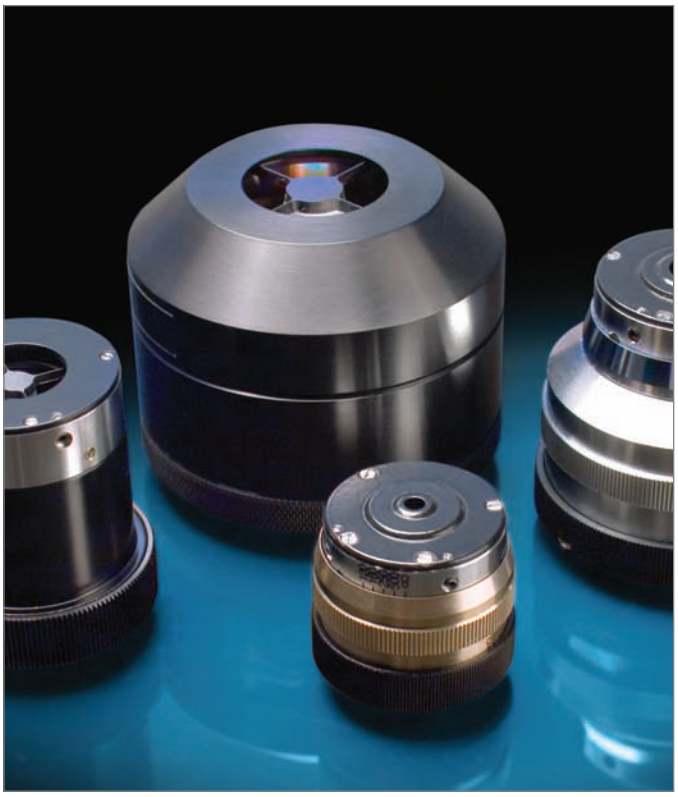
TECHSPEC® ADJUSTABLE REFLX™ OBJECTIVES

- Adjustable for Precision Alignment
- 36X, 52X, and 74X Feature Adjustment for Tube Length and Cover Glass
- 3 Coating Options Available to Best Fit your Application

Our line of TECHSPEC® Adjustable ReflX™ Objectives, formerly known as the Beck/Ealing reflecting objectives, offer a robust design and wide variety of magnifications to suit a wide range of applications. All units are configured for 160mm tube length and 0.17mm cover glass during assembly and precision aligned for optimum performance. However, to indefinitely extend the useful life of each objective, all but the 15x, 0.5NA feature the ability to adjust the centration of the internal mirrors with the provided Allen wrenches (detailed instructions included). Higher magnifications (36X, 52X and 74X) allow for adjustments to the tube length and the cover glass correction through the means of a moving collar.

Each objective is available with one of three coating options, Aluminum, DUV Enhanced Aluminum and Gold. Free from 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, including FTIR spectroscopy and microscopy, photolithography, thin film measurement, semiconductor inspection, and laser etching.



COATING

	Reflectance	Wavelength Range
DUV Enhanced Aluminum:	> 89%	193nm - 400nm
Enhanced Aluminum:	> 89%	250nm - 700nm
Gold:	> 98%	800nm - 10µm

TECHSPEC® ADJUSTABLE REFLX™ OBJECTIVES

Magnification	15X	15X	25X	36X	52X	74X
Numerical Aperture	0.28	0.5	0.4	0.5	0.65	0.65
Adjustable Centration	Yes	No	Yes	Yes	Yes	Yes
Tube Length Adjustment	160mm	160mm	160mm	90mm - ∞	120mm - ∞	120mm - ∞
Cover Glass Correction (mm)	0.17	0.17	0.17	0-1.0	0-1.0	0-1.0
Focal Length (mm)	13.35	13.41	8.00	5.40	3.55	2.54
Field of View (mm)	1.20	1.20	0.72	0.50	0.34	0.24
Obscuration (%)	18.9	19.5	16.7	12.2	16.7	13.3
Typical Working Distance (mm)	24.5	23.2	14.5	8.6	1.9	1.0
Surface Accuracy	⅛λ	⅛λ	⅛λ	⅛λ	⅛λ	⅛λ
DUV Enhanced Aluminum	#66-575	#66-578	#66-581	#66-584	#66-587	#66-590
Former Ealing Model No.	25-0506-190	25-0555-190	25-0514-190	25-0522-190	25-0548-190	25-0563-190
Enhanced Aluminum	#66-576	#66-579	#66-582	#66-585	#66-588	#66-591
Former Ealing Model No.	25-0506-000	25-0555-000	25-0514-000	25-0522-000	25-0548-000	25-0563-000
Gold	#66-577	#66-580	#66-583	#66-586	#66-589	#66-592
Former Ealing Model No.	25-0506-020	25-0555-020	25-0514-020	25-0522-020	25-0548-020	25-0563-020

