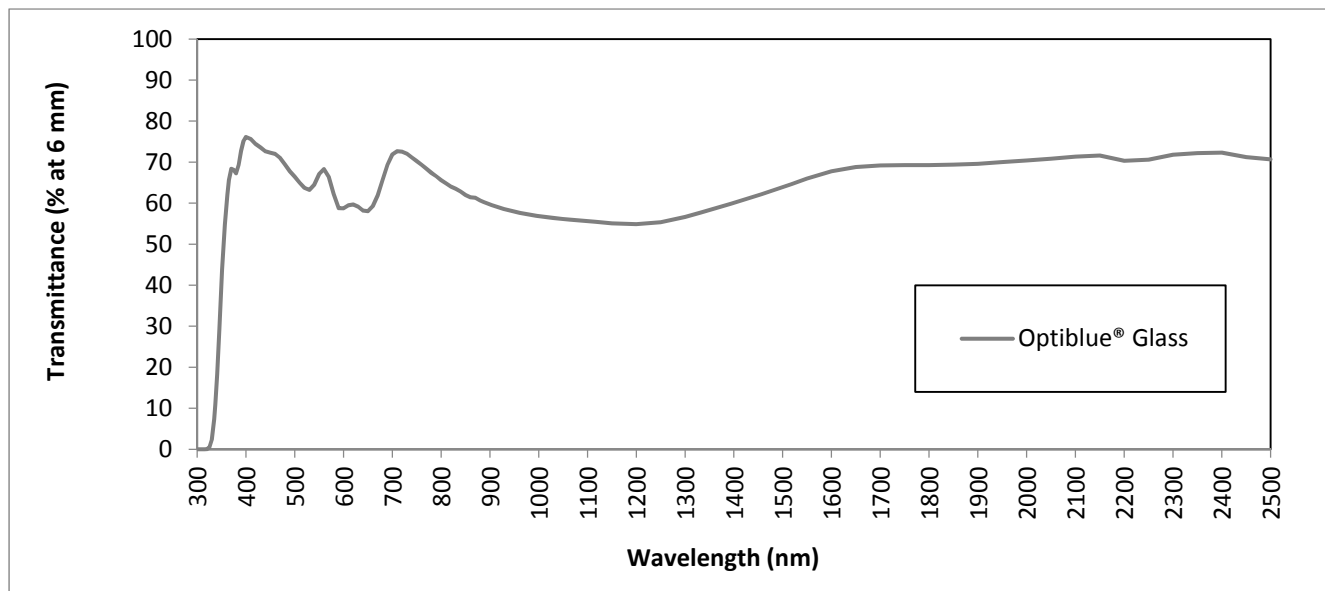
SOLAR PERFORMANCE VALUES ^[1]

Glass Thickness		Transmittance				Reflectance	
inches	mm	Ultra-violet (%)	Visible (%)	Infrared (%)	Total Solar (%)	Visible (%)	Total Solar (%)
¼	6.0	44	64	61	64	6	6

^[1] Figures may vary due to manufacturing tolerances. All tabulated solar performance data are based on the methodology prescribed in ISO 9050, 2003 except Infrared, which is based on the solar irradiance data prescribed by ISO 9050, 2003 from 780 to 2500 nm. Slight changes in transmitted optical properties may occur on exposure to sunlight.

Transmittance (% at 6 mm/0.223")

Wavelength (nm)	Optiblue® Glass %T	Wavelength (nm)	Optiblue® Glass %T	Wavelength (nm)	Optiblue® Glass %T	Wavelength (nm)	Optiblue® Glass %T	Wavelength (nm)	Optiblue® Glass %T
300	0.0	430	73.6	660	59.2	890	60.1	1600	67.8
305	0.0	440	72.6	670	61.9	900	59.7	1650	68.8
310	0.0	450	72.3	680	65.6	910	59.3	1700	69.2
315	0.0	460	72.0	690	69.4	920	58.9	1750	69.3
320	0.1	470	71.0	700	71.9	930	58.5	1800	69.3
325	0.5	480	69.5	710	72.7	940	58.2	1850	69.4
330	2.3	490	67.8	720	72.6	950	57.9	1900	69.6
335	7.3	500	66.5	730	72.1	960	57.7	1950	70.0
340	16.3	510	65.0	740	71.1	970	57.4	2000	70.4
345	28.1	520	63.8	750	70.2	980	57.2	2050	70.9
350	40.5	530	63.2	760	69.4	990	57.0	2100	71.3
355	51.4	540	64.5	770	68.4	1000	56.8	2150	71.6
360	59.9	550	67.1	780	67.3	1050	56.2	2200	70.3
365	65.7	560	68.3	790	66.6	1100	55.6	2250	70.6
370	68.4	570	66.3	800	65.6	1150	55.1	2300	71.8
375	68.1	580	62.2	810	64.8	1200	54.9	2350	72.2
380	67.3	590	58.8	820	64.1	1250	55.3	2400	72.3
385	69.4	600	58.7	830	63.5	1300	56.7	2450	71.2
390	72.8	610	59.5	840	62.8	1350	58.3	2500	70.7
395	75.1	620	59.7	850	62.0	1400	60.0		
400	76.1	630	59.1	860	61.5	1450	61.9		
410	75.6	640	58.2	870	61.3	1500	63.9		
420	74.4	650	58.0	880	60.7	1550	66.0		



ADDITIONAL INFORMATION/DOCUMENTS

The following documents can be referenced for additional information regarding Optiblue® glass:
 Optiblue® Performance Data, Vitro Float Glass Warranty, Vitro Float Glass SDS, C2C Material Health Certificate, Vitro Float Glass EPD