

DA||GLASS



**ANTI-REFLECTIVE
GLASS**

DA||GLASS

**WE CHANGE
THE PROPERTIES
OF GLASS**



**Over 30 years
of experience in
craftsmanship of
highly advanced
glass technology**

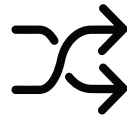
DAGLASS PORTFOLIO

TECHNOLOGIES & PRODUCTS



ANTI-REFLECTIVE GLASS

By changing the surface morphology, this glass increases the light transmittance. Consequently, it improves the efficiency of lightning and significantly advances the quality of image on screens.



DIFFUSED GLASS

It scatters the light in a controlled and steady manner. Therefore, it removes shadows and gives more transparency in contact with water. It is a perfect solution for lightning and greenhouse sector.

nano
barren

NANO-BARREN™ ANTISEPTIC GLASS

It is produced with the use of magnetron technology and has antifungal, self-cleaning and biostatic properties.



DIAMOND GLASS

Hydrophobic, resistant to scratching. It is a great choice for partitions, partition walls, and shower cabinets.



NON-GLARE GLASS

A type of glass with changed morphology in the nano scale. It is suitable for LED screens and LCD screens. The anti-finger print feature makes it an ideal solution for touch screens. It reduces light reflexes and improves the image.



THERMALLY TEMPERED, LAMINATED AND DOUBLE GLAZED GLASS

A wide range of applications in the construction industry.





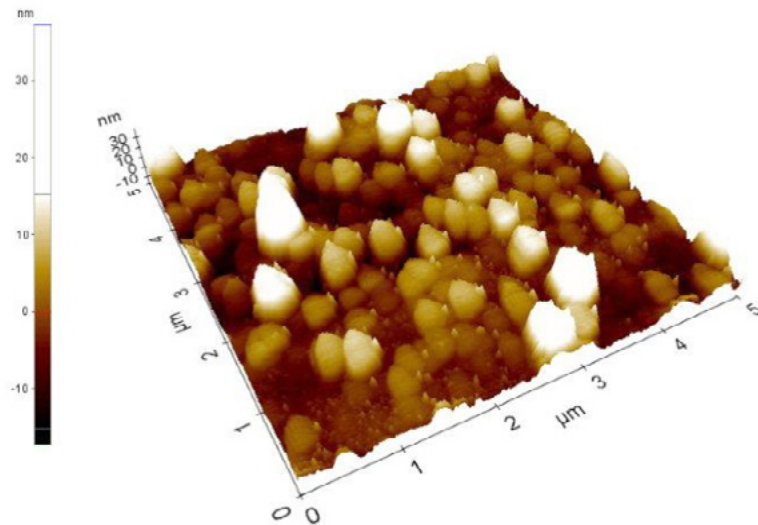
ANTI-REFLECTIVE GLASS is made according to a unique, patented technology. Due to a special chemical process (chemical etching) a morphology of glass itself is modified. The changes in morphology of the glass give unique properties to a glass as increased light transmission and reduced sparkling effect.

Because of the fact, that anti-reflective treatment interferes in a glass structure the function of the glass remains constant, what results in a very high durability in comparison with standard coatings, wherein an additional layer is deposited on a glass surface. Anti-reflective treatment may be performed both on low-iron and float glass in a thickness range between 2 and 19 mm with maximum size of single glass sheet of 2250 by 3210 mm. Additional mechanical treatment by a preparation of ready product as tempering and edges grinding is possible.

THEORETICAL BACKGROUND

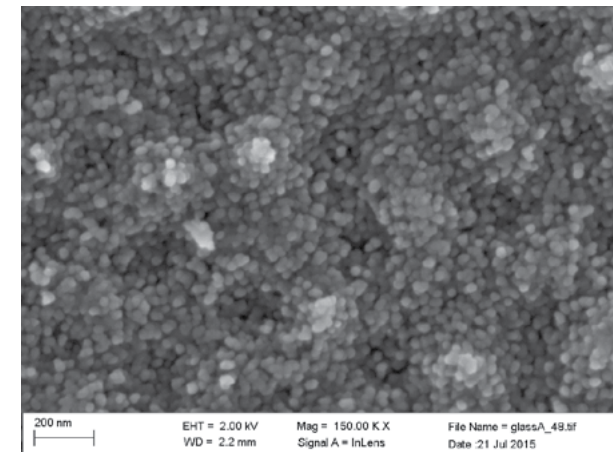
ANTI-REFLECTIVE GLASS

An anti-reflective structure of a nanometre range with defined thickness (in a range 50 till 150 nm) and refractive index (ca. 1.3) is formulated in a process of chemical etching (see pic. 1 and pic. 2 below).



