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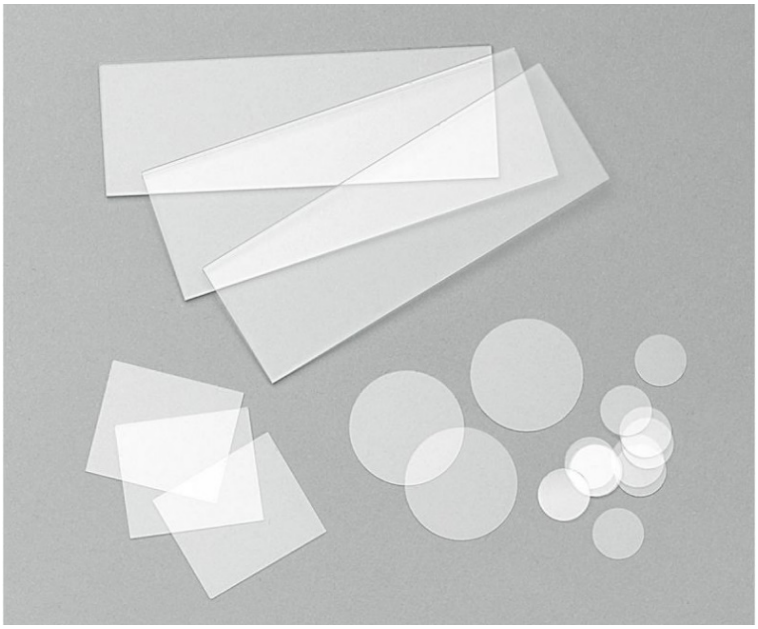
Quartz Slides

AGL4470, AGL4470-1, AGL4470-2, AGL4471



The quartz material used for our Quartz Discs, Quartz Microscope Slides, and Quartz Cover Slips is a high quality, high purity GE124 quartz. This quartz material is well documented and used in many microscopy applications.

Typical Physical Properties

Density	2.2 x 103 kg/m3
Refractive index	1.4585
Softening point	1683°C
Annealing point	1215°C
Strain point	1120°C
Hardness	5.5 - 6.5 Mohs Scale
Compressive Strength	1.1 x 108 Pa
Tensil strength	4.8 x 107 Pa
Electrical resistivity	@ 350°C: 7 x 107 ohm/cm

Typical Trace Element Composition (ppm by weight)
Analysis via Direct Reading Spectrometer

Type	Al	As	B	Ca	Cd	Cr	Cu	Fe	K	Li	Mg	Mn	Na	Ni	P	Sb	Ti	Zr	*OH
GE 124	14	<0.002	<0.2	0.4	<0.01	<0.05	0.05	0.2	0.6	0.6	0.1	<0.05	0.7	<0.1	<0.2	<0.003	1.1	0.8	<5

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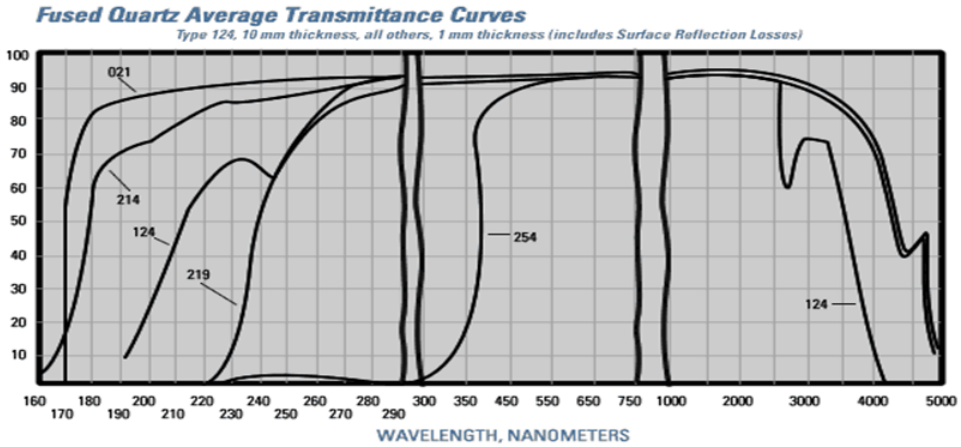
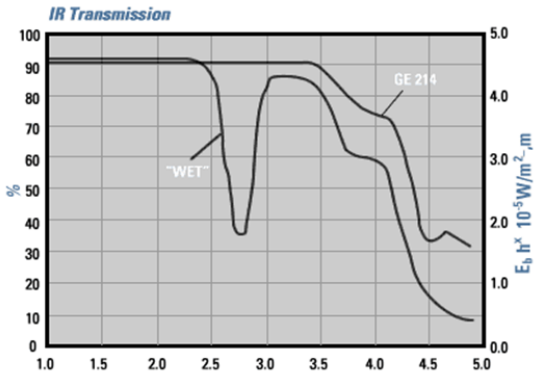
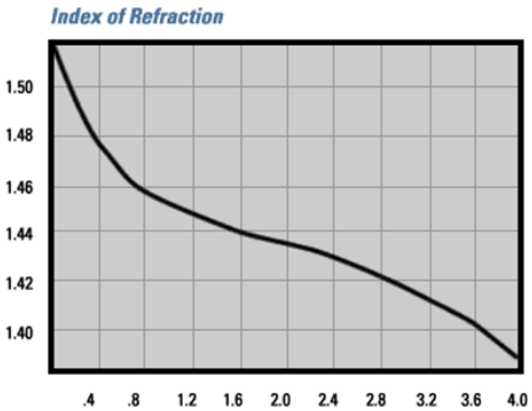
Optical Transmission

The curve shows the typical optical transmission curve with the absorption edges for GE 124 from the UV through visible into the infra-red range. In the typical 250-290nm range for UV microscopy applications the material exhibits excellent transmittance.





This chart shows how low OH^- content GE fused quartz transmits more energy compared to "wet" varieties of the material. The IR energy transmission of fused quartz is affected by the presence or absence of OH^- absorption band at 2.73µm. The overall effect is an increase in the effeciency if IR heating through the quartz.



Index of refraction of fused quartz.
Source: *Journal of the Oprical Society of America*, Sept. 1954.