

Giving glass a profile:
For demanding surfaces.

For maximum functional and aesthetic demands.

We create highly specific glass surfaces.

Berliner Glas Surface Technology has been dedicated to the processing of glass surfaces for almost 40 years. We structure glass surfaces by etching to defined surface properties, surface roughness or gloss values for different markets and fields of application. The etching dip process we developed is unequalled in its ability to meet targeted performance of the desired surface property, uniformity and reproducibility of our etched structures, even over large surfaces.



Modern laboratory and testing technology

The key innovation engine is our laboratory where we are continually optimising etching solutions. Our team of chemists and material technicians has international experience.

Highly light-permeable with defined optical scatter function in instrument covers, anti-reflective in front of works of art or finely structured as touch screens for modern electronics: The functional and aesthetic demands placed on the material glass have risen steadily in recent years.

Structured glass must – among other things – optimally guide light in displays, exhibit outstanding surface feel properties, contribute to the maximum possible energy yield in solar plants or improve interior visibility with surface frosted effects.

Working in glass to micrometer accuracy

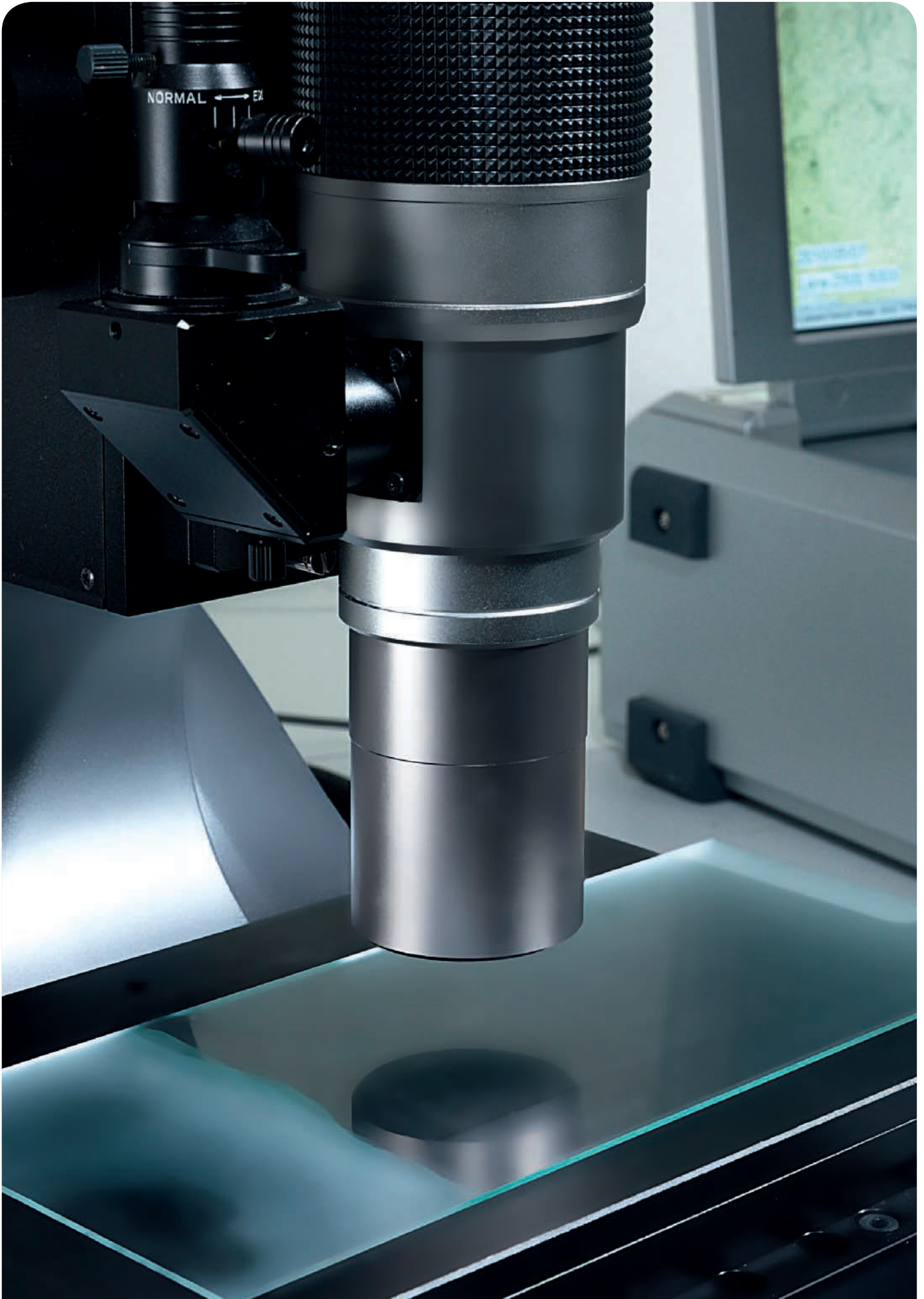
In order to achieve this range of effects, Berliner Glas works with innovative etching technology in specially developed plants. The structures produced have a major impact on the nature of the glass. With its unique technical capabilities, Berliner Glas is the competent partner for such diverse sectors as display technology, solar systems and glass construction. Our products are generally manufactured as individual, highly specific components in direct co-ordination with the customer.

