

ABOUT HYPERION




Hyperion Optics has a rich history in optical engineering and manufacturing of high-precision lens assemblies.

Established in 2008, Hyperion has grown into a team of 50, comprised of the industry's top-tier optical & mechanical engineers, assembly technicians, production staff, and quality management.

In the past 5 years, we have supported numerous laboratories in designing and producing custom, high N.A. objective lenses that have expanded their field of quantum research.



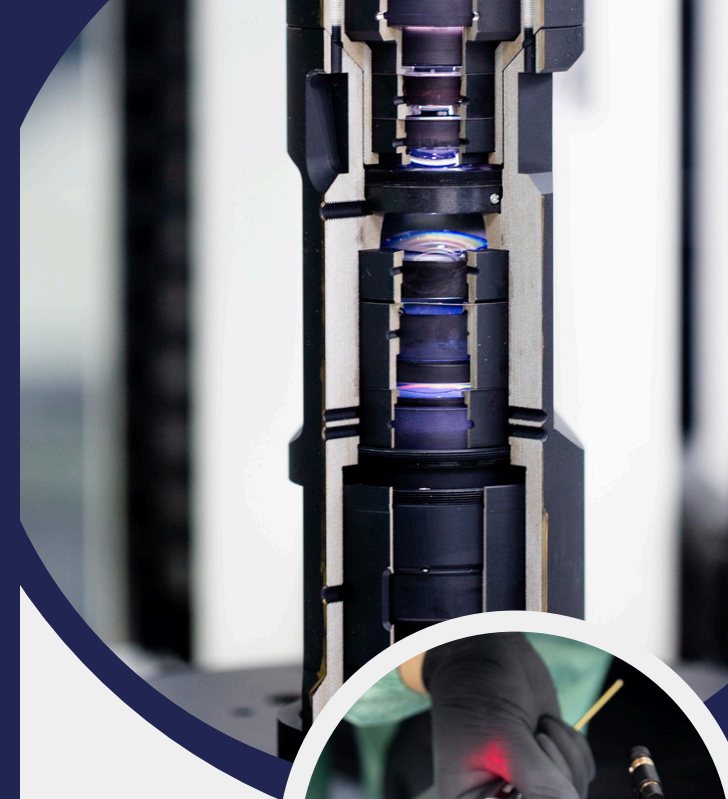
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Optics Engineered for Quantum Resolution

HYPERION
OPTICS

ENHANCED QUANTUM RESOLUTION

Hyperion specializes in balancing the lens's mass with the numerical aperture to create high N.A. diffraction-limited objective lenses.

Through tolerance distribution on the component level and active alignment assembly, we can maximize your quantum resolution:

- 2-5 μ m decenter correction per surface
- 20 μ m real-time air gap correction between each element



ULTRAVIOLET QUANTUM PRECISION

Our production expertise in high-transmittance optical materials in the UV range opens up new opportunities in extended wavelengths.

- **Materials:** Quartz, CaF₂
- **Surface Quality:** up to 20/10 after coating
- **Accuracy:** Power/Irr. 3 (0.2) Fringes
- **Reflectance Decenter:** 30 arc seconds

QUANT METROLOGY

Hyperion is equipped with comprehensive metrology, including TriOptics® HR and Image Science systems to obtain modulation transfer function measurements for different FOVs @different wavelengths.



QUANTUM- GRADE MECHANICAL PRECISION

We utilize conventional anodization and a unique blackening process called Micro-Arc Oxidation ("MAO"), which effectively minimizes stray light reflections from mechanical elements in the system, thereby improving the reception of optical signals.

Critical mechanical elements can reach 5 μ m machining accuracy, guaranteeing precision for quantum applications.

