Geltech® Aspheric Lenses

For aspheric lenses, we can complete new designs and provide prototypes in a matter of weeks while keeping development costs among the lowest in the industry.

LightPath has developed a fully qualified molded glass catalog that covers most design needs. The glasses in our standard catalog have been fully qualified with our process and will provide the most cost effective lenses and enable the fastest turnaround times. AR coatings for these glasses have also been designed, tested and qualified. Our standard glass catalog includes:

- **D-ZK3** - high volume **RoHS**✓compliant glass
- **D-ZLaF52LA** - higher index **RoHS**✓compliant glass
- **ECO-550** - LightPath's exclusive **RoHS**✓compliant glass
- Black Diamond™ infrared glass **(BD-2)** for thermal imaging and other IR applications
- **PBH71** for lenses requiring high index
- Radiation hardened glasses for space applications

LightPath's Typical Aspheric Manufacturing Tolerances*

Parameter	Commercial (standard)	Precision
Center Thickness (CT)	± 0.025 mm	± 0.010 mm
Outer Diameter (OD)	± 0.015 mm	± 0.005 mm
Wedge (arcmin)	4	2
Power/Irregularity (fringes)	3/1	1/0.5
Surface Roughness	15 nm	5 nm
Surface Quality (scratch/dig)	40/20	20/10

**Manufacturability depends on size & shape of the optics, as well as production volume.*

Most moldable glasses from Corning®, Schott®, Sumita®, & CDGM® can be used with LightPath's molding process.

Contact us to discuss lens designs using any of these moldable glasses.

Molded Glass Lens Arrays

By utilizing LightPath's molded lens technology it is now possible to manufacture lens arrays with high precision. Unlike etched lens arrays, where there is a great deal of non-uniformity from array to array, molding will consistently produce the same structure and performance from prototype to large production builds. Consistent focal lengths and form ease the manufacturing requirement for the end user. The molding technology also allows optical designs that require greater sag (lens thickness) such as high numerical aperture collimators for laser diode arrays. Lens arrays can be produced for direct coupling (finite conjugative) or collimating applications. Pitch tolerances are typically less than one micron and lenses can also be placed with varying pitches across the array.

Tx™ Asphere Wafer-Based Molded Optics

Designed and manufactured for today's high performance transmitters, Tx™ Aspheric lenses utilize LightPath's proprietary wafer-scale glass manufacturing techniques, delivering performance, size and price. By molding an entire wafer of lenses at one time and then dicing them individually, production cost is significantly reduced over single lens molding. The dicing operation results in a square form factor lens that can make mounting easier. All lenses are 100% inspected, tested, and AR coated.