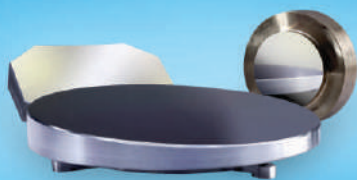




Optica
Excellent In Optics



**MAKES
INVISIBLE TO VISIBLE**



**PRECISION
OPTICS**



**INFRARED
OPTICS**



**OPTICAL
ASSEMBLIES**



**POLYMER
OPTICS**



COMPLETE SOLUTIONS FOR

- Precision Optics
- Diamond Turned optics
- IR Optics
- Opto Mechanical Mounts
- Large Size Optical Systems & Assemblies

We have Expertise in Precision Optics, Diamond Turned Optics, IR Optics, Imaging Optics, Large Size Mirrors & Flats, Aspheric & Off Axis Parabolic Mirrors, Ultra Precision Optical Windows, Diffractive Optics, High Precision Opto Mechanical Mounts/Systems, Large Size Complete Schlieren Systems, Precision Polymer LED Lenses, Polymer Imaging Lenses, LED Backlights & Optical Instruments.

Optica and Allied Engineering Pvt. Ltd. is an established Indian company since 1985, supporting Medical, Aerospace, Astronomy, Automation, R&D Labs, IR Optics. Our focus has been on global customers in the areas of Precision Optics and Polymer Optics.

We are an ISO 9001-2015 Certified company.

Optica works with each customer as a partner from the initial concept drawing to prototype sample to production and support technically. We take pride in giving a complete solution that meets customer requirements.



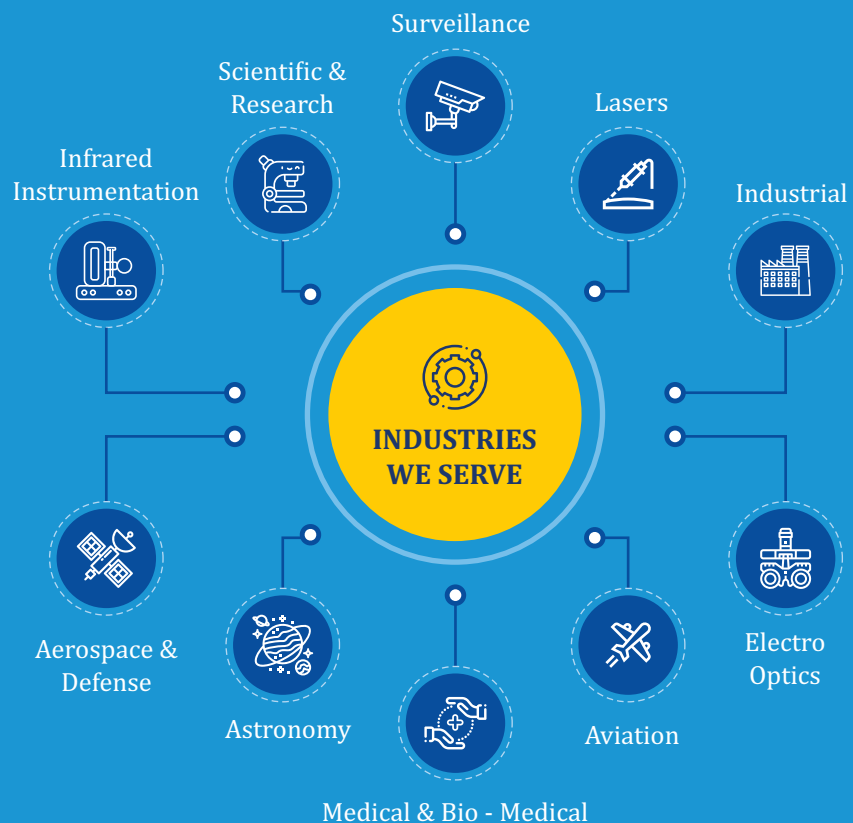
VISION

Our Vision is to consolidate our presence as a trusted source for Precision Optics, IR Optics, Ultra Precision Diamond Turned Optics, Polymer Optics, Optical Systems & Assemblies Support to Research & Academic Organization & Industries.



