

Optical Components

Hyperion Optics is a premium supplier of photonics products including high-precision [optical components](#), lens systems, and optomechanical assemblies across UV-VIS-IR applications.

Hyperion is equipped with a comprehensive metrology lab that includes Zygo® interferometer, profiler, spectrometer, and MTF testing station. Our capability to accurately & scientifically quantify optical specifications such as surface flatness and Transmission in our products offers our partners confidence and a peace of mind.

Hyperion is committed to serving the photonics community with high-quality optics and customer service. Every optic is backed by Hyperion's experienced production staff, QA engineering team, and ISO:9001:2015 compliant manufacturing process. We are proud to offer our customers a worry-free procurement experience.

Optical Components Category



Spherical Lenses

Hyperion offers a variety of spherical/ singlet lenses across the spectrum, including Plano-Convex/Concave, Bi-Concave/Convex, Positive and Negative Meniscus in a wide range of materials.



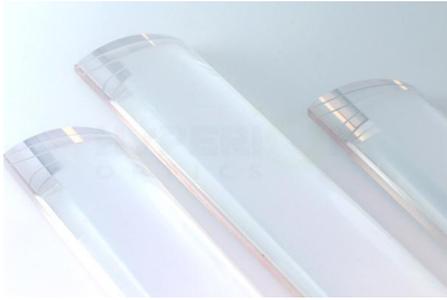
Achromatic Lenses

Hyperion has significantly improved the achromatic spherical and cylindrical lenses manufacturing precision. We offer custom achromatic cylindrical, [achromatic doublet](#), and triplet lenses.



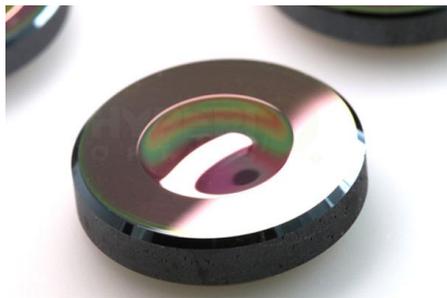
Aspherical Lenses

Hyperion's aspherics capabilities can deliver high-precision aspherical surfaces from VIS imaging system to athermal lenses for LWIR applications. Material options include ZnS, ZnSe, Ge, CaF₂, Chalcogenide, and more.



Cylindrical Lenses

Cylindrical components are widely used for laser applications. Hyperion offers comprehensive Zygo reports on all cylindrical surfaces. Custom measurements such as optical axis deviation are available upon request.



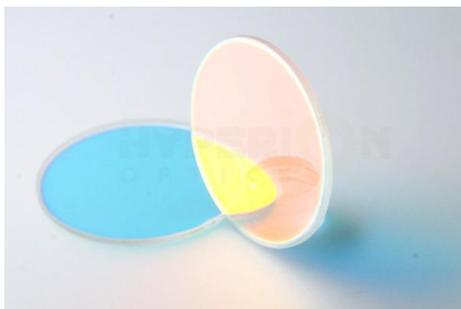
Infrared Lenses

Hyperion regularly work with IR materials that spans across almost the entire IR spectrum. We use laser-based edging device to control MWIR and LWIR lenses' decenter deviation, and test on reflective centering station to fulfill extremely precise tasks.



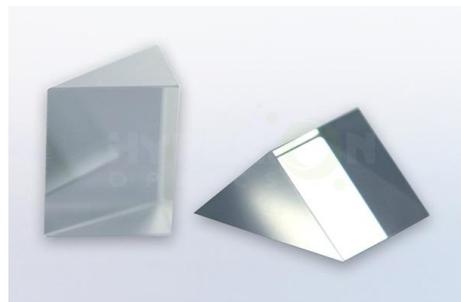
Mirrors

Hyperion offers a variety of laser, flat, metal substrate, focusing, or specialty Optical Mirrors in a multitude of reflective coating options, including Protected Aluminum, Enhanced Aluminum, Protected Silver, Protected Gold, or Dielectric.



