
Advantages of Plastic Optics

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- Less Costly than Glass
- • Lightweight
- Versatile
- • Aspheric Lens Molding Capability

- • Reduction in Assembly Costs

- • Coating Available
- Inexpensive Prototyping

Plastic optics are less costly than glass elements. For most applications, plastic optical components can meet the most demanding requirements but at a much lower price per piece than glass lenses.

Plastic optics are lightweight. Acrylic (PMMA), Polycarbonate (PC), Polystyrene (PS), as well as newer materials such as Cyclic Olefin Copolymer (COC), and Amorphous Polyolefin (Zeonex), have significantly lower specific gravities than that of crown glass. This can be of considerable value when designing an optical system.

Plastic optics are versatile. Producing an aspheric lens out of glass is much more difficult than producing a spherical lens out of glass. In contrast, molding an aspheric component out of plastic is inherently no more difficult or costly than molding a spherical component. Aspheric lenses are preferred as they allow for a great deal of optical correction.

Inexpensive

plastic aspheres can, therefore, be furnished, resulting in reduced aberrations and optical systems that require fewer elements. We are able to supply a number of standard aspheric lenses as well as other lens types of varying diameters and focal lengths.

Plastic optics can substantially reduce your cost of assembly. Considerable cost economies can be obtained by combining an optical element with other features such as frames, tabs, locating pegs, mounting brackets and flanges, all of which can be integrally molded with lenses with an optical element. This technique, known as integral optics, arises from the combination of precision injection molding know-how with the highly specialized skills required in lens production.

Plastic lenses can be coated.

A number of different coatings are available that can improve abrasion resistance and minimize reflections and glare as required. Anti-fog and mirror coatings are also available.