File name	110920Topography008
Head Mode	NC-AFM
Source	Topography
Data Width	512 (pxl)
Data Height	512 (pxl)
X Scan Size	5 (μm)
Y Scan Size	5 (μm)
Scan Rate	1 (Hz)
Z Servo Gain	1
Set Point	1.1894E3 (nm)
Amplitude	1.5859E3 (nm)
Sel. Frequency	299.31E3 (Hz)

Pic. 1 AFM picture of glass after AR treatment of DAGLASS

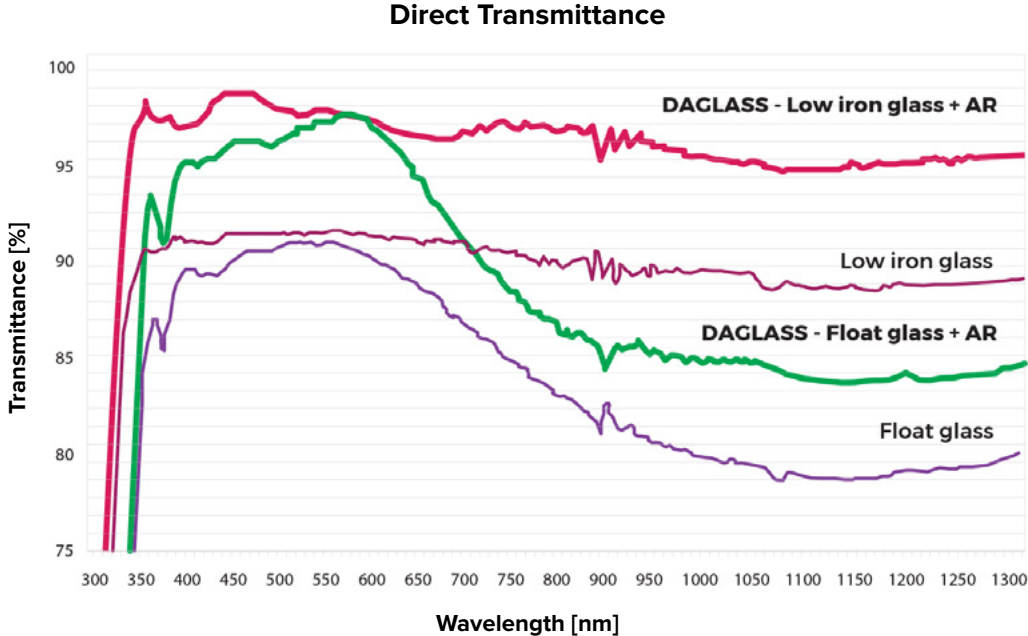


Pic. 2 Electron microscope picture of glass after AR treatment of DAGLASS

OPTICAL PARAMETERS

ANTI-REFLECTIVE GLASS

Thanks to this process the transmittance of low-iron glass may be raised from 91% up to 96 - 97 % as presented on the picture 3 below. This improvement of optical properties opens a broad spectrum of applications of AR Glass of DAGLASS.



Pic. 3 Comparison of direct transmittance value of regular float glass and low iron glass before and after AR treatment.

