Optical Materials

Product Information

SCHOTT Advanced Optics offers a broad range of cutting edge materials for optical, lithographic and scientific applications, suited for a wide range of consumer goods as well as for high-tech industrial application requirements. Its materials are known for reliable quality and extraordinary product characteristics such as very high homogeneity and transmission. Advanced Optics is integrated from customized material development to finishing operations with a material base comprising of optical glass, active laser glass, ZERODUR® zero expansion glass ceramic, optical filter glass, thin glasses and more.
For further details on our comprehensive portfolio of optical materials please go to: www.schott.com/advanced_optics/english/our_products/materials

Main Products and its Applications

Optical Glass

For more than 125 years, SCHOTT has been offering a large portfolio of high quality optical glasses for the needs of various optical and industrial applications, ranging from consumer products to optical systems at the leading edge of research.
Our range of optical glasses includes arsenic free N-glasses, glasses suitable for precision molding (low Tg) as well as classical glass types with lead oxide as an essential component for outstanding optical properties. In addition we offer special variants of our glasses, e.g. High Transmission Glasses marked with HT or HTultra.

Low Tg Optical Glass

SCHOTT has developed several types of Low Tg glass especially suitable for precision molding processes (P-glasses), which are free of lead and arsenic. According to our definition, low Tg glasses have a Tg not higher than 550 °C. Furthermore, the glass compositions of these glasses have been developed to show low tendencies to devitrification and reduced reactions with mold materials at the molding temperature range.

Speciality Glasses and Materials

Being the first to systematically develop optical glass over the last century, we have accumulated the experience of providing other specialty glasses and materials for a variety of applications.
Our special glasses consist of Active and Passive Glasses for Lasers, IR-Materials, Radiation Resistant Glasses, Radiation Shielding Glasses, Technical Glasses and Optical Filters (Optical Filter Glass & Interference Filters).

SCHOTT
glass made of ideas

Speciality Glasses and Materials comprise of:

Active and Passive Glasses for Lasers

SCHOTT offers state-of-the-art phosphate and silicate laser glasses for laser range finding, medical (dermatological) and high peak/average power applications. Standard products are doped with Neodymium or Erbium/Ytterbium ions. These materials are offered as finished component with custom polish or coatings, where the AR and HR coatings have a high laser damage threshold exceeding 1.5 GW/cm².

Radiation Resistant Glass

SCHOTT offers a variety of radiation resistant glass types covering main parts of the Abbe diagram. These glass-types are suitable for earth orbit based applications with lifetimes of up to 10 years.

Radiation Shielding Glass

Radiation shielding glass has been specifically developed for nuclear technology. Some of our glass types contain lead in order to exploit its high radiation absorption.

Technical Glass

SCHOTT's technical glass is not only readily available, but it is of consistent quality and has superior durability even in corrosive environment. The high glass transformation temperature of the glass also makes it suitable for high temperature applications.

Optical Filters

SCHOTT offers a broad range of optical filter glasses and interference filters for applications in Life Science, Analytics, Industry and Cameras. Our filters cover the entire spectral range from UV to IR, Special filters such as night vision or contrat enhancement, KV-, DUG11-, VERIL-Filter and more complete the filter portfolio.

IR-Materials*

SCHOTT offers IG chalcogenide glasses (IG 2-6) with an excellent transmission and low thermal change in refractive index (dn/dt). These glasses encompass the common IR transmission bands: 3–5 µm and 8–12 µm. Polycrystalline Zinc Sulfide (ZnS) is produced by a CVD process. It is available in large size and custom shapes and formats like windows, domes or lens blanks. The transmission band reaches from 0.46–12 µm.

**IR-Materials partly provided by our partner VITRON Spezialwerkstoffe GmbH.*

Further information available on detailed product flyers.

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