

SPIE. FIELD
GUIDE

Field Guide to
Molded Optics

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Glass versus Plastic

When comparing glass to plastic for **molded optics**, **moldable glass** provides an expansive range of options with superior performance in all material properties with the exception of specific gravity and impact strength.

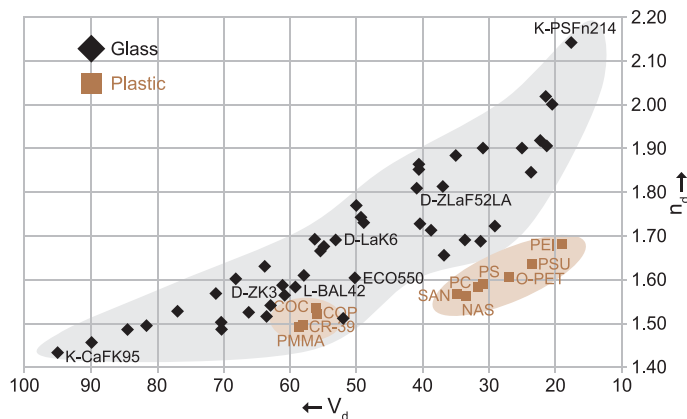
Advantages of Glass

- Selection
- Range of optical properties
- Thermal properties
- Transmission
- Durability
- Environmental considerations

Advantages of Plastic

- Cost
- Weight
- Impact strength
- Integrated features
- More than two optical surfaces

Glass also provides a better selection of optical properties for designers to choose from.



Plastic provides a distinct cost and weight advantage and an excellent ability for forming complicated surfaces and integrated features. Disadvantages of plastics include: high static buildup that attracts foreign particles and can lower cosmetic surface qualities, high thermal expansion, and high temperature coefficient of refractive index. Plastics cannot be cemented or coated as easily as glass.

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