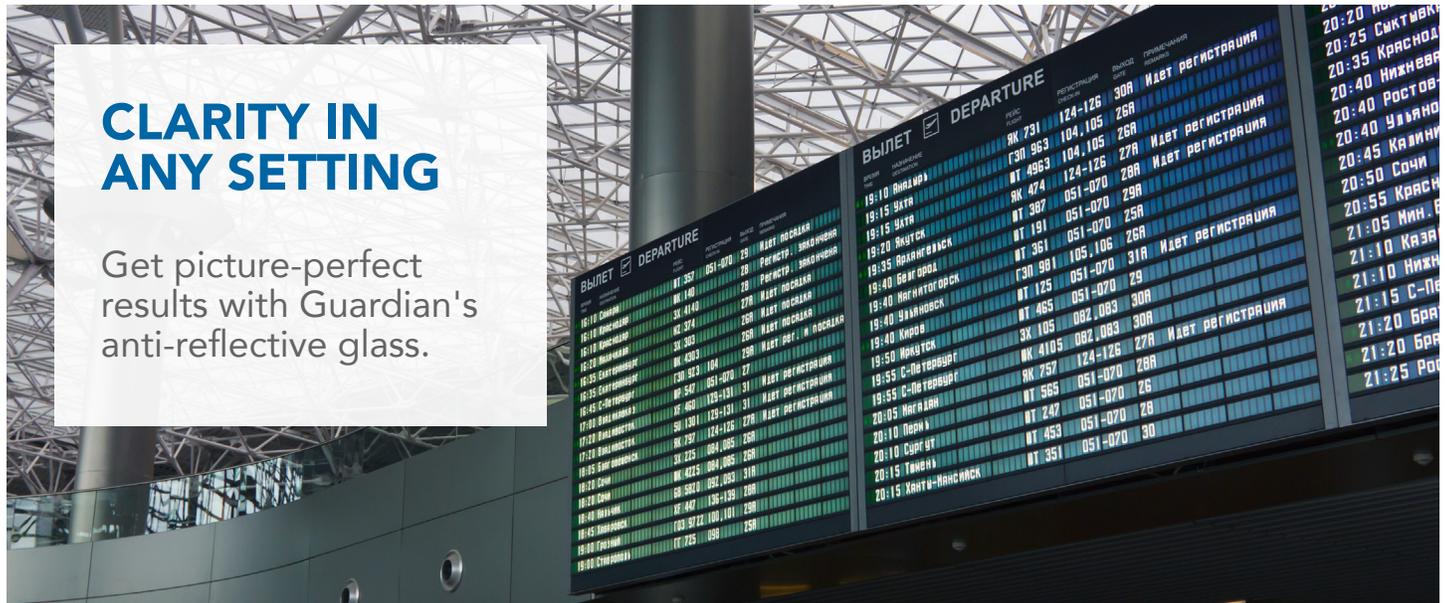


ANTI-REFLECTIVE 15/15 GLASS

CLARITY IN ANY SETTING

Get picture-perfect results with Guardian's anti-reflective glass.



Guardian's anti-reflective (AR) 15/15 glass coating transmits a truer image as part of high-tech signage, industrial displays, imaging equipment and interactive consumer electronics.

Enhanced Clarity

Screens shouldn't distance viewers from vital information and compelling visuals. Guardian AR 15/15 glass is made with precision to reduce glare and enhance contrast. The results are picture-perfect, even in the most demanding applications.

Advanced Technology

Developed in Guardian's state-of-the-art facilities, this high-performance, multilayer sputter coating substantially improves readability in bright environments. Guardian AR 15/15 is both durable and invisible, diffusing external light without altering colors projected from the screen.

Outstanding Service

With several fabrication options, thicknesses and stock sheet dimensions available, Guardian AR 15/15 can be made to order to suit your exact specifications. And with locations on five continents and in more than 25 countries, Guardian can meet your needs anywhere. We'd love to learn about your project and collaborate on a custom solution. Our engineers, suppliers, sample systems and online tools stand ready to support you from concept to completion.

Expect High Performance

- Enhances contrast and readability in bright environments
- Neutral color
- High durability
- Heat treatable
- Available in multiple thicknesses and sizes
- Worldwide sales and service

Add Value in a Breadth of Applications

- Televisions
- Monitors
- Public information displays
- Industrial, medical and military information displays and instrumentation
- Imaging products

Contact our sales and technical staff. We are ready to collaborate with you to develop a custom solution.

