



An ISO 9001:2008 Company

Optica
Excellent In Optics



**Manufacturers of Precision Optics,
Infrared Optics, Diamond Turned
Aspheric Optics, Polymer imaging
Optics, LED Lenses, LED Back
Light, Light guide Plates, Optical
Instruments & Microscopes,
Vision System, Opto-Mechanical
Assemblies etc.,**





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

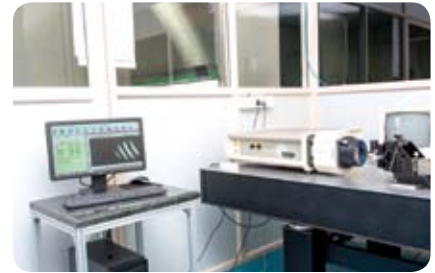
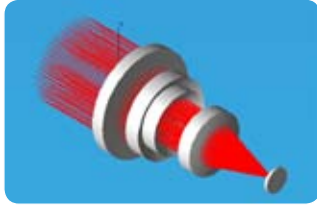
Optica with the product line up cater to the following verticals.

- Defense
- Aerospace
- Automobile
- Biomedical
- Electronic & Opto-electronics
- Analytical Sensors
- Manufacturing
- Green Lighting(LED)
- Nano Technology
- Communications

Vision & Mission

We thrive to consolidate our presence as a trusted source for Precision Optics, IR Optics, Ultra Precision Diamond Turned Optics, Polymer Optics, LED Lenses, LED Backlights, LGP (Light Guide Plates), Optical Instruments and support Research Institutions, Space Organizations & industries like LED Lighting, Medical, Aerospace, Biomedical, defense and Manufacturing industries.

Our Mission is to offer "Total solutions to all Existing & Potential customers through Safe / concurrent manufacturing practices and achieve Manufacturing Excellence & Total customer satisfaction by both collective and individual contributions Retain and nurture the human assets and skills"



Message from MD

Thank you for looking to Optics & Allied Engg Pvt Ltd. (Optica) for your Optical, Polymer Optics, Ultra precision Diamond turned IR Optics, Opto-Mechanical Assemblies and Vision System product needs. Optica has been in business since 1985 innovating and producing optical products for a broad range of market applications including Industrial, Aerospace, Medical, Defense, R&D, Education, Test and Measurement.

Optica became a group of Gaggione LLC, France in 2015. Facility at Bangalore, India, we design, develop, manufacture, and distribute optical components and assemblies, utilizing the latest processes and advanced manufacturing technologies. Optica produces components and assemblies incorporating Precision IR Optics, Laser Optics, Fused Silica Parts, Molded Polymer Optics, 2D Measuring Video Systems, Opto Mechanical Assemblies and Precision Clear Parts.

In 2002, Optica Received Prestigious "Defense Technology spin-off Award" from Hon'ble Prime Minister of India Sri. Atal Bihari Vajpayeeji. For Design and development of Low Vision Aids for Visually Challenged people.

As one of the founder Trustee for "Needy Heart Foundation" (Social and Cheritable Trust with good doctors and industrialists), we support Below poverty line patients for their heart operation needs.

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



Sincerely
D. Rajendra Kotaria

The Company

Optica is an established Indian company since 1985, supporting Medical, Aerospace, Defense, R&D Labs and Education. Our focus has been on global customers in the areas of Precision Optics IR, Aspheric Optics and Polymer Optics, Optical instruments, Vision Systems, Single Point diamond turning facility for making IR Aspherics and Polymer Optics. We are an ISO 9001-2008 certified company. We, as a team are committed to deliver "quality products & services" to our customers on committed time line and achieve total customer satisfaction. We thrive to accomplish this through effectively implemented quality management system and by keeping abreast with technological developments.

Our Capabilities

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 are robust and cost effective to meet customer specified performance and reliability expectations.

- We have installed the softwares to design optical component & Optical systems. We can also receive 3D part files & other design input in STEP or IGES files
- Zemax ,OSLO and Trace – Pro Optical Software's for Lens and System Designs.
- PRO-E or SOLID WORKS used for Opto-Mechanical Designs and Mold design.
- All our designs are done in 3D and detail drawings in 2D.

Precision Optics

Lens designing & simulations by OSLO, ZEMAX & Trace-pro optical softwares.

Having high speed polishing machines, curve Generators, Centering and edging M/C, installed Single Point Diamond Turning machine from Precitech, USA, Glass Cutting M/C, Vacuum coating machines for AR coating and other specialize multilayer coating. These plants are of reputed brands from USA, Swiss and Korea.

We can make optics from Ø5mm to 900mm 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 0.2micron to 14 microns)

Manufacture Optical Components like Biconvex and Plano Convex lenses, Achromatic Doublets, Precision Windows used in UV and IR Range, Prisms, Laser Protective windows and Laser Optics, Spherical Mirrors up to Dia. 900mm, Optical Flats and Parallels, Reticles etc.

Company can process UV, visible and IR optics, Laser optics etc.

Materials Can process BK-7, Schott, Zerodur, Fused silica, Sapphire, Borofloat, CaF2, ZnSe, Silicon, Germanium, etc.

Polymer optics

LED lenses and other polymer lenses get designed in OSLO and trace-pro software. We have capabilities to make proto tools for initial trial production. Company can make lenses from Ø3mm to 300mm in polymer. Company have best precision injection molding facility. Testing Facility for LED lenses is Goniophotometer, Integrating spheres, LM-3 (Luminance Meter), Spectrophotocolorimeter etc.