Unique environmental competence

With all our products we place great emphasis on the value of sustainability: Unique among etching companies, all processing residues are chemically converted and recycled as raw materials. In addition to DIN EN ISO 9 001 (Quality), we are also certified to DIN EN ISO 14 001 (Environment) and OHRIS (ISO 18 001 – Occupational Safety and Health).

The 4 fields of competence of Berliner Glas Surface Technology:

- Light Scattering
- Surface Structuring
- Increasing Transmission
- Surface Engineering



We define scattering in your favor.

Perfect light guidance through structured glass.

Incoming light is scattered in a defined manner by the structured surfaces of finely etched glass. Undesirable surface reflections disappear. When viewing through the glass, the surface structuring leads to a clearer image.

Light scattering in perfection

These demands are ideally satisfied by our BG-Nonflex glass, for example in antiglare controls or instrument covers, by our BG-NFT glass in displays and touch screens or by our TEGLA® glass picture framing glass products.



Surface structuring & decorative etching

High-quality control elements with a touch function are being used ever more frequently in modern computers and telecommunications systems. They must react sensitively to touch, feel pleasant and be easy to clean owing to their continual use.





Glass with high optical demands

Whereas untreated glass simply reflects a part of the incident light, structured glass surfaces scatter the reflected light. This eliminates disruptive glare and reflection effects almost completely. In the transmitted light the scattered light encompasses a considerably larger light cone – working without shadows, for example in operating theatres, is only possible in this way.

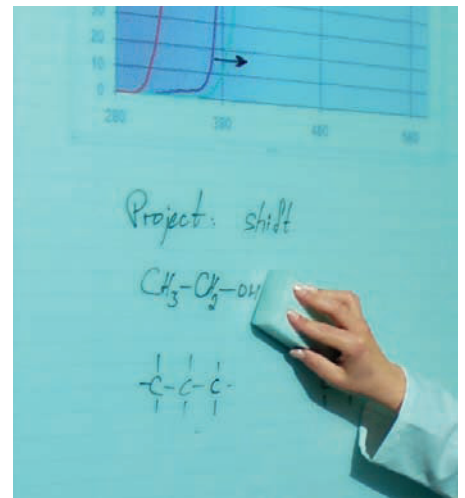
Structuring and decorative etchings. Functional and aesthetic surfaces.

Structured surfaces produced to satisfy clearly defined customer requirements permit optimization of the writing feeling on character recognition displays. Structured surfaces offer more grip in operation and are less prone to fingerprints and similar impurities – ideal for touch applications.

