

LightPath 390093 | 9.25mm Dia., 0.71 NA, BBAR (1800-3000nm), Mounted IR Aspheric Lens

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| General                          |                         |
|----------------------------------|-------------------------|
| 390093                           | Lightpath Lens Code:    |
| Aspheric Lens                    | Type:                   |
| Physical & Mechanical Properties |                         |
| 9.25 ±0.10                       | Diameter (mm):          |
|                                  | Clear Aperture CA (mm): |

|                                                                           |                                                                                              |
|---------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| 5.00                                                                      |                                                                                              |
| 2.62                                                                      | Center Thickness CT (mm):                                                                    |
|                                                                           | Bevel:                                                                                       |
| Protective as needed                                                      |                                                                                              |
| Optical Properties                                                        |                                                                                              |
| 3.00 @ 7800nm                                                             | Effective Focal Length EFL (mm):                                                             |
| 0.71                                                                      | Numerical Aperture NA:                                                                       |
| Black Diamond™ BD-2 (Ge <sub>26</sub> Sb <sub>12</sub> Se <sub>60</sub> ) | Substrate:  |
| 7800                                                                      | Aspheric Design Wavelength (nm):                                                             |
| BBAR (1800-3000nm)                                                        | Coating:                                                                                     |
| R <sub>avg</sub> <1.0% @ 1.8 - 3.0µm                                      | Coating Specification:                                                                       |
| 80-50                                                                     | Surface Quality:                                                                             |
| 0.7                                                                       | f#:                                                                                          |
| 2.6023                                                                    | Index of Refraction (n <sub>d</sub> ) @ 10µm:                                                |
| 2.5843                                                                    | Index of Refraction (n <sub>d</sub> ) @ 14µm:                                                |
| 2.6210                                                                    | Index of Refraction (n <sub>d</sub> ) @ 4µm:                                                 |
| 2.6173                                                                    | Index of Refraction (n <sub>d</sub> ) @ 5µm:                                                 |
| 1800 - 3000                                                               | Wavelength Range (nm):                                                                       |
| 2.35                                                                      | Working Distance (mm):                                                                       |
| Infinite                                                                  | Conjugate Distance:                                                                          |
| Threading & Mounting                                                      |                                                                                              |
| Stainless Steel, MØ x0.5 Thread                                           | Mount:                                                                                       |
| Material Properties                                                       |                                                                                              |
| 4.68                                                                      | Density (g/cm³):                                                                             |
| 70 x 10 <sup>-6</sup> /°C from -40° to +80°C (5 - 14 µm)                  | Thermo-optic coefficient dn/dT:                                                              |
| 285.00                                                                    | Transformation Temperature (°C):                                                             |
| Regulatory Compliance                                                     |                                                                                              |
| Compliant                                                                 | RoHS 2015:                                                                                   |
| View                                                                      | Certificate of Conformance:                                                                  |
| Compliant                                                                 | Reach 233:                                                                                   |

## 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

