

#### **ABOUT US**

Hyperion Optics is a leading optics supplier of photonics products including optical components, lens systems and opto-mechanical assemblies in UV, Visible, NIR, SWIR applications.

Our clients spanning across defense, security, bioengineering, phamaceutical, institutional, industial and research industries worldwide. We specialize in DFM (Design for Manufacturing) input from rapid prototyping to volume production. Our comprehensive metrology coupled with our cost-effective philosophy help Hyperion customers obtain a competitive edge in the global market.

Compared to other Chinese vendors, Hyperion has the most experienced engineering team to provide technical backups and consultation for our customer with multi-languages skills, seamless communication is also an advantage. Free consulation toward your optical system and preliminary design are also available now!

## QUA'LITY SERVICE

Optical System Design-Prototyping / Volume Production

Components Manufacturing

Custom Coating

Reverse Engineering

Opto-Mechanical Design and Assembly/ Sub-assembly

Design Consultation & Optimizing

## **Cutting Edge Advantages**

Competitive Pricing

Promising Design Output

In-House Metrology

Full Testing With Cert Documentation

Money Back Warranty

#### **COMPONENTS CAPABILITY**







Visible Range Spherical Lenses and Mirrors/Laser Precision With Competitive Pricing







Infrared Range Spherical Lenses and Windows

Availability

Custom Design
Special Coating
Edge Blackening
Special Shaping



Surface Figure
Dimentional Parameter
Centration

Radius Coating Curves



# OPTICAL & MECHANICAL SERVICES OUR EXPERTISE

Our engineering team consists of optical, mechanical, quality engineers with expertise in a wide range of imaging applications and technologies, skilled in the design of complex, high resolution, diffraction limited, innovative optical assemblies.

Additionally, they have years of experience with imaging optics design, optical alignment methodologies and equipment, opto-mechanical tolerance analysis.

Using state-of-the-art optical/mechanical design software, we ensure that your lens systems are both technically feasible and mechanically manufacturable. By integrating both optical and mechanical designs we ensure the solution built meets all your mechanical and performance specifications. We also ensure lens performance through extensive testing both during manufacturing and after assembly.

#### **OPTICAL DESIGN & PRECISION ASSEMBLIES**

Hyperion optics has various range of lens system solutions available, from VIS to IR, we also welcome custom design and prototyping. Our specialty is projection lens, microscope objective lens, SWIR lens, diffraction limit objective lens and fisheye lens. We equipped with interferometer as well as MTF testing station which ensure the products delivered are quantitatively quality assured.

#### **SWIR** Lens



#### **OPTICAL SPECIFICATIONS**

| EFFECTIVE FOCAL LENGTH                    | (MM)  | 12.5                         |            |
|---|---|------------------------------|------------|
| TOTAL TRACK                               | (MM)  | 82.0                         |            |
| F/#                                       |   | 1.4                          |            |
| Paraxial Image Height                     | (MM)  | 8.0                          |            |
| AR COATING                                | (nm)  | 700-1900                     |            |
| MECHANICAL INTERFACE                      |   | C-MOUNT                      |            |
| OPERATING TEMPERATURE                     | ( • )   | -20 - + 40                   |            |
| 10 st | 17 (17 (18 ) 18 ) 17 (18 ) 18 | elaid curvature<br>1 10 kg s | Ejecortian |















## OPTO-MECHANICAL ENGINEERING

Competitive Pricing

Free Consulting

Rapid Prototyping

Optimizing solutions / Reverse Engineering

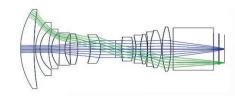
Money Back Warranty

## **Projection Lens**



## **OPTICAL SPECIFICATIONS**

| EFFECTIVE FOCAL LENGTH | (MM) | 12.5           |
|------------------------|------|----------------|
| Maximum Aperture       |      | f/2.5          |
| Imager Format          |      | 0.7" 1,280X720 |
| Transmission           |      | 85%            |
| Filed Angle            | Deg  | 72             |
| Inner Circle           | (MM) | 18             |
| Distortion             |      | 0.5%           |
| Relative Illumination  |      | 70%            |
| Projection Range       |      | 0.7m ~ 1.4m    |
| Lateral Color          |      | <=1/3 pixel    |

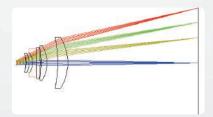


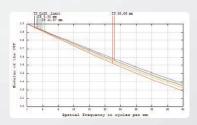
#### Scan Lens



## **OPTICAL SPECIFICATIONS**

| EFFECTIVE FOCAL LENGTH  | (MM) | 100     |
|-------------------------|------|---------|
| Back Focal Length       |      | 122.57  |
| Total Track             |      | 153.57  |
| Image Space F/#         |      | 24      |
| Entrance Pupil Diameter | (MM) | 4.2     |
| Exit pupil Diamter      | (MM) | 7.2     |
| Maximum Radial Field    |      | 58.8    |
| Primary Wavelength      |      | 632.8nm |
| Angular Magnification   |      | 0.58    |







Hyperion optics has equipped Zygo interferometer and MTF testing station, also with the capability of transmission test on component or lens system. With our advanced metrology laboratory capability, we are able to deliver promising quality products and fulfill customer's needs. Initial optical design consultation is totally free; don't hesitate to communicate with one of our opto-mechanical engineer today!

#### **FABRICATION & PRECISION ASSEMBLY**



Besides high speed polishing technique, our lens / windows manufacturing also maintains 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 is also available for low volume production plan. Contact one of our optical sales engineers find out the best offer today!

#### **Contacts**

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