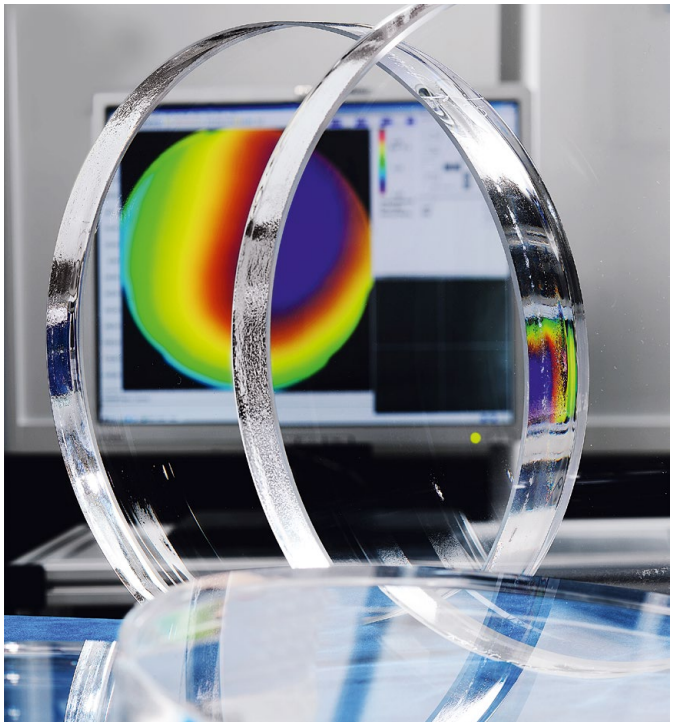
Extremely High Homogeneity for Large Precision Optics

High Homogeneity Glasses



Product Information

The superior quality of an optical material is reflected in its homogeneity and, to be even more specific, in an extremely narrow variation range for the entire piece of glass with respect to refractive index. Therefore, the optical glasses that are to be used in high-power laser and astronomical applications especially require extremely high homogeneity.

As part of its broad range of optical glasses, SCHOTT manufactures high-quality glasses up to the homogeneity level H5. In response to increased demand, SCHOTT will now offer its customers short lead times for a wide range of preferred glasses up to the quality level H4 according to customer specification. Some of these glasses are also available as i-Line glasses that combine extremely high refractive index homogeneity and high UV transmittance at 365 nm.

Advantages

- Select high homogeneity glasses (quality level H4) are available from stock on short notice
- The maximum allowed refractive index variation is very tight: Peak to valley 2×10^{-6} for H4 glasses (1×10^{-6} for H5 glasses)
- Glasses of this quality allow extremely high resolution imaging
- All products are supplied with individual test certificates; homogeneity is measured using extremely accurate, highly advanced interferometers
- A team of optical glass specialists is available to offer expert advice, world-class support and in-depth application know-how
- Customized homogeneity metrology in 2D or even 3D available
- Measurement of homogeneity via stiching possible up to a diameter of 1500 mm

Applications

- High-power laser technology, measurement technology
- Semiconductor industry
- Satellite technology, photogrammetry for astronomical applications

SCHOTT
glass made of ideas

Stock list of materials and maximum available dimensions

Glass Type*	Maximum available dimensions*	Homogeneity level
F2	Ø 300 mm, thickness: 120 mm	H4
LF5	Ø 220 mm, thickness: 45 mm	H4
LLF1	Ø 220 mm, thickness: 45 mm	H4
SCHOTT N-BK7®	400 mm x 400 mm x 70 mm	H4
	250 mm x 250 mm x 100 mm	H4
	750 mm x 450 mm x 100 mm	H3
N-FK5	Ø 240 mm, thickness: 50 mm	H4
N-FK51A	Ø 180 mm, thickness: 40 mm	H3
N-KZFS11	Ø 120 mm, thickness: 35 mm	H4
N-LAK22	Ø 130 mm, thickness: 35 mm	H4
SF5	120 mm x 120 mm x 35 mm	H4
SF6	Ø 220 mm, thickness: 50 mm	H3

* As in the past, other types of glass, supply forms and dimensions are available upon request (the dimensions depend on the glass type). Please contact us.

Materials available only as customized products.

Cut blanks measured in 2 directions available upon request.

Specifications

SCHOTT offers glasses in five levels of homogeneity. Thanks to a carefully controlled manufacturing process, glass pieces in H4 quality have a maximum peak to valley refractive index variation of 2×10^{-6}, while the quality level H5 achieves a value of 1×10^{-6}. The maximum variation of refractive index is expressed in peak to valley values in accordance with ISO 12123.

Detailed information can be found in our optical glass pocket catalogue. If you have any further requests, please contact us.

Quality Assurance

SCHOTT is both ISO 9001 and 14001 certified and thus meets all of the demands made of a reliable partner. Our optical glass is subjected to stringent quality inspection before it is shipped. The production of optical glass is constantly monitored at all stages. Furthermore, extensive final inspections are also performed.

The research laboratories of Advanced Optics in Mainz for the measurement of physical and chemical properties are accredited by the national accreditation body for the Federal Republic of Germany DAkkS on the basis of the ISO 17025:2005.

SCHOTT North America, Inc.
400 York Avenue
Duryea, PA 18642, USA
Phone +1 570/457-7485
info.optics@us.schott.com

schott.com

SCHOTT
glass made of ideas