



Home → Precision Optics → Precision Lenses

ACOUSTO-OPTICS

CRYSTAL OPTICS

ELECTRO-OPTICS

FIBER OPTICS

PRECISION OPTICS

[Precision Prisms](#)
[Corner Cubes](#)
[Precision Lenses](#)
[SWIR Lens Assemblies](#)
[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](#)

[« BACK TO PRECISION OPTICS](#)



PRECISION LENSES

Custom precision lenses are a key optical component for many transmission and imaging applications in the aerospace, security, defense, machine vision, health care, and life science industries.

G&H manufacture custom precision lenses for imaging, focusing, collimation and illumination, using standard polishing and grinding techniques, as well as single point diamond turning and MRF®.

We take a design-for-manufacture approach to lens production, facilitating the production of cost-effective, high quality custom precision lenses.

Our lens processing capabilities include CNC generating, grinding, and polishing. We polish spherical, semi-spherical, and aspheric lenses. 5-axis grinding and polishing machines are utilized for manufacturing high precision aspheric surfaces on optical glass. Single point diamond turning is used for aspheric and diffractive optical elements.

A unique, stand-out capability for G&H is our ability to manufacture complex shapes on lenses, such as step profiles or off-axis shapes.

In addition to singlets, we produce a wide variety of doublets, triplets, and more complex lens assemblies.

From high transmission broadband anti-reflection coatings to V-coats for high energy applications, our extensive coating capabilities deliver performance across the spectrum from the UV to the FIR.

We have made significant investment in metrology equipment to ensure that our customers receive quality, high-performing products. More details on our metrology capabilities can be found in the metrology section of the catalog.

CONTACT US

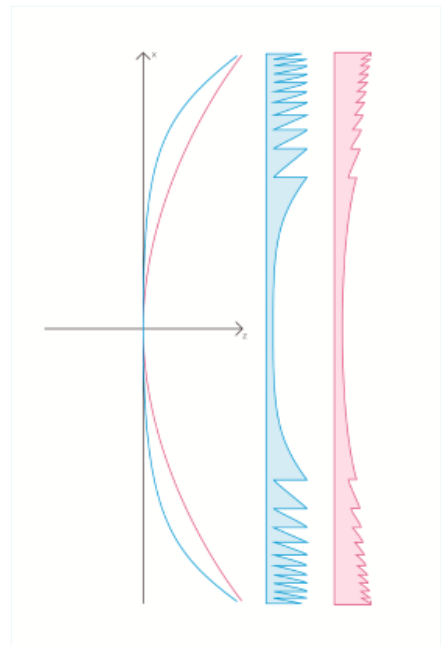
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MAGNETORHEOLOGICAL FINISHING

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Environmental testing of components and coatings is critical for assurance of performance in rugged conditions. G&H environmental testing capabilities include MIL-C-675C, MIL-C-48497A, MIL-E-12397, and MIL-M-13508C for endurance against abrasion, adhesion, humidity, temperature, and environmental conditions.



APPLICATIONS

Dental imaging, dermatology, endoscopy, hyperspectral imaging, lasers, machine vision inspection, metrology, optometry, projection, range finding, reconnaissance, surveillance, target identification, targeting and designating, thermal imaging.

Specifications	VISIBLE THROUGH INFRARED 400 NM – 14µm		VISIBLE ONLY	INFRARED ONLY
	Spherical	Aspherical	Cylindrical	Aspheric/Diffractive
Substrate material	All optical glasses	All optical glasses	All optical glasses	ZnSe, ZnS, Ge, Si, Chalcogenides
Diameter ranges	Up to 200 mm	Up to 60 mm	Up to 200 mm	Up to 250 mm
Thickness ranges	Up to 100 mm	Up to 100 mm	Up to 100 mm	Up to 100 mm
Surface quality	40-20 to 5-2	20-10	20-10	20-10
Surface accuracy (conventional polishing)	λ/10	λ/10	λ/10	λ/10
Surface accuracy (MRF)	λ/40	λ/20	λ/20	λ/20
Dimensional tolerance	±0.005 mm	±0.005 mm	±0.005 mm	±0.005 mm
Radius	2.0m to infinity	2.0m to infinity	2.0m to infinity	2.0m to infinity
AR coatings	High laser damage threshold High transmission Broadband or V-coat anti-reflection	High laser damage threshold High transmission Broadband or V-coat anti-reflection	High laser damage threshold High transmission Broadband or V-coat anti-reflection	High transmission Broadband or V-coat reflection

Actual specifications are dependent upon design, geometry, and material. Please talk to an applications engineer early in your design process to capture the most value of our design-for-manufacture approach.

G&H has received ISO9001 certification across all of its manufacturing sites while AS9100C certification has been achieved at select facilities.

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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