LED Lenses for all reputed Brands like OSRAM, NICHIA, CREE, PHILIPS LUMILEDS, SEOUL, EDISION, etc.

Reflectors

Company is Pioneer in making reflectors for Interior lights for AIR BUS Industry and High end Industrial Applications. Company have Complete Computerized latest modern Plant for Metalizing the reflectors. These are made in Polycarbonate Materials.

LED Back Light

A back light is a form & Light Guide Plate of illumination used in (LCDs) as LCDs do not produce light themselves, they need illumination to produce a visible image. Back lights are used in small displays to increase readability in low light conditions.

Company installed European Brand High Speed Ultra Precision Laser Marking machine and laser cutting machine with light distribution software. LED Backlight can be made in different sizes up to 900mm x 2000mm. It is used to illuminate the LCD and Advertising Panels and LED Panel Lights for General Lightings. Backlights are available in different colors with more than 95% uniformity. Small Backlight used in Digital Energy meters can be produced up to 1 Million/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 & Precision Moulds

- We produce different types of opto-mechanical assemblies, Vibration free tables, stages and mounts.
- High Precision moulds for Polymer Optics, LED Lenses & Clear Parts.

Testing facility for above products

- UV-VIS spectro photometer 180-1100nm & FTIR
- ZYGO Laser Interferometer Size – 100mm
- Optical test station for checking EFL, MTF, Angle, BFL, Radius etc. from OEG Germany
- Talysurf PGI-1200 to measure aspherics profile and roughness.
- Centering microscope to check centering error.
- Spherometer with digital dial guage - 1 micron accuracy.
- Auto collimator – Nikon
- Goniophotometer & Integrating Spheres
- Spectrophotocolorimeter for checking light spectrum
- Luminance meter (LM-3) to check uniformity and light measurement of flat led panels and back lights
- Polari scope to check the strains in Glass and Lenses.
- Video Measuring Systems/profile projector Microscopes etc.
- Digital Height Gauges, Digital Vernier's and Micrometers

Our Products

Our extensive product line-up includes...



Optical Components

IR Optics - Visible Optics, Diamond Turned Aspherics, Singlets, Achromatic doublets, Prisms, Mirrors, Laser Optics, Laser Protective windows, IR Lenses, Optical Windows, Optical Color Glass Filters, Interference Filters, Thin Film Coatings, Diamond Turned IR Optics like ZnSe, Ge, Si, Lenses/window, Reticles etc.

Polymer Lenses/LED Backlights

LED Lenses, Aspheric Lenses, Condenser Lenses, Multi Array Lenses, LCD Backlights, LED Light Pipes, Reflectors, Light Guide Plates (LGP), Clear Transparent Windows made out of PC / PMMA / Zeonex.



Optical Instruments

Video Zoom Microscopes, Binocular Zoom Microscopes, In-built LCD Microscopes, Measuring Videoscopes, Vision Systems, Digital Microscopes, Illuminated Magnifiers, LED Magnifiers, Hand Magnifiers Low Vision Aids etc.

Opto-mechanical Components & assemblies

Vibration Free Tables & Bread Boards, XY Stages, Lens Mounts & Posts, Gimbal & Kinetic Mounts, Turn key projects for Schiloren Systems.



Facility:

- Single Point Diamond Turning Machine – Nanoform X (Precitech –USA)
- High precision optical polishing machines from LOH, Korea and Taiwan
- Lens Auto centering & Edging machine from LOH and Sidai-Korea
- High accuracy lens curve generator machines from Rogers & Clarke, Sidai-Korea
- High speed lapping and polishing machines from Taiwan
- Balzers BAK760 Batch Coating System & 19" coating Unit
- Metalizing unit with 1.2meter vacuum chamber
- Ultrasonic agitator cleaning facility
- Laminar flow chambers
- Optical cementing equipment
- Glass surface grinding and slitting machines
- Clean rooms for assembly of optics
- CNC machining Centers (DMG-Germany)
- CNC Turning Center (HAAS –USA)
- Conventional Milling machines with DRO,
- Radial Drilling, Surface Grinding, etc.
- Conventional Lathe machines
- EDM spark erosion machine.



The Journey so far



●
1985

Incorporated with Glass optical components and Instruments to Aerospace, Defense Establishments

●
2001

Diversification to Polymer Optics manufacturing for Camera, Sensors & Low Vision Aid lenses

●
2003

Expanded precision molding to processing all types of Engineering / Technical plastics

Achievements

Received "Defense Technology Spin off Award" from Honorable Prime Minister in 2002 for Manufacturing Polymer Aspheric Lenses as LOW VISION AIDS. First of its kind in India.

Achieved ISO 9001-2008 Certification in the Year of 2008.

Certified Injection Molders by Underwriter's Laboratories since 2005.

2004

Added Precision
Tool Room
Facility

2009

Started
Manufacturing of
LED Lenses and
Backlight - much
awaited import
substitution
for domestic
customers

2013

Moved to a new
building at prime
industrial area to
support expansion
in Precision
Optics, Polymer
Optics and
Opto-Mechanical
Parts

2015

Became Global
company - got
collaborated
with Gaggione
LLC, France.

2016

Entered in to IR
Optics - installed
Single Point
Diamond Turning
machine Taly surf
PCI 1200 from
Precitech, USA,





Manufacturing Facility & Corporate Office

Optics & Allied Engineering Pvt. Ltd.

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Production Facilities

Optica - India | Gaggione - France |
Quadratec - Canada | Surcotec - Swiss

www.opticsindia.com | www.gaggione.com