MISSION

Our Mission is to offer total solutions to all existing & potential customers through safe / concurrent manufacturing practices and to achieve manufacturing excellence & total customer satisfaction by both collective and individual contributions by nurturing and retaining human assets and skills.





MESSAGE FROM MD

Thank you for looking at Optica for your Precision Optical Parts, Optical Assemblies, Optical Large Turn key Projects, Diamond Turned IR Optics, Precision Polymer Optics, Ultra Precision Mechanical Parts for Space, Optica has been in business since 1985 innovating and producing optical products for a broad range of market applications including Industrial, Aerospace, Medical, Defense Labs, R&D, Education, Surveillance etc.

Headquartered in Bangalore, India, we design, develop, manufacture, and distribute optical components and assemblies, utilizing the latest processes and advanced manufacturing technologies. Optica became a group of Gaggione S.A.S, France in 2015.

As one of the founder members for “Needy Heart Foundation” (Social and Charitable Trust with good doctors and industrialist), we support needy heart patient for surgical requirements as our CSR activity.

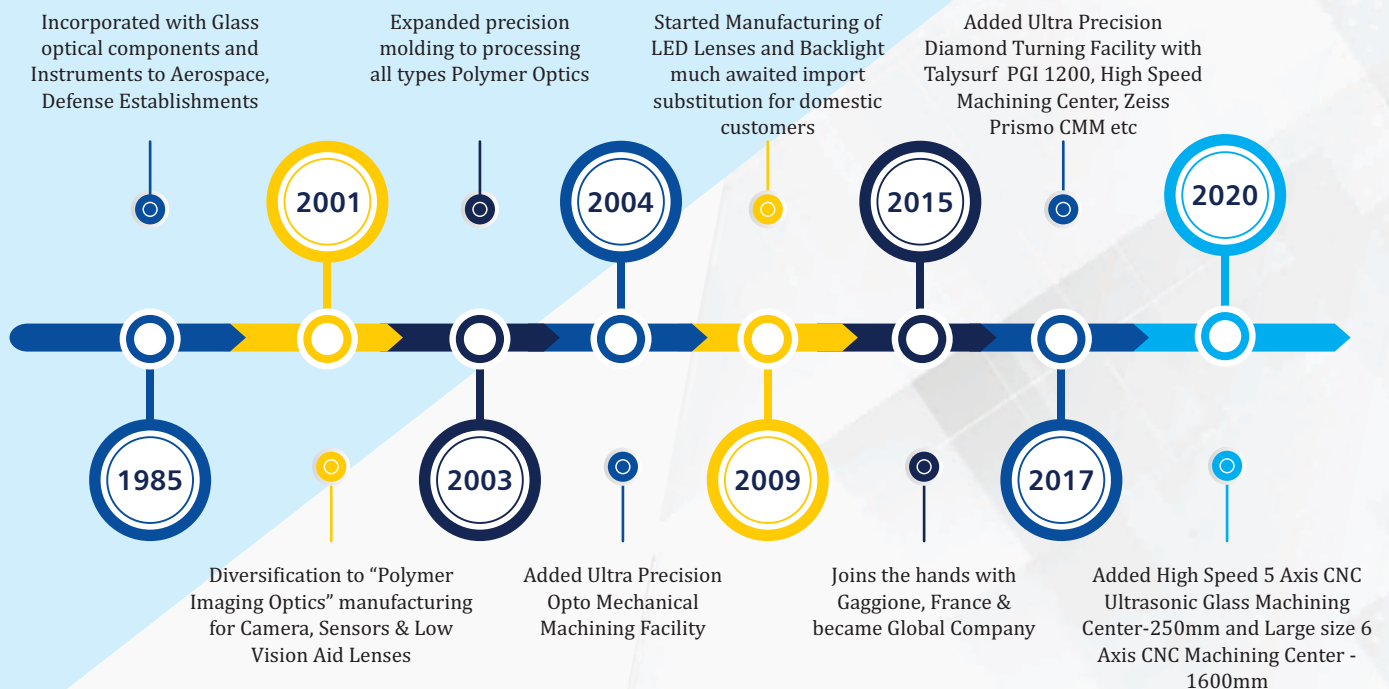
We pride ourselves on high performance, customer support, quality products, value added designs and cost effective volume manufacturing.



