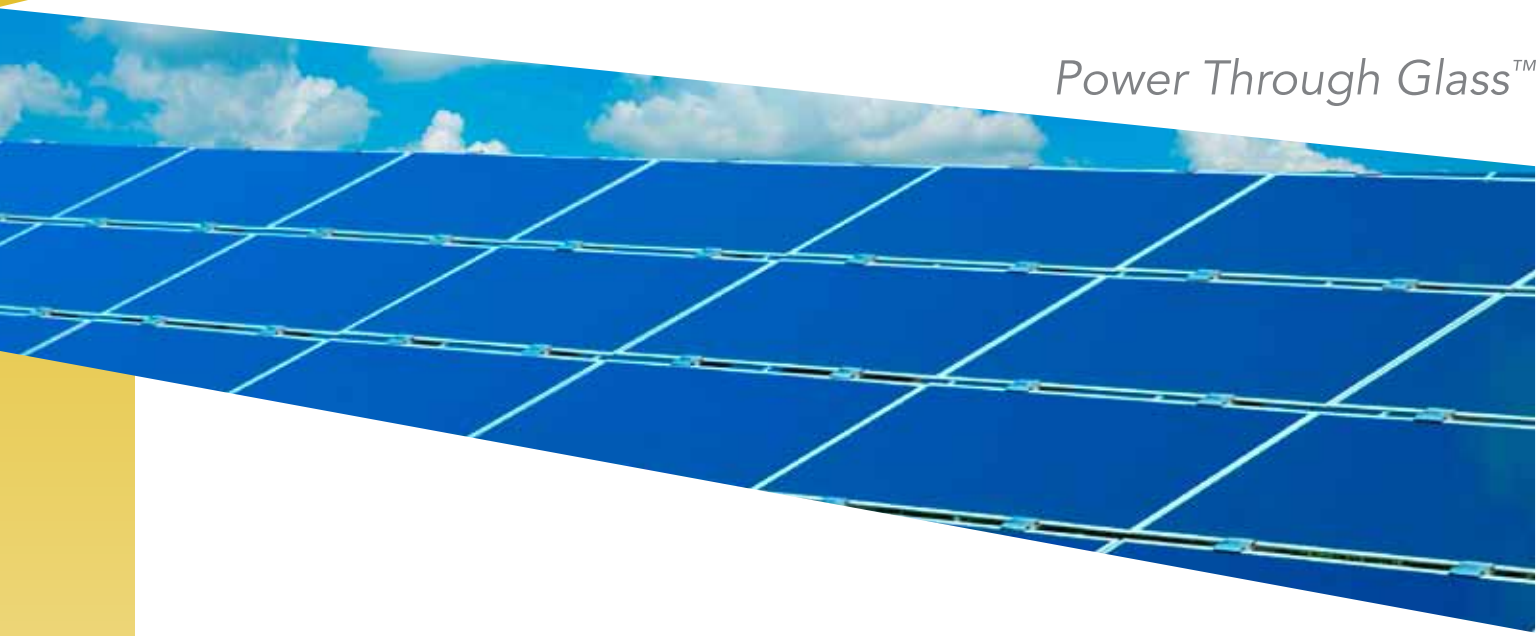
Guardian EcoGuard® Float AR

Anti-Reflective Solar Glass

Power Through Glass™



Your Energy Investment Optimized

Low-Iron Float Glass

Standing behind excellence in your solar energy solutions is a company committed to providing you with glass innovation. Guardian has been manufacturing high-quality glass solutions for more than 75 years, with a comprehensive product line that includes glass and coatings for solar energy applications. EcoGuard Float AR is a high performing solar glass with an anti-reflective coating designed to optimize the available sunlight while resisting harsh environmental conditions.

Guardian Industries operates in state of the art manufacturing centers around the world, so we are always nearby when you need us.

Features

EcoGuard Float AR utilizes Guardian's highest performing solar glass, EcoGuard float and a specially designed anti-reflective coating that maximizes the sunlight's available energy. This is especially true for sunlight that is diffused or at low angles to the receiver. Peak wavelength optimization is possible.

EcoGuard Float AR is available in 3.2mm and 4.0mm tempered lites.

Applications

EcoGuard Float AR is designed specifically for PV module applications that call for a single-sided anti-reflective coating.

