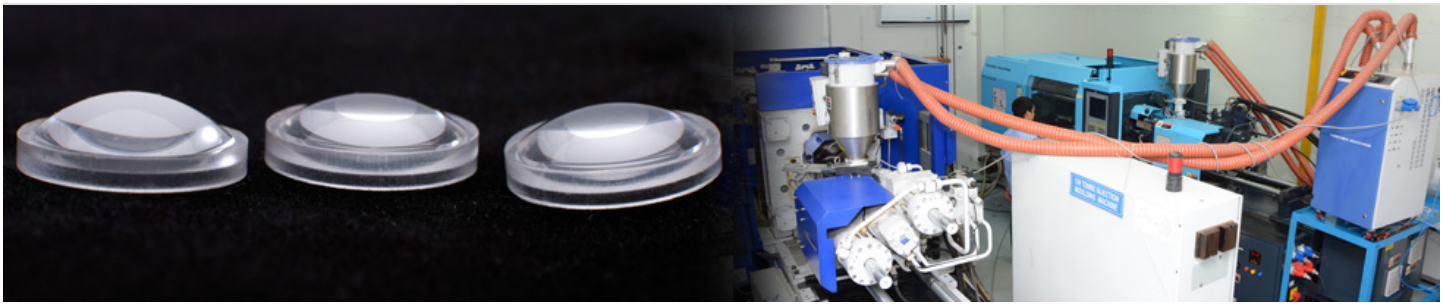
Call Us: **+91 9422650076**

Lensel Optics Pvt. Ltd.

ISO 9001:2008 Certified

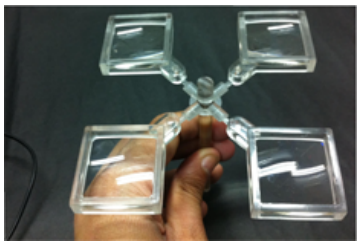


Recent Projects

PLASTIC OPTICS

PLASTIC INJECTION MOLDED OPTICS

We have 4 precision Injection Molding machines. Our optical component molding is done within a Class 100,000 Cleanroom. The room has temperature and humidity control. In addition, we have automatic material dryers and loaders as well as automatic mold temperature controllers to ensure that there is perfect stability in the molding environment.



We are able to achieve very high levels of precision and surface figure in our lenses through years of experience in mold design and process optimization.

We supply both coated and un-coated plastic lenses. Our coating is a special multi-layer BBAR coating which provides excellent transmission and anti-scratch resistance to the plastic lenses.

We make plastic injection molded lenses, plastic molded optics for a variety of applications such as low vision devices, magnifiers, plastic aspheric lenses, imaging lens, imaging camera lenses, prisms, condensers, filters, shortpass filters, longpass filters, optical filters, bandpass filters, interference filters attenuators etc.

We design and manufacture our molds in-house. For complex aspheric lenses with higher order coefficients, we procure our cavity inserts from an internationally renowned SPDT service provider.

We have supplied plastic lenses to customers in India, USA, Canada, Belarus, Israel, UK, Belgium, Columbia, Egypt etc.

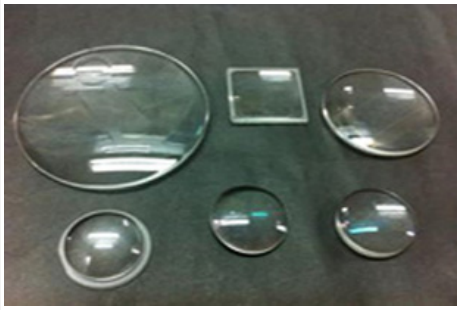
Material	PMMA (Acrylic), Polycarbonate, Zeonex (COC)
Diameter	4mm to 130 mm
Optical Surface	Spherical, Conic, Aspheric Surfaces (Even and Odd Aspheres with higher order coefficients)
Shapes	Optical surface along with integrally molded features like mounting frame, pegs, notches, spacers etc.
Precision	Diameter tolerance : +0.00/ -0.02 mm; Thickness tolerance : +0.00/ -0.03 mm; Centering tolerance: 3 arc min; Scratch/Dig : 60/40; Focal length tolerance : ± 0.5%;

RECENT EXAMPLES OF PLASTIC OPTICS DEVELOPED BY LENSEL

SINGLET, DOUBLETS, ASPHERICS

DOUBLE ASPHERIC IMAGING LENSES

GALILEAN TELESCOPE WITH LIGHT



We can make any type of lens in PMMA, Polycarbonate or Zeonex with spherical, conic or aspheric surfaces to the tolerances stated above. The lenses can have any shape desired as well as integrally molded mounting features like pegs, slots etc. We also make plastic doublets consisting of PMMA and PC lenses bonded together. We make the molds for these lenses in-house assisting the customer right from prototype supply to bulk production.

