

SOLITE

EXTRA CLEAR PATTERNED GLASS FOR SOLAR APPLICATIONS

THE PERFECT SOLAR GLASS

SOLITE is an extra-clear patterned glass designed for the photovoltaic module industry. SOLITE has a shallow hexagonal pattern on the bottom side that aids in degassing during lamination. The top surface is a sand-blast pattern that diffuses glare and reflections. The extra-clear composition minimizes light absorption and maximizes PV module output. SOLITE is supplied with an Anti-Reflective Coating (ARC). ARC reduces the top surface reflection by 2.0 to 2.5%. The anti-reflective coating enhances transmission even more at angle, resulting in breaking threshold earlier and later in the day. The result is world-class module performance.

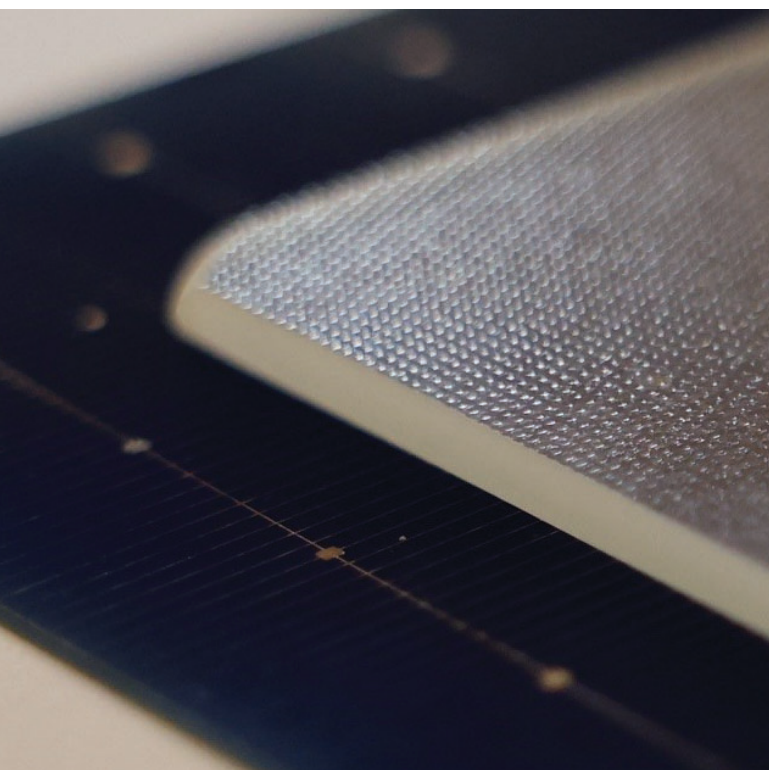
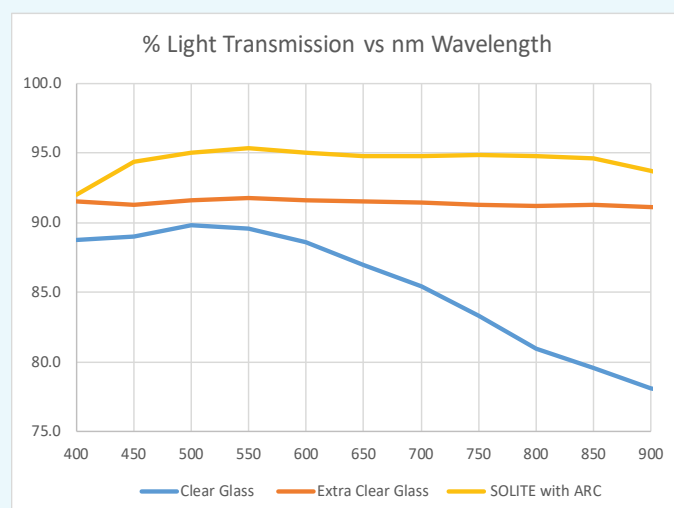
PRODUCT DESCRIPTION

Stewart strongly recommends full tempering for PV module glass. Full tempering minimizes hail damage and maximizes flexural strength. 3.2 mm glass will be fully tempered.

Because 2.0 mm glass is too thin to be fully tempered, it can instead be heat-strengthened to ASTM C1048 standards. 2.0 mm heat-strengthened glass may be suitable for use in areas without significant hail exposure or excessive wind loads.

KEY FEATURES

Type	Extra Clear Patterned Glass
Pattern	Hexagonal/Sand-Blast
Coating	Anti Reflective
Applications	Cover Glass for Solar Modules



Technical Specifications of SOLITE Glass

Typical Characteristics

SOLITE Visible Transmission (%)	2.0 mm - 5/64": 91.5%	Illuminant D65 at 2° Observer (+/- 0.2%)
	3.2 mm - 1/8": 91.4%	Illuminant D65 at 2° Observer (+/- 0.2%)
	4.0 mm - 5/32: 91.3%	Illuminant D65 at 2° Observer (+/- 0.2%)
SOLITE ARC Visible Transmission (%)	2.0 mm - 5/64": >93.6%	ASTM C1376 Illuminant D65 at 2° (+/- 0.2%)
	3.2 mm - 1/8": >93.5%	ASTM C1376 Illuminant D65 at 2° (+/- 0.2%)
	4.0 mm - 5/32": >93.4%	ASTM C1376 Illuminant D65 at 2° (+/- 0.2%)
Length	Per Customer Specifications	
Width	Per Customer Specifications	
Specific weight (kg/m²)	2.0 mm -5/64": 5.0	
	3.2 mm - 1/8": 7.87	
	4.0 mm - 5/32: 9.62	
Process conditions	Tempered, Diamond Ground Pencil Edge	
Stewart can help evaluate these properties according to other standards and/or to the specificities of the final application		

Mechanical Characteristics

Mean Modulus of Rupture (Mpa)	83	ASTM C1048 Heat-Strengthened
Young's Modulus (GPa)	70	
Poisson's Ratio	0.2	
Hardness	Mohs (Scratch Hardness)	6
	Knoop (Indentation Hardness)	470
Density (kg/m ³)	2500	Indenter load 500g at 18°C

Thermal Characteristics

Hemispherical Emissivity	<0.84	Between -18°C and 66°C
Expansion Coefficient (10 ⁻⁶ /°K)	8.3	Between 20°C and 300°C
Specific Heat (J/kg•K)	880	
Thermal Conductivity (W/m•K)	0.937	
Softening Point (°C)	714	
Annealing Point (°C)	550	
Strain Point (°C)	499	

Chemical Composition

Silicon Dioxide (SiO ₂ , %)	69 to 74
Sodium Oxide (NaO, %)	12 to 16
Calcium Oxide (CaO, %)	5 to 12
Magnesium Oxide (MgO, %)	0 to 6
Aluminum Oxide (Al ₂ O ₃ , %)	0 to 3

DISCOVER THE STEWART DIFFERENCE

Boost the efficiency and durability of your solar panels while also increasing Made in USA content with SOLITE. Featuring a precisely engineered diamond knurl pattern and world-leading Anti Reflective Coating, SOLITE is more than just glass – it's the future of renewable energy.

Whether you are powering the next breakthrough in photovoltaic modules or enhancing the elegance of thermal collectors, SOLITE delivers unmatched performance suited for your needs. At Stewart, we don't just make glass, we craft a vision for a sustainable tomorrow.



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