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# LightPath 390010 | 8.24mm Dia., 0.83 NA, BBAR (1800-3000nm), Mounted IR Aspheric Lens

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Stock #88-077 CLEARANCE **3 In Stock**

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⊖ 1 ⊕ C\$350<sup>00</sup>

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### General

390010 **Lightpath Lens Code:**

Aspheric Lens **Type:**

### Physical & Mechanical Properties

8.24 ±0.10 **Diameter (mm):**

3.00 **Clear Aperture CA (mm):**

|                      |                                  |
|----------------------|----------------------------------|
| 2.17                 | <b>Center Thickness CT (mm):</b> |
| Protective as needed | <b>Bevel:</b>                    |

## Optical Properties

|   |  |
|---|--|
| 1.47 @ 9200nm   | <b>Effective Focal Length EFL (mm):</b>            |
| 0.83  | <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"/>         |
| 9200  | <b>Aspheric Design Wavelength (nm):</b>            |
| BBAR (1800-3000nm)  | <b>Coating:</b>                                    |
| R <sub>avg</sub> < 1.0% @ 1.8 - 3.0μm                                     | <b>Coating Specification:</b>                      |
| 80-50   | <b>Surface Quality:</b>                            |
| 0.6   | <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>  |
| 1800 - 3000   | <b>Wavelength Range (nm):</b>                      |
| 0.63  | <b>Working Distance (mm):</b>                      |
| Infinite  | <b>Conjugate Distance:</b>                         |
| 9200  | <b>Focal Length Specification Wavelength (nm):</b> |

## Threading & Mounting

|                                 |               |
|---------------------------------|---------------|
| Stainless Steel, M8 x0.5 Thread | <b>Mount:</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 233:</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

1.8 - 3 $\mu$ m AR Coating

