

- Dynamic magnification range of 0.08-212X offers incredible versatility.
- High contrast images and vivid colors help your equipment perform better.
- 0.02-125.68 mm field coverage allows you to view a wide range of parts.
- Working distance can be varied from 36 to 356 mm.
- Add infinity corrected objective lenses to achieve unmatched edge flatness and clarity.



Zoom 6000



Zoom 6000

Zoom 6000 Field of View Matrix (in mm)

Zoom 6000

Lens Attachment	W.D.	Camera Format/Parameters	.5X Adapter Low - High	.67X Adapter Low - High	1X Adapter Low - High	2X Adapter Low - High	5X Adapter Low - High
0.25X	–	Mag.	0.09X - 0.56X	0.12X - 0.75X	0.18X - 1.13X	0.35X - 2.25X	0.88X - 5.62X
	Max. 356*	Field 1/4"	45.70 - 7.12	34.03 - 5.33	22.85 - 3.56	11.42 - 1.78	4.54 - 0.72
	Max. 356*	Field 1/3"	68.64 - 10.64	51.12 - 8.04	34.32 - 5.32	17.16 - 2.66	6.88 - 1.08
	Max. 356*	Field 1/2"	91.36 - 14.16	68.06 - 10.66	45.68 - 7.08	22.84 - 3.54	9.12 - 1.44
	Max. 356*	Field 2/3"	125.68 - 19.52	93.62 - 14.66	62.84 - 9.76	31.42 - 4.88	12.56 - 1.93
Max. 356*	O-I		573	597	629	657	706
0.5X	–	Mag.	0.18X - 1.13X	0.24X - 1.50X	0.35X - 2.25X	0.70X - 4.50X	1.75X - 11.25X
	Max. 175	Field 1/4"	22.85 - 3.56	17.02 - 2.66	11.42 - 1.78	5.71 - 0.89	2.28 - 0.36
	Max. 175	Field 1/3"	34.32 - 5.32	25.56 - 4.0	17.16 - 2.67	8.58 - 1.33	3.43 - 0.53
	Max. 175	Field 1/2"	45.68 - 7.08	34.03 - 5.33	22.85 - 3.56	11.42 - 1.77	4.57 - 0.71
	Max. 175	Field 2/3"	62.84 - 9.76	46.81 - 7.33	31.43 - 4.89	15.71 - 2.44	6.29 - 0.95
Max. 175	O-I		376	400	432	460	509
0.75X	–	Mag.	0.27X - 1.69X	0.35X - 2.25X	0.53X - 3.38X	1.05X - 6.75X	2.63X - 16.88X
	Max. 113	Field 1/4"	15.22 - 2.38	11.34 - 1.78	7.61 - 1.19	3.81 - 0.59	1.52 - 0.24
	Max. 113	Field 1/3"	22.86 - 3.56	17.04 - 2.67	11.43 - 1.78	5.72 - 0.89	2.29 - 0.36
	Max. 113	Field 1/2"	30.46 - 4.74	22.69 - 3.56	15.23 - 2.37	7.62 - 1.19	3.05 - 0.47
	Max. 113	Field 2/3"	41.90 - 6.52	31.21 - 4.89	20.95 - 3.26	10.48 - 1.63	4.19 - 0.64
Max. 113	O-I		313	337	369	397	446
None	–	Mag.	0.35X - 2.25X	0.47X - 3.00X	0.70X - 4.50X	1.40X - 9.00X	3.50X - 22.50X
	Max. 92	Field 1/4"	11.42 - 1.78	8.51 - 1.33	5.71 - 0.89	2.86 - 0.45	1.14 - 0.18
	Max. 92	Field 1/3"	17.16 - 2.67	12.77 - 2.01	8.58 - 1.33	4.29 - 0.67	1.72 - 0.27
	Max. 92	Field 1/2"	22.85 - 3.56	17.01 - 2.67	11.42 - 1.77	5.71 - 0.89	2.28 - 0.36
	Max. 92	Field 2/3"	31.43 - 4.89	23.40 - 3.65	15.71 - 2.44	7.86 - 1.22	3.14 - 0.48
Max. 92	O-I		289	313	345	373	422
1.5X	–	Mag.	0.53X - 3.38X	0.71X - 4.50X	1.05X - 6.75X	2.10X - 13.50X	5.25X - 33.75X
	Max. 51	Field 1/4"	7.61 - 1.19	5.67 - 0.89	3.81 - 0.59	1.91 - 0.30	0.76 - 0.12
	Max. 51	Field 1/3"	11.43 - 1.78	8.52 - 1.33	5.72 - 0.89	2.86 - 0.44	1.14 - 0.18
	Max. 51	Field 1/2"	15.23 - 2.37	11.34 - 1.77	7.62 - 1.19	3.81 - 0.59	1.52 - 0.24
	Max. 51	Field 2/3"	20.95 - 3.26	15.60 - 2.44	10.48 - 1.63	5.24 - 0.81	2.10 - 0.33
Max. 51	O-I		250	274	306	334	383
2.0X	–	Mag.	0.70X - 4.50X	0.94X - 6.00X	1.40X - 9.00X	2.80X - 18.00X	7.00X - 45.00X
	Max. 36	Field 1/4"	5.71 - 0.89	4.26 - 0.67	2.86 - 0.45	1.43 - 0.23	0.57 - 0.09
	Max. 36	Field 1/3"	8.58 - 1.33	6.39 - 1.00	4.29 - 0.67	2.15 - 0.33	0.86 - 0.14
	Max. 36	Field 1/2"	11.42 - 1.77	8.51 - 1.33	5.71 - 0.89	2.86 - 0.44	1.14 - 0.18
	Max. 36	Field 2/3"	15.71 - 2.44	11.70 - 1.83	7.86 - 1.22	3.93 - 0.61	1.57 - 0.24
Max. 36	O-I		259	283	315	343	387

