ACOUSTO-OPTICS

CRYSTAL OPTICS

ELECTRO-OPTICS

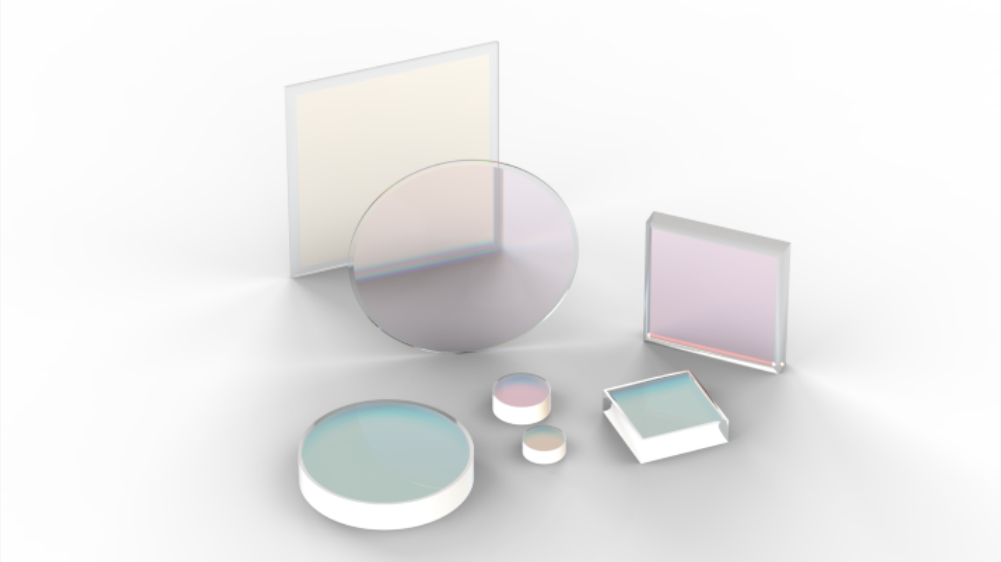
FIBER OPTICS

PRECISION OPTICS

Precision Prisms
Corner Cubes
Precision Lenses
Opto-Mechanical Assemblies
Precision Mirrors
Synchrotron and Research Grade Mirrors
Plate and Cube Beamsplitters
Optical Windows and Flats
Waveplates
Superpolished SROC
Ring Laser Gyroscope Components
Infrared Optics
Optical Domes
ML Optic

SYSTEMS

« BACK TO PRECISION OPTICS



OPTICAL WINDOWS AND FLATS

G&H deliver high performance optical windows and flats across a wide range of applications. From small precsion optical flats for interferometry applications, to large windows installed in military vehicles, our components are custom designed to deliver performance and value.

Optical windows are a critical component in a variety of applications which require minimal optical impact with maximum mechanical separation between two environments.

Ideally, the window has minimal impact upon the beam transmission properties: does not reflect, absorb, or scatter the beam; does not distort or impact the wavefront; does not bend or deviate the beam path.

The mechanical separation may require thermal, chemical, or environmental tolerance. Careful material selection and coating design

is often required to achieve all of the mechanical separation as well as the optical needs.

OPTICAL WINDOWS FOR INDUSTRIAL APPLICATIONS

Optical windows are utilized in lasers, testing chambers, and other systems where the environment on one side may be pressurized, filled with a specific gas, or otherwise need to be chemically separated from the other. The window needs to transmit the photon energy with minimal disruption (highest transmission, lowest absorption and scattering, and minimal polarization or optical path distortion).

The highest quality optical windows from G&H demonstrate very high parallelism, supremely low surface roughness, low transmitted and reflected wavefront errors, and are optical transparent at the operational wavelength range.

Window material is chosen based on environmental factors such as acidity of atmosphere, strong vacuums, high pressures, or high temperatures and the operational wavelength range.

WINDOWS FOR DEFENSE APPLICATIONS

Defense-grade windows from G&H are significantly larger and may be coated with diamond-like coatings to withstand abrasive environments in the desert.

Window thickness is determined by environmental factors: pressure differentials, thermal conditions, and mounting mechanics.

APPLICATIONS

Biomedical instrumentation, corrosive chemistry, directed energy applications, industrial instrumentation, IR imaging, laser cavities, machine vision, multiphoton imaging.

SPECIFICATIONS	INDUSTRIAL	DEFENSE
Coating options	High laser damage threshold High transmission Broadband or V-coat anti-reflection	Broadband or V-coat anti-reflection Diamond-like coatings for abrasion resistance
Substrate materials	ZnSe,ZnS, Ge, common glasses, fused silica, glass ceramics,	ZnSe,ZnS, Ge, commonglasses, fused silica, glass ceramics,
Sizes	Typical 3-300 mm	Up to 450mm

Especially optimized for	High energy Transmission at high angles High temperature stability	Abrasive environments Transmission in high angles High long-term stability
Environmental testing	Humidity,sea salt spray, DIN, MILupon request	Humidity,sea salt spray, DIN, MILupon request

Actual specifications are dependent upon design, geometry, and material choices.

> *G&H has received ISO9001 certification across all of its manufacturing facilities. AS9100C certification has been achieved at select facilities. Durability testing can be performed against MIL, DIN, or BSI standards as appropriate.*

GET IN TOUCH

We enable leading organizations all over the world to deliver tailored, innovative solutions to meet precise requirements. Contact us now to discuss your next project.

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