

Category: Materials, Coatings & Processes

Reference: TD-DE-1077

Optical Glass

Benefitting from well over a century of experience in the development and manufacture of high-quality glass products, the technology owner offers a huge portfolio of optical glasses for a vast range of commercial, industrial and scientific applications.

The unrivalled range of around 120 glass types is constantly evolving as new innovations and melting processes are introduced to optimize efficiency and cost-effectiveness. Optical glasses are available in the form of raw glass, cut blanks and pressings, as well as finished components, and we work closely with customers to tailor our products to their needs.



The high homogeneity glass has a crucial role to play in high-power laser applications and astronomy, while the i-Line glass offers high UV transmittance. Cameras and medical instruments also rely on the precision-molded glasses, while HT and HTUltra glasses allow outstanding transmittance for projector or high-end optical systems.

Innovative Aspects:

- **Homogenous refractive index**
Carefully controlled manufacturing processes ensure glass blanks with highly homogeneous refractive index distribution. The technology owner achieves refractive index variation below one part per million. Extremely accurate, highly advanced interferometers determine the homogeneity.
- **Industry-leading transmittance values**
The current portfolio includes 13 HT and HTUltra glasses. Several exhibit the very best transmittance values currently available in the optical glass market, including N-BAK4HT, N-BK7HT, F2HT, N-SF5HTUltra, and N-SF6HTUltra.
- **Leading metrology**
The owner is continuously developing its metrology equipment to remain at the leading edge of measurement. This high sophisticated metrology equipment enables the technology owner to offer the tightest tolerances on the market.
- **High quality standards**
It is both ISO 9001 and 14001 certified, with all optical glass products going through a stringent quality inspection before delivery. The production of optical glass is continuously monitored at all stages of production, in addition to an elaborate final inspection.

Your Advantages

The impressive range of technical qualities found in optical glass reflects the variety of different applications the extensive portfolio covers. In all cases, robust quality control and commitment to using the finest quality materials is assured.

Application Areas:

Optical glass used in high-power laser, satellite and astronomical applications must offer exceptionally high homogeneity and extremely narrow variation in refractive index throughout. The high homogeneity glasses meet this challenge head on. Other fields are:

- **Projectors and high-end optical systems**
The HT and HTUltra ranges of specialty glass offer very high levels of transmittance – a quality that makes them particularly suitable for digital projectors and high-end optical systems. With ultra HD imagery in ever-increasing demand and large-scale projection systems becoming more popular, these products deliver the high-quality performance required.
- **Life science**
Life Science applications demand special materials for high-end optical designs. The technology owner offers a comprehensive portfolio of optical glasses to enable high-end Life Science applications, such as extremely low dispersion, low fluorescence or glasses with large anomalous dispersion.
- **Cameras, phones and microscopes**
Small, powerful and custom-shaped lenses are in ever-growing demand in areas ranging from smartphones to digital cameras. The precision molded glasses are well-suited to the design of complex and aspherical lenses.
- **Machine vision and metrology**
Machine vision systems require optical glass products that offer high image resolution and excellent contrast, as well as a high refractive index and tight tolerance. The technology owner provides the tightest tolerances available on the market.