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EDMUND OPTICS® PLAN APO & REFLX™ OBJECTIVES

Our objectives are made to the highest quality and standards, utilizing a strain-free optical system. They maintain a long working distance and offer high numerical apertures. With resolving power from 5 to 0.34 microns, our objectives work for a wide array of applications. All stated magnifications are based on a tube lens focal length of 200mm. Mounting thread is 26mm x 0.706mm pitch (36 TPI). Works with all Mitutoyo parts and can be placed directly in a system currently utilizing Mitutoyo objectives.

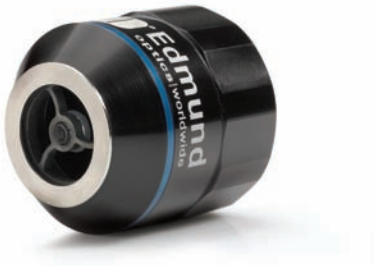
- High Quality Optics in a Plan Apochromat Design
- Long Working Distance Options
- Sub-Micron Resolving Power

EO PLAN APO AND PLAN APO ULWD SERIES

	Plan APO 2X	Plan APO 5X	Plan APO 10X	Plan APO 20X	Plan APO 50X	Plan APO 100X	Plan APO ULWD 50X	Plan APO ULWD 100X
Numerical Aperture, NA:	0.055	0.14	0.28	0.42	0.55	0.8	0.42	0.55
Working Distance, WD (mm):	34	34	33.5	20	13	3	20.5	13
Focal Length (mm):	100	40	20	10	4	2	4	2
Resolving Power (µm):	5	2	1	0.7	0.5	0.34	0.7	0.5
Depth of Focus (µm):	91	14	3.58	1.6	0.9	0.43	1.6	0.9
Field of View - Dia. (mm):								
Eyepiece, 24 Dia. field:	12	4.8	2.4	1.2	0.48	0.24	0.48	0.24
⅔″ Sensor (H x V):	4.4 x 3.3	1.76 x 1.32	0.88 x 0.66	0.44 x 0.33	0.176 x 0.132	0.088 x 0.066	0.176 x 0.132	0.088 x 0.066
½″ Sensor (H x V):	3.2 x 2.4	1.28 x 0.96	0.64 x 0.48	0.32 x 0.24	0.064 x 0.048	0.256 x 0.192	0.064 x 0.048	0.064 x 0.048
Stock Number	#59-875	#59-876	#59-877	#59-878	#59-879	#59-880	#59-881	#59-882

Edmund Optics® ReflX™ objectives are available in two configurations: infinity-corrected for focusing applications and finite conjugate for imaging applications. The infinity-corrected objectives may also be used for imaging applications when used with a 200mm secondary tube lens. The finite conjugate versions feature a standard 160mm back tube length, and may be used interchangeably with common DIN objectives.

Our High Performance (HP) ReflX™ is built on the same design as our original but with a ¼λ peak-to-valley (P-V) transmitted wavefront and a tapered mechanical design, which permits use at angles of incidence (AOI) up to 45°. Customization available.



- Long Working Distance, High NA
- Ultra-Wide Spectral Band with No Chromatic Aberration
- Infinite and Finite Conjugate Designs
- Specially Treated to Reduce Stray Light

ReflX™ Objectives	DUV Enhanced Al Aluminum (R>88%, 190nm – 11µm)	UV Enhanced Al Aluminum (R>85%, 200 – 700nm)	Protected Gold (R>94%, 700nm – 11µm)
15X ReflX™, Infinite Conjugate	#59-315	#58-417	#58-418
15X ReflX™, Finite Conjugate	#59-316	#58-421	#58-422
15X HP ReflX™, Infinite Conjugate	#59-884	#59-886	#59-888
15X HP ReflX™, Finite Conjugate	#59-885	#59-887	#59-889

Numerical Aperture, NA:	0.28	
Working Distance WD (mm):	23.6	
Focal Length (mm):	13.3	
Entrance Pupil Diameter (mm):	8.5	
Small Mirror Diameter (mm):	8.8	
Mounting:	RMS	
Field of View (mm):		
⅔″ Sensor (H x V):	0.59 x 0.44	
½″ Sensor (H x V):	0.43 x 0.32	
Obscuration:	27%	
	ReflX™	HP ReflX™
Transmitted Wavefront:	1/10λ (RMS)	¼λ (P-V)

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