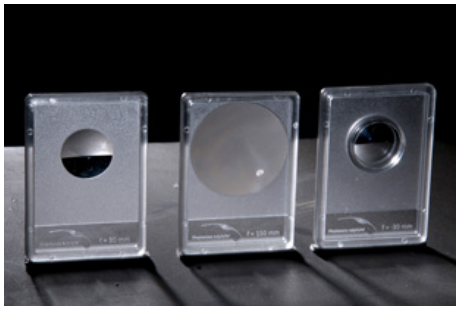
We developed these aspheric lenses with integrally molded spacers for a customer in Belarus. Both surfaces of the lenses have deep aspheric surfaces with non-zero sixth and eighth order coefficients. The cavity inserts for these surfaces were made on a Single Point Diamond Turning machine with special allowance made for molding shrinkage. These lenses are used for imaging applications and require very high precision surface profiles.

This is a fully plastic optical system consisting of a BBAR coated plastic achromatic doublet(PMMA and PC), coatedplastic negative biconcave lens,plastic casing, LED housing, LED housing attachment and hinge assembly. All lenses have fringe level surface figure. The system was designed by a US based customer and developed entirely at our facility. We continue to manufacture and assemble these oculars. The ocular has optical quality comparable to glass oculars at a fraction of the weight and cost. The ocular, released in 2009, has already sold over 25,000 units in the US.

COATED PLASTIC OPTICS

We have developed a special BBAR coating for plastic lenses. This coating has a special adhesive layer to increase coating adhesion to the plastic substrate and an anti-scratch layer built in to increase the scratch resistance of the plastic lenses. The coating has a uniform green color and increases the average transmission of PMMA lenses in the visible range to above 98%. All our coatings are tested on our Thermo-Fisher UV-VIS-NIR Spectrophotometer. For more information please visit our **Coatings**.

TABLETOP TELESCOPE



These lenses were designed by the VrijeUniversitait in Belgium as a teaching tool for high school physics students. We developed these lenses in-house and continue to supply them to the university. They have been enthusiastically received by the students and are currently distributed to schools all over Europe.

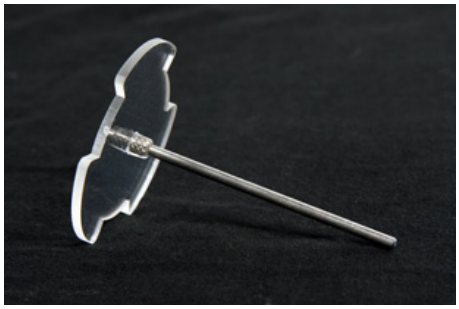
OTOSCOPE

We have developed complete imaging systems consisting of aspheric plastic lenses for use in the medical field. A US based medical devices company recently developed an Otoscope with us using 3 aspheric lenses. We manufacture the lenses, coat them, assemble them and do the complete product testing for the customer. We have also developed lenses for us in biometric imaging devices.

LARGE, THICK OPTICS

We have developed techniques for the molding of large thick lenses such as a 95 x 50 mm rectangular, 20 mm thick bi-convex lens weighing 95 grams which we currently make for a customer in the US. These large moldings

INSERT MOLDED OPTICS



We have experience with insert molded optics where metal components are molded into the optical component to allow for easy installation of the optics in the system. The picture to the left shows a camera attachment with an

FILTERS AND ATTENUATORS

We have extensive experience in using additives in the base PMMA and Polycarbonate to create custom filters and attenuators with specified spectral transmission profiles for our customers. We have developed a Blue Day

are very tricky as they require the molder to balance the long cycle times needed to maintain surface figure while also ensuring that there is no material degradation and perfect clarity is maintained and the molding is produced free of strain.

integrally molded stud which we sell to a UK based customer.

Light Filter for a leading microscope manufacturer in India. We have also developed attenuating plastic lenses for a use based customer.

« compact model

stage based 2 dimensional measurement system »