D. Rajendra Kotaria
Managing Director



OUR HISTORY



OUR ACHIEVEMENTS

Received “Defense Technology Spin off Award” from Hon’ble Prime Minister during Year-2002 for Manufacturing Polymer Aspheric Lenses as LOW VISION AIDS first of its kind in India.



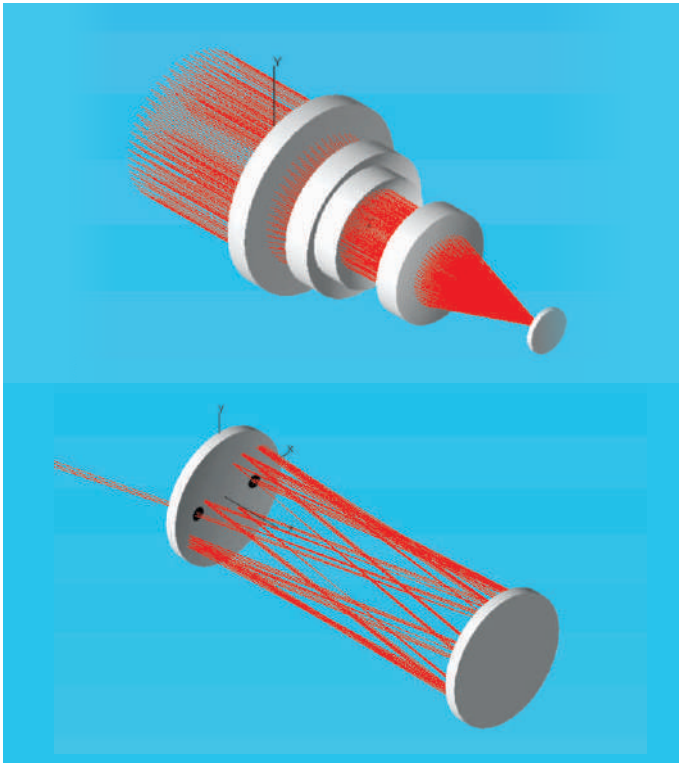


DESIGN & DEVELOPMENT

We strongly believe that, good designs followed by good engineering practices and effective document control are key for successful completion of projects on agreed time line. We have experienced engineers who will ensure designs to be robust and cost effective to meet customer specified performance and reliability expectations.

We have necessary software's to design optical component & optical systems. We can also receive 3D part files & other design input in STEP or IGES files.

We have Zemax, Oslo and Trace Pro Optical Software for lens and system designs. PRO-E, Solidworks for Opto-Mechanical designs and mold designs. We also use CREO Parametric 6, NX, Calypso Diffsys etc.