Product features from surface feel through design to easy cleaning

Our BG-NFT products have optimized surface feel properties especially for use in touch applications. With our BG-Classic 2Plus products, the high-quality frosted appearance provides a special surface texture has been optimized to ease cleaning.

Writable projection boards for projector presentations, glass doors and glass partitions, anti-slip glass floors or touch pads on laptop computers and tablet PCs, the special surface structures of our glass enhance functionality everywhere.



We translate transmission increase with: More light, more performance thanks to TE surfaces.

Glass surfaces are optically changed by a specially developed surface treatment. A reduction in the index of refraction results in an increase in light transmission.

Anti-reflective surfaces on a host of geometries

BG-TE etching can be performed on a host of glass types and geometries. For example, the transmission of highly curved lenses, glass moldings or tubes (also the inside of curved tubes) can be improved. With this process it is also possible to apply an anti-reflective coating to thermally strengthened safety glass after final treatment. This very cost effective method of producing anti-reflection surfaces reduces the residual reflection to roughly 1%.



Giving glass a profile – surface engineering. Perfect surfaces for optimum results.



Functional glass must have immaculate surfaces so that, for example, coatings property adhere. Glass can be cleaned in etching processes, chemically polished or its fracture strength increased through acid treatment. This technique smoothes out micro damage on the glass surface, caused by mechanical treatments.

Immaculate surfaces – immaculate end product

Berliner Glas only supplies you with high-quality glass from reputable manufacturers, as cut-to-size raw glass, assembled to customer specifications and specially packed or as a pre-treated substrate for coating processes. The customer's own materials can be processed as a commission order. In addition, many coatings can be removed from the glass surface by a specific etching process. In this way expensive substrates can be recovered. Simply ask us – with our technological expertise we develop solutions especially to meet your requirements.



Improving the transmission and function of glasses

A maximum yield of brightness and energy is the objective of functional glass in lighting applications, photovoltaics or solar collectors. The special surface treatment of our BG-TE glass substantially increases the proportion of the transmitted light.



Chemical polishing and fine cutting

An acid bath even removes chemical impurities or levels out microfine cracks which cannot be seen by the naked eye and which otherwise can quickly lead to rupture failure when subjected to load or changes in temperature. We can cut glass from a thickness of 0,55 mm up to 6 mm on our cutting lines, and assemble and pack it to customer specifications.

Our solutions

for demanding surfaces.

◆ BG-Nonflex glass

Technical glass with defined surfaces for electronics, machinery and automobiles

◆ BG-NFT glass

Technical glass with microstructured surfaces specially for display and touch screen applications

◆ BG-TE glass

Flat glass, rolled or molded glass in a wide range of geometries and sizes with transmission-enhancing surfaces for a greater light yield

◆ BG-Classic 2Plus glass

Large-area float glass with finely structured surfaces for architectural applications

◆ TEGLA® picture framing glass

Picture glasses for maximum demands

◆ Special etchings

Individually treated glasses to customer specifications

◆ Cut lengths

Float and special glasses in thicknesses from 0.55 mm in desired formats and units

Certified quality.



High-tech in glass. Solutions in optics.

The Berliner Glas Group is one of Europe's leading providers of high-quality refined technical glass as well as optical key components, assemblies and systems. The refinement of shaped glass optimizes functionality. In the Technical Glass business unit we therefore convert our many years of highly developed expertise in glass processing into innovative solutions for our strategic markets. Whether front panels for displays or TV sets, navigation systems, solar systems, picture glass or lighting – our high-tech glass is used all over the world.

The Berliner Glass Group consists of companies which have been developing and producing optical solutions for over 100 years. As an owner managed medium-sized company with around 950 employees, we can offer our customers tailor-made and marketable solutions of the highest quality anywhere and anytime.



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Surface Structuring

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