

# TECHSPEC® RefIX™ OBJECTIVES

## #39-145 • 18.88mm WD

### 20X/0.33NA DUV ENHANCED ALUMINUM

- Industry Leading 24 to 31mm Working Distance
- EO Designed and Manufactured for Focusing or Imaging Applications
- Actively Aligned for Optimal Performance
- Ultra-Wide Spectral Band from 190nm to 11 $\mu$ m with No Chromatic Aberration



Reflective objectives are commonly used in applications requiring superior image quality or focusing performance over a broad spectral range. The Schwarzschild-style objective exhibits near-diffraction limited performance over the full reflecting range of the chosen coating. By eliminating the problems of chromatic aberration and material absorption associated with standard microscope objectives, these components are ideal for applications requiring high throughput and excellent resolution in the UV or IR, including FTIR spectroscopy, ellipsometry, photolithography, and semiconductor inspection.

The RefIX™ objective design features a number of advantages over common Schwarzschild objectives. The rugged design allows these objectives to be integrated into equipment with moderate heat and vibration without sacrificing performance. All internal surfaces have been specially treated to eliminate stray light. Each objective is manufactured in the U.S.A. and assembled, tested, and certified on our Zygo GPI-XP interferometer. A certificate of compliance is included with each objective.

<b>Style:</b>	Finite Conjugate
<b>Magnification:</b>	20X
<b>Numerical Aperture:</b>	0.33
<b>Working Distance:</b>	18.88mm
<b>Focal Length:</b>	9.91mm
<b>FOV, 2/3" Sensor:</b>	0.44 x 0.33mm
<b>FOV, 1/2" Sensor:</b>	0.32 x 0.24mm
<b>Transmitted Wavefront, RMS:</b>	$\lambda/10$
<b>Obscuration (%):</b>	30.46
<b>Entrance Pupil Diameter:</b>	7mm
<b>Aperture Diameter:</b>	7.9mm
<b>Small Mirror Diameter:</b>	8.4mm
<b>Reflection (%):</b>	88
<b>Coating:</b>	DUV Enhanced Aluminum
<b>Coating Specification:</b>	$R_{avg} > 88\%$ @ 0.19 - 11 $\mu$ m
<b>Mounting Threads:</b>	RMS
<b>Type:</b>	Microscope Objective
<b>Wavelength Range (<math>\mu</math>m):</b>	0.15 - 11
<b>Wavelength Range (nm):</b>	150 - 11000
<b>Manufacturer:</b>	EO