Optical Design & Simulation



PRECISION UV-VIS-IR OPTICS



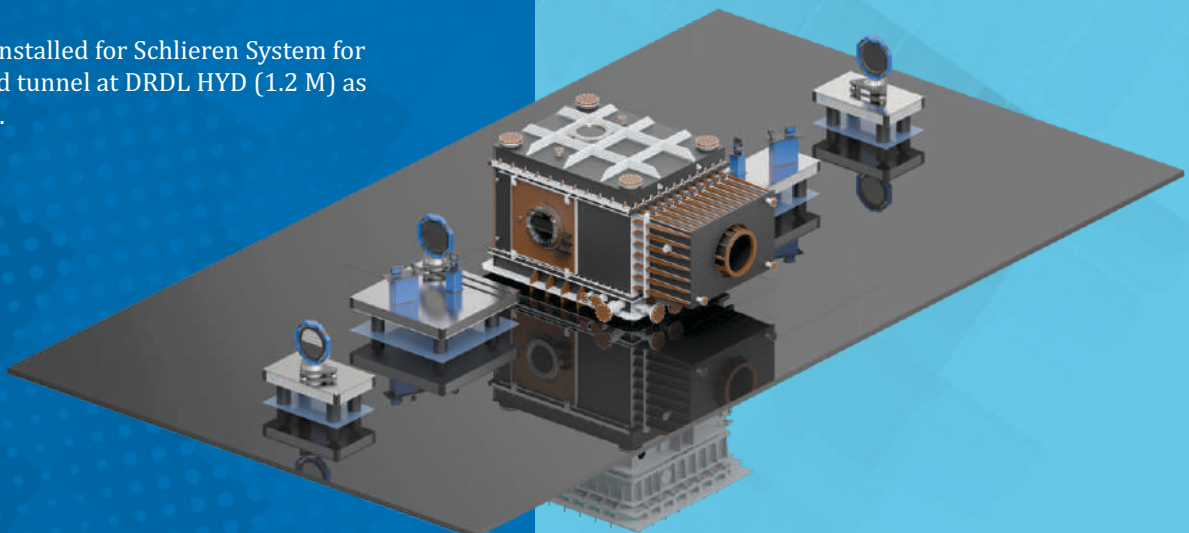
We Manufacture a wide range of optical components Viz: Lenses, Achromatic Doublets, Precision Windows, Optical Domes, Spherical & Parabolic Mirrors, Off Axis Parabolic Mirrors, Diamond Turned Metal Mirrors, Silicon & Germanium Aspheric Lenses, Diffractive Optics, Wedges, Axicons, Optical Flats up to accuracy $\lambda/20$. All types of Prisms, Laser Optics, HR Laser Mirrors, Interference & Color Glass Filters, Plate & Cube Beam Splitters, Spherical & Parabolic Mirrors up to Dia. 1200 mm, Machined Optical Glass Parts, Reticles, Optical Assemblies, Schlieren Systems and Turnkey Projects.

We produce Optics from Dia. 5mm to 1200mm with anti reflection coating like single layer, BBAR, Multilayer Coating, Metal Mirror Coating, Dichroic, Narrow and Broadband Filters, Beam Splitters, DLC Coating, etc. (wavelength from 0.185 micron to 14 microns).

Company process UV, Visible and IR Materials & Metals.

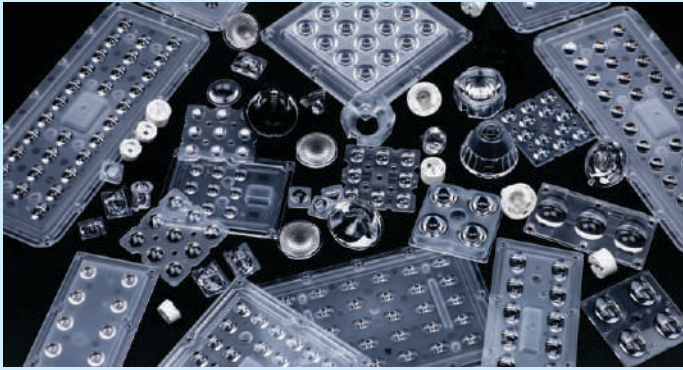
Material Processed : N-BK-7, Silicon, Germanium, Chalcogenide, Zerodur, Astrosital, Clear Ceram, Fused Silica, Sapphire, Pyrex, CaF₂, MgF₂, ZnSe, ZnS, all Non Magnetic Metals like Al₂, Titanium, Nickel, Copper, PMMA, PC, Invar etc.