*0.25X lens attachment provides working distance range of 216 mm - 356 mm when used with a 12 mm fine focus zoom lens (1-60135). The fields of view above are measured diagonally in millimeters (Horizontal = Diagonal x 0.8 and Vertical = Diagonal x 0.6).

Zoom 6000 UltraZoom

Combine Infinity-Corrected Objectives for Maximum Resolution and Magnification

Navitar's UltraZoom is a high-performance zoom lens system ideal for semiconductor inspection or other high magnification applications. Its advanced design offers high resolution and outstanding contrast. This system incorporates infinity corrected, plan-apochromatic objectives providing long working distances and excellent edge flatness and clarity. The system's resolution varies from 420 to 1,650 lines per mm, depending on the microscope objective used. The UltraZoom is also available with fine focus and/or co-axial illumination.



Zoom 6000

Zoom 6000 UltraZoom Field of View Matrix for 1-60190, 1-60191, 1-60349 and 1-60350 (in mm)

Objective Lens (Mitutoyo) Ultra Long WD	W.D.	Camera Format/Parameters	1X Adapter Low - High	2X Adapter Low - High
2X 0.055 NA 1-60758	—	Mag.	0.70X - 4.57X	1.39X - 9.14X
	34	Field 1/4"	5.75 - 0.87	2.87 - 0.44
	34	Field 1/3"	8.62 - 1.31	4.31 - 0.66
	34	Field 1/2"	11.49 - 1.75	5.75 - 0.87
	34	Field 2/3"	15.80 - 2.41	7.90 - 1.20
5X 0.14 NA 1-60226	—	Mag.	1.74X - 11.43X	3.48X - 22.86X
	34	Field 1/4"	2.30 - 0.35	1.15 - 0.17
	34	Field 1/3"	3.45 - 0.52	1.72 - 0.26
	34	Field 1/2"	4.60 - 0.70	2.30 - 0.35
	34	Field 2/3"	6.32 - 0.96	3.16 - 0.48
10X 0.28 NA 1-60227	—	Mag.	3.48X - 22.86X	6.96X - 45.72X
	33	Field 1/4"	1.15 - 0.17	0.57 - 0.09
	33	Field 1/3"	1.72 - 0.26	0.86 - 0.13
	33	Field 1/2"	2.30 - 0.35	1.15 - 0.17
	33	Field 2/3"	3.16 - 0.48	1.58 - 0.24
20X 0.42 NA 1-60228	—	Mag.	6.96X - 45.72X	13.92X - 91.40X
	20	Field 1/4"	0.57 - 0.09	0.29 - 0.04
	20	Field 1/3"	0.86 - 0.13	0.43 - 0.07
	20	Field 1/2"	1.15 - 0.17	0.57 - 0.09
	20	Field 2/3"	1.58 - 0.24	0.79 - 0.12
50X 0.55 NA 1-60229	—	Mag.	17.40X - 114.30X	34.80X - 228.60X
	13	Field 1/4"	0.23 - 0.03	0.11 - 0.02
	13	Field 1/3"	0.34 - 0.05	0.17 - 0.03
	13	Field 1/2"	0.46 - 0.07	0.23 - 0.04
	13	Field 2/3"	0.63 - 0.10	0.32 - 0.05

The UltraZoom Family

UltraZoom Part #	Fine Focus			
	3 mm	12 mm	Zoom	Co-ax
1-60191				
1-60190				
1-60350 (1)				
1-60349 (1)				
1-60255 (2)				
1-60260 (2)				
1-60920 (2)				

(1) These lenses do not incorporate fine focus mechanisms. Ideal for applications requiring maximum stability. Fine focus is achieved using stage or focus mount incorporating Z-travel.
 (2) These lenses provide single magnification, high resolution video image with fine focus and co-axial illumination. Additionally, a fixed magnification of 0.88X will be achieved with a non-zoom lens. Multiply 0.88 by the objective magnification and then by the adapter magnification to determine the final lens system magnification.