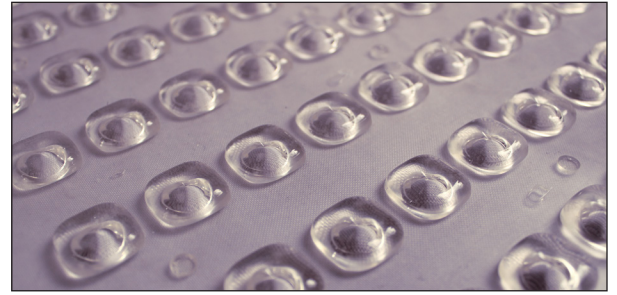


Why Silicone is Revolutionizing Optical Molding



In the world of precision optics, choosing the right material for your molding project can significantly impact performance, durability, and efficiency. Optical silicone molding is emerging as a game-changer, offering advantages that surpass traditional plastics and thermoplastics. A.L.P. provides industry-leading expertise in optical silicone molding, combining advanced equipment, tooling, and optical engineering to deliver high-quality solutions. Our in-house photometry lab enables real-time evaluation of first samples, ensuring optimized results from concept to production.

The Advantages of Optical Silicone Molding

When selecting materials for optical applications, Moldable Optical Silicone (MOS) stands out due to its unique properties. Here's why optical silicone is revolutionizing the industry:

Superior Optical Clarity and Light Transmission

- Optical silicone provides greater than 91% light transmittance, ensuring maximum efficiency in lighting and optical applications.
- A refractive index of 1.41, it enables high-performance optical designs.

Exceptional Moldability and Precision

- Its low viscosity allows for excellent mold replication, capturing fine details with precision.
- Unlike thermoplastics, silicone requires low clamp tonnage, reducing production costs and complexity.
- Negative draft (undercut) features can be achieved with optical silicone, making it highly versatile for complex geometries.



Unmatched Durability and Environmental Resistance

- Silicone offers an exceptional continuous service temperature range from -45°C to +200°C, maintaining stability in extreme conditions.
- Most optical silicone grades are immune to UV degradation, ensuring long-lasting performance without yellowing or material breakdown.
- Exceptional impact resistance makes it ideal for rugged applications.

Versatility in Molding and Integration

- Insert molding capabilities with plastic, metal, and glass allow for integrated component manufacturing.
- Silicone expands when molded, allowing for thicker wall sections with no sink marks, a common issue with thermoplastics.
- Its ability to provide self-gasketing and self-mounting functionalities reduces the need for additional components and assembly steps.

Why Choose **A.L.P.** for Optical Silicone Molding?

A.L.P. stands at the forefront of optical silicone molding, leveraging cutting-edge equipment, innovative engineering, and a dedicated in-house photometry lab. Our expertise ensures:

- Rapid prototype development and testing
- Precision molding with complex geometries
- Reliable, high-performance optical solutions for demanding applications

If you're considering optical silicone molding for your next project, A.L.P. is your trusted partner. Contact us today to learn how we can help bring your vision to life with industry-leading silicone molding solutions.

