Infrared Microscope Objectives – For IR Microsampling, Imaging and Micron-Level Spots

PIKE Technologies offers reflective and refractive microscope objectives that cater to mid-IR imaging. For applications requiring high resolution and zero chromatic aberration, PIKE reflective objectives are ideal. An innovative design combined with high quality manufacturing result in specifications that far exceed the competition. PIKE reflective objectives have higher NA, better finish, less scatter, and are much easier to use than other commercially available objectives. For applications where center obscuration is an issue, we recommend our refractive objectives. Such objectives are appropriate for highly-scattering samples or when maximum light throughput is necessary. In sum, the PIKE reflective and refractive objectives are an emerging technology ready for most demanding mid-IR imaging applications.

Advanced performance specifications are possible with cutting-edge aspheric finishing capabilities available in-house at PIKE Technologies. In contrast to other commercially available objectives, PIKE designs are not constrained by conventional optical surface fabrication. The resulting product pushes beyond traditional boundaries for numerical aperture. Vertical integration of diamond turning, precision asphere metrology, and active alignment provides a finished product that achieves high image quality essential for your applications.

For applications requiring high theoretical resolution and small spot size, PIKE objectives have the highest numerical aperture – without sacrificing working distance. This unusual combination is featured in both the reflective and refractive designs making each design more broadly applicable and easier to use. PIKE objectives use standard mechanical dimensions for tube lengths, threads, heights, and parfocal lengths. Standard mechanical dimensions ensure compatibility with your existing microscopes and adapters. Once the objective is installed, no adjustment is necessary.

High performance, standard dimensions, and a zero-adjustment design make PIKE objectives ready for an easily-implemented, powerful addition to your mid-IR imaging toolkit. Contact PIKE Technologies with your custom requirements.

**Features of Microscope Objectives**

- High numerical aperture
- Reflective Schwarzschild designs for UV, VIS, and IR wavelength ranges
- Refractive objectives eliminate problems arising from central obscuration
- Designed for standard microscope compatibility
- Transmission mode illumination is possible by using a pair of objectives
- No alignment or adjustment necessary
- Other applications include UV photolithography and microscopic inspection, laser illumination, and thermal micro-imaging

**Ordering Information**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>892-0003</td>
<td>IR Tube Lens</td>
</tr>
<tr>
<td>892-0004</td>
<td>25X, 0.40NA IR Refractive Objective</td>
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<tr>
<td>892-0001</td>
<td>20X, 0.60NA IR Refractive Objective</td>
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<tr>
<td>892-0002</td>
<td>40X, 0.85NA IR Refractive Objective</td>
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<tr>
<td>891-0001</td>
<td>20X, 0.70NA Schwarzschild Objective</td>
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<tr>
<td>891-0002</td>
<td>50X, 0.75NA Schwarzschild Objective</td>
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<tr>
<td>891-0003</td>
<td>100X, 0.80NA Schwarzschild Objective</td>
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Notes: For options not described here, please contact PIKE Technologies.