

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

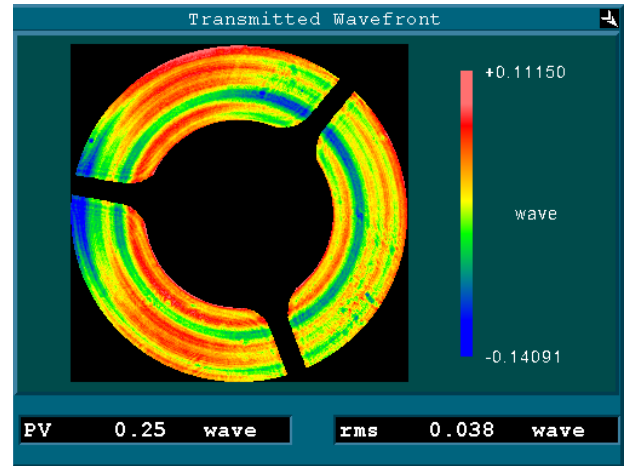


FEATURES OF REFLECTIVE OBJECTIVES

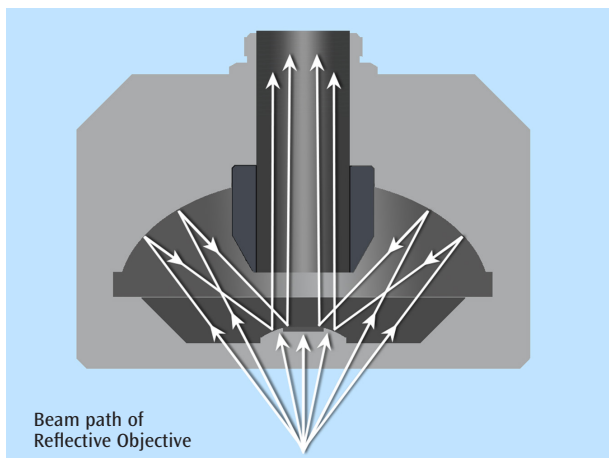
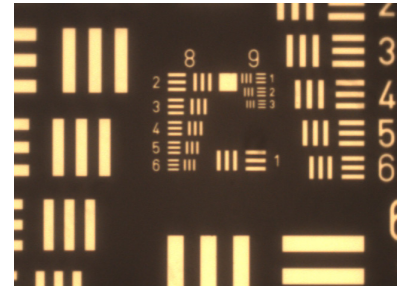
- 20X, 40X, 100X
- High NA greater than 0.7
- Optimal brightness, high resolution
- Long working distance
- Full spectral range
- No alignment required
- Finite conjugate and infinity corrected configurations

PIKE reflective objectives are ideal for applications requiring the high NA (numerical aperture) for creating higher resolution and smaller spot sizes. The all-reflective objectives – often referred to as Reverse Cassegrain or Schwarzschild objective – have zero chromatic aberration. Aspheric surfaces are designed, fabricated, actively aligned, and measured in-house to optimize high NA surfaces for performance.

PIKE objectives are easy to use and to implement standard mechanical dimensions for tube lengths, threads, heights, and par-focal lengths to ensure compatibility with your existing microscopes and adapters. Once the objective is installed, no adjustment is necessary.



Objectives are aligned and evaluated for transmitted wavefront using Zygo Fizeau Interferometers (above) and checked for visible resolution (right).



ORDERING INFORMATION

Reflective Objectives

PART NUMBER DESCRIPTION

891-0001	20X, 0.70NA Infinite Schwarzschild Objective
891-0005	20X, 0.70NA Finite Schwarzschild Objective
891-0007	40X, 0.78NA Infinite Schwarzschild Objective
891-0002	40X, 0.78NA Finite Schwarzschild Objective
891-0003	100X, 0.80NA Infinite Schwarzschild Objective
891-0004	100X, 0.80NA Finite Schwarzschild Objective
891-0010	20X, Narrow Infinite Schwarzschild Objective
891-0008	40X, Narrow Infinite Schwarzschild Objective
891-0009	15X, LWD Finite Schwarzschild Objective

Note: For options not described here, please contact PIKE Technologies.

SPECIFICATIONS			
	20x	40x	100x
Infinite PN	891-0001	891-0007	891-0003
Finite PN	891-0005	891-0002	891-0004
Numerical Aperture	0.7	0.78	0.8
Outer Dia	80 mm	72 mm	70 mm
Thread	RMS	RMS	RMS
Entrance Pupil Diameter	15 mm	8.5 mm	3.4 mm
Obscuration	52.9%	42.9%	60%
Spider	3 legs	3 legs	3 legs
Design Spot Size @ $\lambda = 550$ nm	0.5 μ m	0.45 μ m	0.44 μ m
Design Spot Size @ $\lambda = 5$ μ m	4.55 μ m	4.11 μ m	3.98 μ m
Surface Type	Aspheric	Aspheric	Aspheric
Surface Accuracy	$\lambda/4$	$\lambda/4$	$\lambda/4$
WD	14 mm	8.3 mm	1.8 mm
Parfocal	67 mm	60 mm	60 mm
MTL (for finite conjugate)	160 mm (DIN Standard)	160 mm (DIN Standard)	160 mm (DIN Standard)
Tube Lens F.L. (for infinite conjugate)	200 mm	200 mm	200 mm
Height	58 mm	56.8 mm	63 mm
Adjustment	No	No	No

Alternative available coatings include bare gold, protected Al, protected gold, protected silver, enhanced UV, and custom reflective coatings. All values are subject to change. Specifications based on performance in PIKE Technologies' Inverted/Horizontal Microscope (PN 034-0960).