Optical System installed for Schlieren System for Hypersonic wind tunnel at DRDL HYD (1.2 M) as Turnkey Project.





PRECISION POLYMER OPTICS



LED Lenses and Polymer Imaging Lenses get designed by our Optical Designers with relevant Software's as per Customer and Market Demand. We develop proto tools for initial trial production. Company produce Lenses & Reflectors of 3mm to 300mm sizes in Polymer. At our Company have best precision injection molding facility. We have Testing facility including Goniophotometer, Integrating Spheres, LM-3 (Luminance Meter), Spectro -Photo Colorimeter etc.

LED Lenses for all reputed brands like OSRAM, NICHIA, CREE, PHILIPS LUMILEDS, SEOUL, EDISON, etc. We do have ultra precision lens molding machines with 30T to 350T capacity with in-house lens mold making & designing facility.

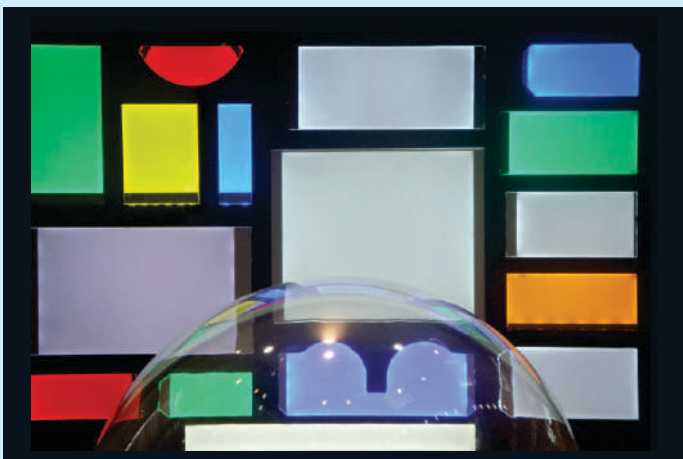
Applications: Street Lights, Flood Lights, High Bay Lights, Colour Mixing Lights, Facade Lights, Surgical Operation Theatre Lights, Collimators, Interior Lights, Iris Scanners, Finger Scan, Camera etc.



LED BACKLIGHT

Company installed European make high speed ultra precision laser marking machine and laser cutting machine with light distribution software. LED Backlight can be made in different sizes upto 900 X 2000mm.

We produce Backlights in different colors with more than 95% uniformity with production capacity of up to 1 million pcs / month. These backlights are used in digital energy meter, flat panel lights, LCD panel lights, TV LCD panel lights, LED panel lights for home and office lighting etc.

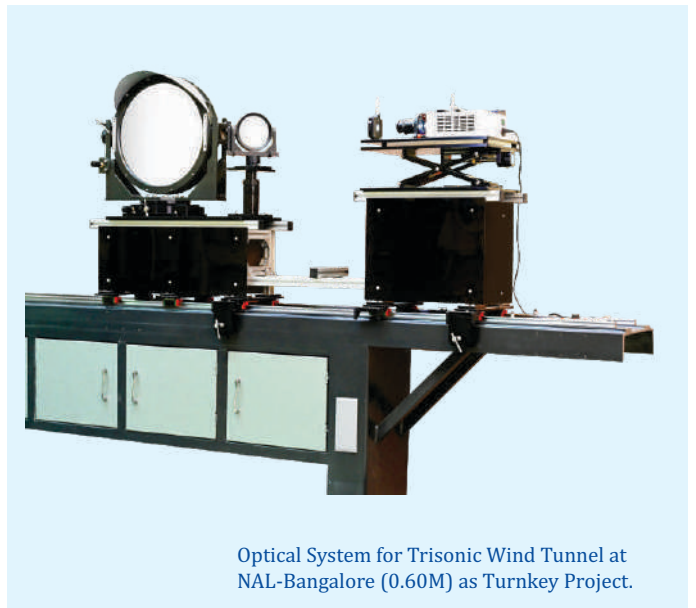


OPTO-MECHANICAL PARTS, ASSEMBLIES & LENS MOULDS

We produce different types of Opto-Mechanical assemblies, vibration free tables, motorized stages and mounts. We develop high precision moulds for Polymer Optics, LED Lenses & Clear Parts.

