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# LightPath 390037 | 5.5mm Dia., 0.85 NA, BBAR (8000-12000nm), Molded IR Aspheric Lens

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⊖ 1 ⊕ **\$574<sup>00</sup>**

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### General

390037 **Lightpath Lens Code:**

Aspheric Lens **Type:**

### Physical & Mechanical Properties

5.50 ±0.015 **Diameter (mm):**

4.00	<b>Clear Aperture CA (mm):</b>
2.24	<b>Edge Thickness ET (mm):</b>
3.00	<b>Center Thickness CT (mm):</b>
Protective as needed	<b>Bevel:</b>

## Optical Properties

1.87 @ 9500nm	<b>Effective Focal Length EFL (mm):</b>
0.85	<b>Numerical Aperture NA:</b>
Black Diamond™ BD-2 (Ge <sub>26</sub> Sb <sub>12</sub> Se <sub>60</sub> )	<b>Substrate:</b> <input type="checkbox"/>
9500	<b>Aspheric Design Wavelength (nm):</b>
BBAR (8000-12000nm)	<b>Coating:</b>
R <sub>avg</sub> <1.0% @ 8 - 12μm	<b>Coating Specification:</b>
80-50	<b>Surface Quality:</b>
0.58	<b>f#:</b>
2.6023	<b>Index of Refraction (n<sub>d</sub>) @ 10μm:</b>
2.5843	<b>Index of Refraction (n<sub>d</sub>) @ 14μm:</b>
2.6210	<b>Index of Refraction (n<sub>d</sub>) @ 4μm:</b>
2.6173	<b>Index of Refraction (n<sub>d</sub>) @ 5μm:</b>
8000 - 12000	<b>Wavelength Range (nm):</b>
0.72	<b>Working Distance (mm):</b>
Infinite	<b>Conjugate Distance:</b>
9500	<b>Focal Length Specification Wavelength (nm):</b>

## Material Properties

14.00	<b>Coefficient of Thermal Expansion CTE (10<sup>-6</sup>/°C):</b>
4.68	<b>Density (g/cm<sup>3</sup>):</b>
70 x 10 <sup>-6</sup> /°C from -40° to +80°C (5 - 14 μm)	<b>Thermo-optic coefficient dn/dT:</b>
285.00	<b>Transformation Temperature (°C):</b>

## Regulatory Compliance

<a href="#">Compliant</a>	<b>RoHS 2015:</b>
<a href="#">View</a>	<b>Certificate of Conformance:</b>
<a href="#">Compliant</a>	<b>Reach 247:</b>

## Product Details

- Wavelength Range of 1.8 - 12μm
- Variety of Coating Options
- Mounted and Unmounted Versions

LightPath® Mid-Wave and Long-Wave Infrared (IR) Aspheric Lenses feature a low-cost, molded design and offer several key benefits over Germanium substrate aspheres. With a dn/dT and CTE significantly less than that of Germanium, the lenses feature a smaller change in focal length as a function of temperature change. Featuring a higher operating temperature than Germanium (which suffers 20 – 30% transmission loss at 100°C), the lenses can be used in applications including collimators for QCL lasers and as components within thermal imaging assemblies. LightPath Mid-Wave and Long-Wave Infrared (IR) Aspheric Lenses have a wavelength range of 1.8 - 12μm. These lenses are available mounted or unmounted, in a variety of coating options.

## Technical Information

8.0 - 12 $\mu$ m AR Coating