Filters

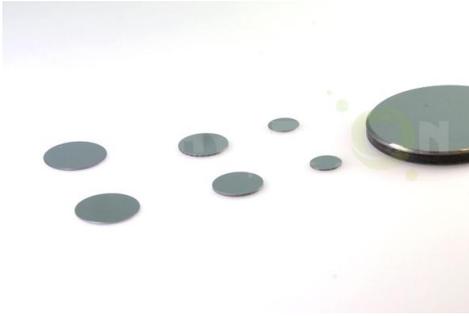
Hyperion is equipped with 4 coating chambers to provide various filters to our customers. Please contact us about your custom coating specifications, we are more than happy to simulate the coating results for you.



Prisms

Hyperion supplies a wide range of prisms to meet UV-Visible-NIR applications. Our capabilities can fulfill high-precision surface quality and tight angle tolerance. Materials selection ranges from flint/crown glasses, fused silica, ZnSe, CaF₂.

Hyperion Optics



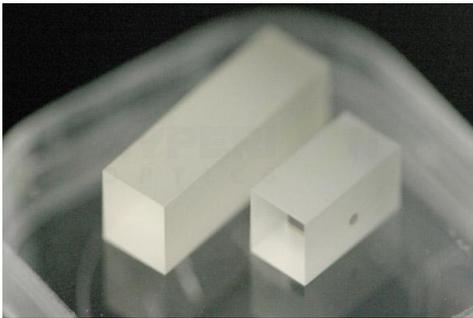
Windows

Our precision optical windows range from UV to VIS, NIR, SWIR further MWIR and LWIR applications. We offer a variety of substrates, such as Germanium (Ge), Silicon (Si), N-BK7, UV Fused Silica, Zinc Selenide (ZnSe), or Multiple anti-reflection coating options are available for the Ultraviolet (UV), Visible, or Infrared (IR). Please also refer to our IR optics category for more information.



Dome

Glass domes are widely used for commercial applications which require protective boundary between different environments; domes perform as windows, providing protection to electronic sensors or detectors without sacrificing field of view.



Crystals

Our crystals solution includes BBO, BIBO, KTP, anti gray tracking KTP, LiNbO₃, Nd YAG crystal and wafer and much more. With 1/10 lambda precision, coated/un-coated options, competitive pricing.



Laser Optics

Protect scan lenses from backscatter and other workplace hazards, Hyperion Optics offers [protective windows](#) -- also known as debris windows -- that are either included as the overall scan lens assembly part, or sold separately. These plano-plano windows are available in both ZnSe and Ge materials and also supplied mounted or unmounted.

Custom Optical Components

We at Hyperion Optics offer a wide range of components manufacturing service, custom made to your specifications. Our manufacturing capability enables us to fulfill your product material mix per your application, from UV band to IR wavelength.

If your design incorporates a complex combination of components, such as aspherical surfaces, doublet, and triplet in optical glass or IR materials for high-end application, Hyperion Optics would be your optimal choice. Our years of manufacturing and assembly experiences can help ensure you reach your project goals within your budget.

Our lens/ windows manufacturing capabilities also include high-speed polishing technique and traditional polishing process for the purpose of prototyping with relatively low volume (2-5 pcs), for customer's optical performance approval. Aspherical shaping and polishing are also available for a low-volume production plan.

Hyperion's Custom Components Fabrication

✧ DFM/ DFA Expertise

A wide range of elements manufacturing capability spanning across UV, VIS, NIR, SWIR, MWIR, LWIR applications. With our expert design team's support, we can work with customers from both design and manufacturing perspectives, thereby achieving the optimal cost-benefit ratio in a given project.

✧ In-House Metrology

Our extensive inspection capability offers our customer full quality support to meet excellent products delivery. Your parts distributed under strict internal quality control. Further, Hyperion Optics will stand behind your part's quality in its life cycle.

✧ Effective Prototyping

With the decades of experience in components manufacturing, we are comfortable with low-volume prototyping before going into mass production. Our in-house coating chamber can help you save cost by slotting your custom components into our regular coating routine.