Our Mechanical & Optical Engineers have expertise to work on Different high value challenging projects for large optical systems, Lidar Telescopes and Turnkey Optical Schlieren Systems used in Wind Tunnels.

- *Opto-Mechanical Equipment Design*
- *Optical Alignment Tooling and Fixture*
- *Ray Tracing*
- *Selection of Optical Components and Opto - Mechanical Mounts*
- *Design of Custom Mounts using Kinematic Principles*
- *3D Model and 2D Drawings Creations*
- *Assembly Procedure and Operating Procedure Documentation*



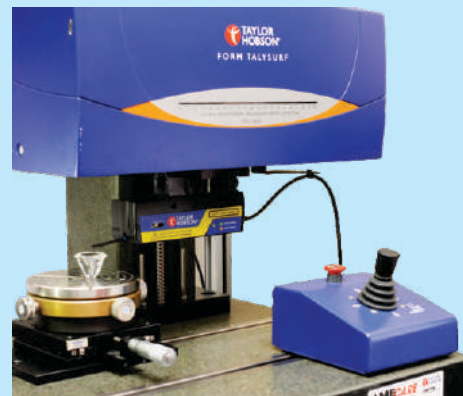
Optical System for Trisonic Wind Tunnel at NAL-Bangalore (0.60M) as Turnkey Project.





MANUFACTURING FACILITY

- Diamond Turning Machines Nanoform X up to Dia. 420mm
- 5 Axis High Speed Ultrasonic Glass CNC Machining Center
- 6 Axis High Speed Large Size CNC Machining Center 1600mm
- Optical Grinding and Polishing Machines
- Curve Generators and Centering and Edging Machines
- Thin Film Coating Plants for Optics & Polymer Optics
- High Speed Lens Polishing Machines
- Large Optics Grinding Polishing Machine 1200mm
- CNC Turning Center & other conventional Machines like Milling, EDM, High Precision Surface Grinding M/C
- Ultraprecision Lens Moulding M/C 30T - 350T
- Laminar Flow Assembly and Inspection Tables



