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LightPath 390010 | 4.5mm Dia., 0.83 NA, BBAR (8000-12000nm), Molded IR Aspheric Lens

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Stock #88-073 **2 In Stock**

⊖ 1 ⊕ £328⁰⁰

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| Volume Pricing | |
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| Qty 1-10 | £328.00 each |
| Qty 11-49 | £295.20 each |
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ⓘ Prices shown are exclusive of VAT/local taxes

Product Downloads

General

390010 **Lightpath Lens Code:**

Aspheric Lens **Type:**

Physical & Mechanical Properties

4.50 ±0.015 **Diameter (mm):**

| | |
|----------------------|---------------------------|
| 3.00 | Clear Aperture CA (mm): |
| 1.63 | Edge Thickness ET (mm): |
| 2.17 | Center Thickness CT (mm): |
| Protective as needed | Bevel: |

Optical Properties

| | |
|---|---|
| 1.47 @ 9200nm | Effective Focal Length EFL (mm): |
| 0.83 | Numerical Aperture NA: |
| Black Diamond™ BD-2 (Ge ₂₆ Sb ₁₂ Se ₆₀) | Substrate: <input type="checkbox"/> |
| 9200 | Aspheric Design Wavelength (nm): |
| BBAR (8000-12000nm) | Coating: |
| R _{avg} <1.0% @ 8 - 12μm | Coating Specification: |
| 80-50 | Surface Quality: |
| 0.6 | f/#: |
| 2.6023 | Index of Refraction (n _d) @ 10μm: |
| 2.5843 | Index of Refraction (n _d) @ 14μm: |
| 2.6210 | Index of Refraction (n _d) @ 4μm: |
| 2.6173 | Index of Refraction (n _d) @ 5μm: |
| 8000 - 12000 | Wavelength Range (nm): |
| 0.63 | Working Distance (mm): |
| Infinite | Conjugate Distance: |
| 9200 | Focal Length Specification Wavelength (nm): |

Material Properties

| | |
|--|--|
| 14.00 | Coefficient of Thermal Expansion CTE (10 ⁻⁶ /°C): |
| 4.68 | Density (g/cm ³): |
| 70 x 10 ⁻⁶ /°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 247: |

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 μ m AR Coating