PERFORMANCE DATA

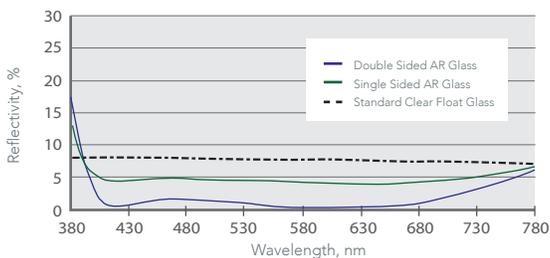
Total Reflectance	Single Sided AR: Rvis 4.9% Double Sided AR: Rvis < 1.0%
Transmission	Tvis (between 380 - 780 nm) will vary based on glass thickness and type: <ul style="list-style-type: none"> Tvis > 97%, Double Sided AR on 4 mm Float Clear glass Tvis > 98%, Double Sided AR on 4 mm UltraClear™ low iron glass
Adhesion	No damage or delamination after snap tape test
Abrasion Resistance	No degradation after eraser abrasion as per ISO-9211-4-01-04. No degradation after abrasive felt pad tests for 500 stokes as per EN 1096
Humidity	No deterioration after 48-hour exposure to 49°C and 95% relative humidity
Salt Fog	No deterioration after 24-hour exposure to 5% NaCl in water at 35°C

PRODUCT OPTIONS

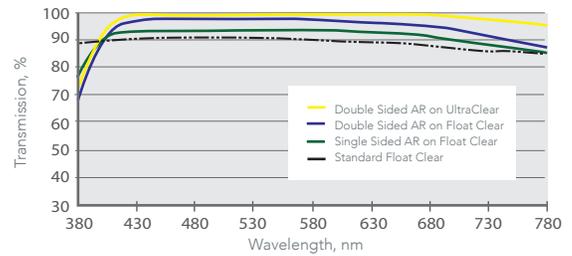
Glass Substrate	Float Clear, ExtraClear® or UltraClear™ low iron glass*.
Coating Protection	Temporary Protective Film (TPF) on coated side
Glass Thicknesses	2 - 15 mm
Stock Sheet Dimensions	Standard size: 3.21 x 2.25 m and 2.55 m Maximum size 3.21 x 6.0m Other size and type available upon request.

REFLECTANCE VS. WAVELENGTH

AR 15/15 virtually eliminates the reflection of most visible light. Typical Rvis < 0.4% per coated side.



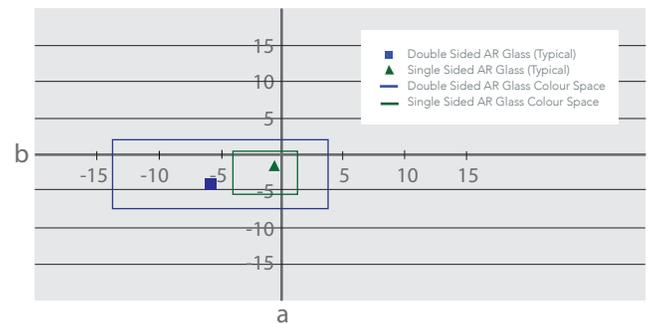
Increased transmission equals more lumens and higher efficiency**



Reflected Color

AR 15/15 is color-neutral for an optimal viewing experience. L* a* b*- reflected colour space, 2°C, 8° incidence.

By providing the most strict production control, Guardian declares the narrowest color space for the remaining reflection among the available anti reflective glasses on the market.



* ExtraClear® float glass offers neutral coloured with significantly reduced iron content (0.05% ± 0.01%). UltraClear™ float glass offers exceptional clarity with a low iron oxide content (<130ppm).

** Performance defined herein is typical for 3mm glass. AR Glass performance is subject to variations due to manufacturing tolerances, glass thickness and glass types. Detailed specifications for specific product options may be obtained by contacting your local GUARDIAN representative.

Contact a regional Guardian location for additional product information.

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A global glass manufacturer headquartered in Auburn Hills, Michigan, Guardian Industries is a leader in float glass, fabricated glass and products for commercial, residential, interior and other applications. To learn more, visit Guardian.com.

Guardian makes electronics smarter with innovative solutions developed at our Science and Technology Center. You'll find Guardian technical glass in the world's most cutting-edge consumer and industrial products. Our global reach and local presence give you access to Guardian products and people, wherever you are.