TESTING FACILITY

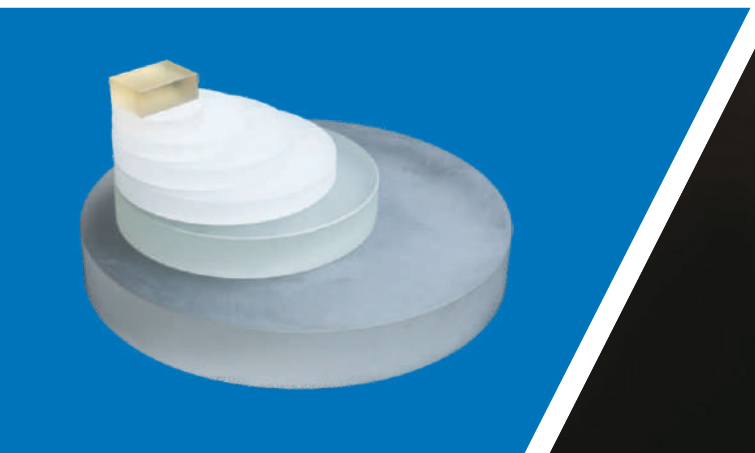
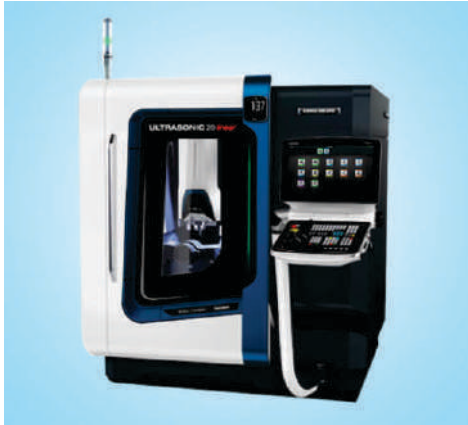
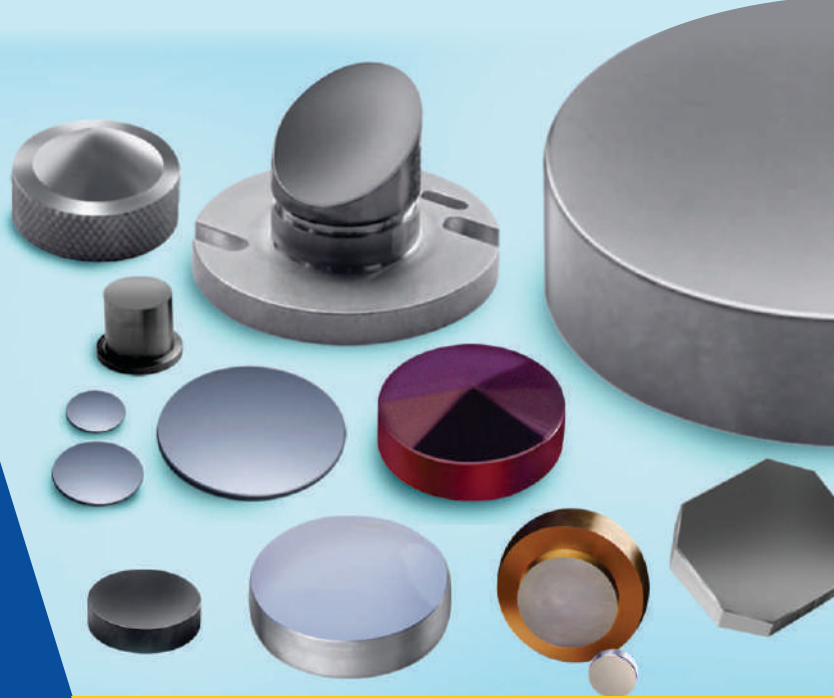
- Taly Surf PGI 1200 (Taylor – Hobson Make) for measuring Aspheric Form-Figure-Finish
- CMM Prismo (Zeiss-Make) having 0.8 Micron least count size 900mm
- Phase shift Interferometer (Zygo-Make) with Intellwave software
- Vertical Laser Interferometers 2 No
- Optical Test Station from OEG Germany (MTF, FL, BFL, Centering Error, Radius etc)
- Spectrophotometer UV-VIS –NIR, & FTIR etc.
- Flat Laser Interferometer
- Auto Collimators Nikon
- Leica Centering Microscope
- CT Measurement up to 1 Micron
- Video Measuring Systems
- Goniophotometer & Integrating Sphere
- Spectrophoto Colorimeter
- Luminance meter





CAPABILITIES

- Dimension $\pm 0.005\text{mm}$, Radius : $\pm 0.1\%$
- Form Error Lambda / 20 & Angle Accuracy : ± 5 Sec
- S/D : up to 20:10
- Optical Windows / Mirrors : 3mm to 1200mm
- Spherical and Parabolic Mirrors up to 800mm
- Off axis Parabolic Mirrors : 50mm to 600mm
- Lenses 2.00mm to 300mm & Domes : 40mm- 150mm.
- Flat Optics : 6.00mm to 900mm
- HR Mirrors : 99.95%, IR HEAR Coating : 98% Transmission
- BBAR : Reflection less than 1%





Optica
Excellent In Optics

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