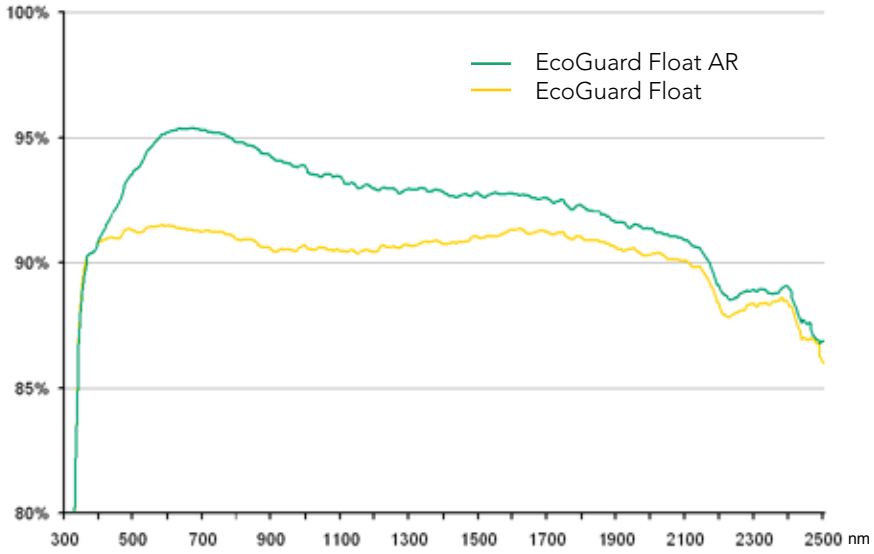
EcoGuard® Float AR

ANTI-REFLECTIVE SOLAR GLASS

Product Summary

	EcoGuard Float		EcoGuard Float AR		
Thickness	Solar Transmission (Te) [1]	Light Transmission (Tpv) [2]	Solar Transmission (Te) [1]	Light Transmission (Tpv) [2]	Strength
3.2 mm	90.8 %	91.3 %	93.4 %	93.9 %	Tempered
4.0 mm	90.6 %	91.1 %	93.2 %	93.7 %	Tempered

Representative Transmission Data



Notes:

1. Te: solar transmission @ AM 1.5 (ISO 9050) over 300–2500 nm.
2. Tpv: solar transmission from 400 - 1200 nm: Quantum Efficiency (QE) of a typical c-Si PV module [400 - 1200 nm].

Advantages: Manufacturing

- Fully integrated process - Guardian manufactures its own low-iron glass, then applies the coating and tempers the glass at one location
- Dedicated manufacturing equipment designed specifically for the application of the anti-reflective coating
- A worldwide leader in glass and glass coating production ensures consistent, high quality products

Advantages: Guardian

- Track record of optimizing customers' solar energy performance
- Global solar asset base
- Stable, privately held company with clear focus
- Tradition of glass innovation backed by broad solar R&D
- Advanced and proprietary manufacturing capabilities
- Rich, diverse product and technology pipelines

Advantages: Performance

- Module output increases of up to 2.6% at normal incident testing and up to 5% in installed performance
- Increases the transmission across the solar spectrum by as much as 2.6%
- Improved module performance in both direct and low-angle sunlight
- Exceeds all IEC temperature and humidity testing requirements

Durability Testing

- Damp Heat IEC 61215: 480 h
- Humidity Freeze IEC 61215: 10 cycles
- Thermal cycling test of PV modules with AR glass (IEC 61215): 480 h
- Salt fog: 96 h
- Other tests passed: Water boil, Tape pull, Taber, NaOH soak, Finger print clean-ability and Crockmeter

Guardian Industries Corp.
EcoGuard Solar Glass
14511 Romine Road
Carleton, MI 48117
+1.800.521.9439
solarglass@guardian.com

Guardian Europe S.à r.l.
Zone Industrielle Wolser
L-3452 Dudelange
Grande-Duche de Luxembourg
+352.52.11.15.01
solarglass.europe@guardian.com

www.guardian.com/solarenergy

GUARDIAN
Glass • Automotive • Building Products

EcoGuard is a registered trademark of Guardian Industries Corp.
©2012 Guardian Industries Corp. V063112