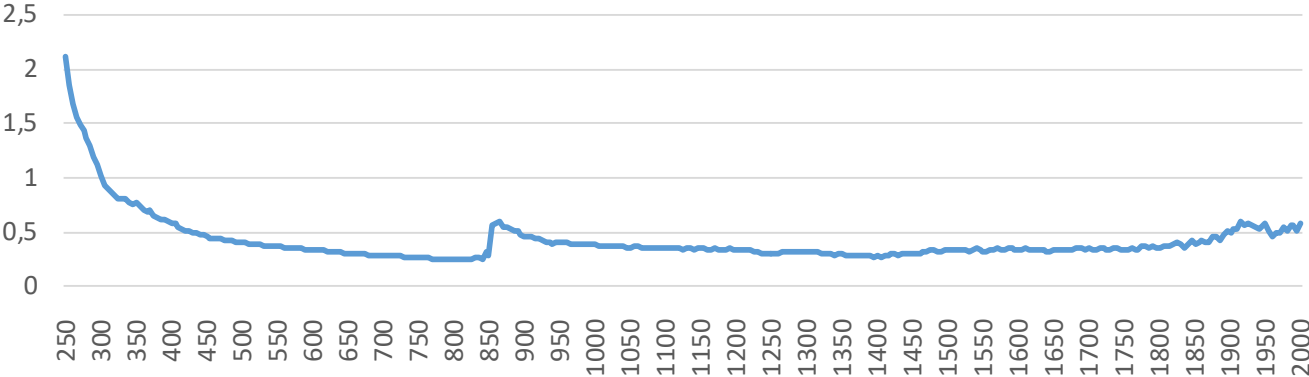


OPTICAL PARAMETERS

ANTI-REFLECTIVE GLASS

As the light transmittance increases, its reflection decreases. Below graph concerns low-iron DAGLASS AR Glass and shows the value of transmitted light in relation to wavelength values. It is clearly noticeable that the value of reflectance goes down below 1 %.

Reflection value in a function of transmitted light wavelength [nm]



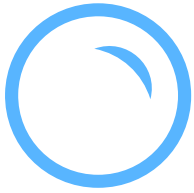
— Reflection value in a function of transmitted light wavelength [nm]



An aerial photograph of a solar farm, showing rows of solar panels stretching across a landscape. The image is overlaid with a semi-transparent blue filter. In the center, the title 'Applications of Anti-Reflective Glass' is written in large, bold, white sans-serif font. To the left of the title are three vertical white bars of varying heights. In the bottom right corner, the text 'D//GLASS' is visible on one of the solar panels.

Applications of Anti-Reflective Glass

D//GLASS



ANTI-REFLECTIVE GLASS

Anti-Reflective Glass is produced with the use of advanced chemical technology. It is highly resistant to scratches and has exceptional properties - increases light transmission, and gives a clear image while reducing unwanted reflections. It may be subjected to mechanical and thermal treatment. DAGLASS AR Glass can be combined with other DAGLASS products, including NON-GLARE Glass and Diffused Glass.



PUBLIC PLACES



**AUTO & AVIATION
INDUSTRY**



**COMMERCIAL
SPACES**



**EXTERIOR
ARCHITECTURE**



**EDUCATIONAL INSTITUTIONS
AND MUSEUMS**



**LIGHTING
INDUSTRY**



**GREENHOUSE
INDUSTRY**



**PHOTOVOLTAICS & GLASS
FOR SOLAR COLLECTORS**





ARCHITECTURAL

- Window displays
- Sales stands in shopping centers
- Jewelry showcases
- Museum displays
- Railings

DA|GLASS



WINDOW DISPLAYS



JEWELRY SHOWCASES



MUSEUM DISPLAYS



RAILINGS



An underwater scene with various fish swimming in blue water. In the foreground, the silhouettes of a family (two adults and two children) are visible, looking at the aquarium. The lighting is dramatic, with beams of light filtering through the water.

SPECIALIST APPLICATIONS

- Windshields and dashboards
- Optical filters
- Screens
- Lighting industry
- Zoos and aquariums
- Window displays

DAI|GLASS



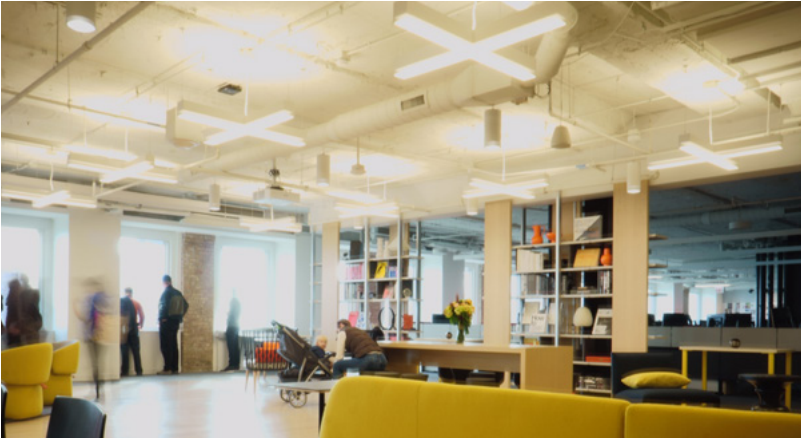
SHOP WINDOWS



AVIONICS



SCREENS



LIGHTING





RENEWABLE ENERGY

- PV panels
- Solar collectors

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GREENHOUSE INDUSTRY

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