



BG-TE.

More light, more performance.

Transmission enhanced flat glasses, rolled or form glasses in various shapes and sizes.

BG-TE.

Increased transmission

A specially developed surface treatment of glass surfaces changes the optical characteristics by enhancing light transmission. A porous SiO₂ surface is formed in the glass with a refractive index value between air and glass, which leads to an increase in transmission. The glass surface is evenly nonreflecting over a broad wavelength range and results in a reduction in angle-independent reflections without dulling the surface.

Versatile applications

High brightness and energy transmission is a major goal of functional glasses for lighting in solar thermal and photovoltaic applications (crystalline and thin film modules). **BG-TE** etching can be performed on a variety of glass types and geometries to increase transmission, for example strongly curved lenses, molding, or glass tubes (including the inside of curved pipes) will be improved in its light transmission. With this method it is also possible, thermally tempered, anti-reflective safety glass to finish.

Unique combination

A **BG-TE** etching can be combined with our structured etching **BG-Nonflex** and **BG-NFT**. Our skills scattering, structuring and transmission increase complement each other to a high-class product. This combination from one source is unique on the market.

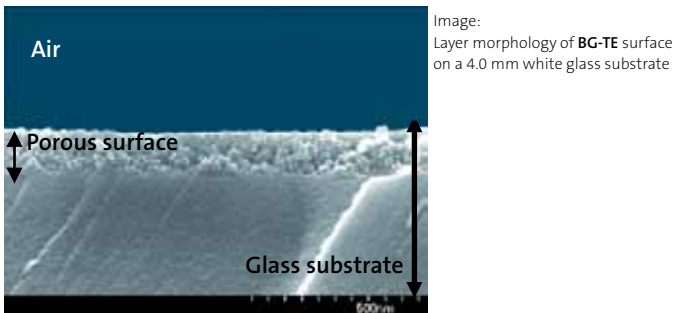


Image:
Layer morphology of **BG-TE** surface on a 4.0 mm white glass substrate

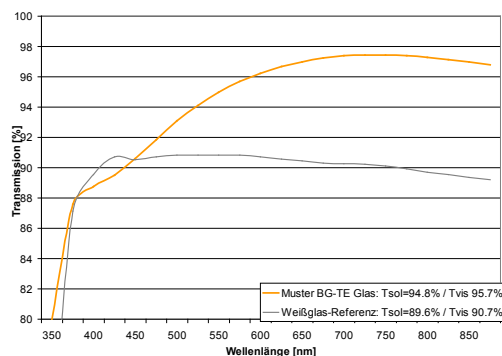


Image:
Transmission curves of **BG-TE** and white glass as reference (4.0 mm)

Technical data

Size of flat glass	max. 1,200 x 2,250 mm
Other geometry	max. weight of 800 kg
Glass thickness	from 1 mm
Transmission maximum	adjustable in range 500 - 710 nm (UV/VIS-spectrometer)
Increase in transmission	≥5 % relative to the untreated glass (UV/VIS-spectrometer)
Glare reduction	≥ 65 % relative to the untreated glass (UV/VIS-spectrometer)
Refractive index range	1.22 - 1.44

Highest quality standards

Our measurement procedures ensure consistent quality even with large quantities. In addition to a permanent processes and production monitoring, final inspection with high-precision measurement systems is performed. On request, detailed test reports are created and supplied.

Certified quality

The long-term stability of the **BG-TE** glasses was tested by the Fraunhofer Institute for Solar Energy Systems ISE in accordance with extracts of IEC 61215/IEC 61646.

The performance of **BG-TE** glasses was tested by the Institute for Solar Technology SPF. Our **BG-TE** glass has passed the SPF-procedure "Certification of Solar Glass" version 2.1, as a solar glass (solar thermal) certified and assigned to the classes X1 and X4.

Result of SPF process

	X1 (dull/dull)	X4 (dull/prism.)
Transmission factor F_T	0.967	0.964
Angle weight factor F_{IAM}	0.998	0.952
Foto degradation factor F_{UV}	0.998	0.998
Glass efficiency η_{Gl}	0.963	0.916

For more information and certificates under www.solarengery.ch

Certified by:



Surface Technology

www.berlinerglas-st.com

Berliner Glas Herbert Kubatz GmbH & Co. KG Syrgenstein Business Unit Technical Glass

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