Standard Glasses

LightPath Technologies manufactures aspheric lenses using several different types of glass. These glasses have been fully qualified, along with the corresponding AR coating. Transmittance of all five glasses is very good over a large wavelength spectrum.

Lens Code	Glass Type	Refractive Index	Abbe Number	CTE	dn/dT	Equivalent Glasses	RoHS✓ Compliance
350xxx	C-0550	1.605	ν_d = 50.42	15 x 10^{-6} / °C	-11 x 10^{-6} / °C	Corning BCD-C2060 & Schott SK16	✗
352xxx	ECO-550	1.606	ν_d = 50.27	11.62 x 10^{-6} / °C	2.39 x 10^{-6} / °C	N/A	✓
354xxx	D-ZK3	1.586	ν_d = 60.71	7.6 x 10^{-6} / °C	3.2 x 10^{-6} / °C	Hoya M-BACD5N & Ohara L-BAL35	✓
355xxx	D-ZLaF52LA	1.806	ν_d = 40.79	6.9 x 10^{-6} / °C	6.5 x 10^{-6} / °C	Ohara L-LAH53, Hoya M-NBFD130, Sumita K-VC89	✓
370xxx	PBH71	1.922	ν_d = 21.29	8.9 x 10^{-6} / °C	13.1 x 10^{-6} / °C	Schott SF66, Hoya FDS1, Sumita PSFN5	✗

D-ZLAF52LA → 355xxx Series of Lenses

This glass has a higher index of refraction than ECO-550 and is best suited for those applications that require a higher index and need to maintain RoHS compliance.

D-ZK3 → 354xxx Series of Lenses

This glass is best suited for those applications that require a low cost glass for higher volume manufacturing.

ECO-550 → 352xxx Series of Lenses

New European (RoHS) and Japanese environmental regulations have restricted the use of lead and other hazardous substances in optical components. ECO-550 is an environmentally friendly alternative to conventional moldable glasses. It has similar optical properties to C-0550, but does not contain hazardous materials.

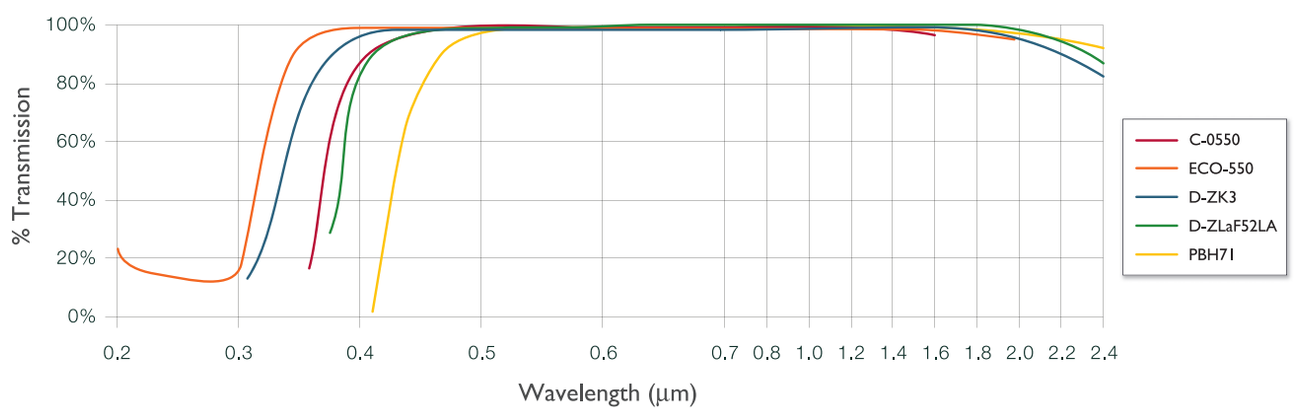
C-0550 → 350xxx Series of Lenses

Corning® developed a special glass to allow production of highly sophisticated aspheric lenses that are cost effective. The code for this glass is C-0550, and its low dispersion (ν_d = 50.40) is key for many applications. In durability, it is equivalent to Corning® BCD C2060 or Schott® SK16. Due to limited availability, this glass should only be used for special projects that require its unique properties.

PBH71 → 370xxx Series of Lenses

For aspheric lenses that require a glass with a higher index of refraction, LightPath also offers lenses made from Ohara® PBH71 glass. Its high index (ν_d = 1.92286) allows designers to minimize aberrations in lenses with high numerical apertures. It has the added benefit of a lower coefficient of thermal expansion.

Standard Glass Internal Transmission Curves (5 mm thickness)



LightPath's capabilities include most high volume moldable glasses from Corning®, Schott®, Sumita®, and CDGM®.