

Zoom 6000 UltraZoom Field of View Matrix

Zoom 6000 UltraZoom Field of View Matrix
(for part number's I-60190, I-60191, I-60349 and I-60350 in mm)

Objective Lens (Mitutoyo) Long W.D	Working Distance (mm)	Camera Format/ Parameters	1X Adapter Low - High	1.33X Adapter Low - High	2X Adapter Low - High	3.3X Adapter Low - High
4X 1.4 NA* 1-55075	20	Mag.	1.99X - 9.14X	1.79X - 12.16X	2.78X - 18.29X	4.59X - 30.18X
		1/4" Sensor	2.01 - 0.44	2.24 - 0.33	1.44 - 0.22	0.87 - 0.13
		1/3" Sensor	3.02 - 0.66	3.35 - 0.49	2.16 - 0.33	1.31 - 0.20
		1/2" Sensor	(1) 5.15 - 0.87	4.47 - 0.66	2.87 - 0.44	1.74 - 0.27
		2/3" Sensor	(1) 5.15 - 1.20	6.15 - 0.90	3.95 - 0.60	2.39 - 0.36
5X 0.14 NA* 1-60226	34	Mag.	1.74X - 11.43X	2.30X - 15.00X	3.48X - 22.86X	5.74X - 37.72X
		1/4" Sensor	2.30 - 0.35	1.74 - 0.26	1.15 - 0.17	0.70 - 0.11
		1/3" Sensor	3.45 - 0.52	2.61 - 0.40	1.72 - 0.26	1.04 - 0.16
		1/2" Sensor	(1) 4.05 - 0.70	3.48 - 0.54	2.30 - 0.35	1.39 - 0.21
		2/3" Sensor	(1) 4.02 - 0.96	4.00 - 0.74	3.16 - 0.48	1.92 - 0.29
10X 0.28 NA* 1-60227	33	Mag.	3.48X - 22.86X	4.63X - 29.90X	6.96X - 45.72X	11.48X - 75.44X
		1/4" Sensor	1.15 - 0.17	0.86 - 0.13	0.57 - 0.09	0.35 - 0.05
		1/3" Sensor	1.72 - 0.26	1.30 - 0.20	0.86 - 0.13	0.52 - 0.08
		1/2" Sensor	(1) 2.10 - 0.35	1.73 - 0.27	1.15 - 0.17	0.70 - 0.11
		2/3" Sensor	(1) 2.10 - 0.48	2.10 - 0.37	1.58 - 0.24	0.96 - 0.15
20X 0.42 NA* 1-60228	20	Mag.	6.96X - 45.72X	9.30X - 59.90X	13.92X - 91.40X	22.97X - 150.88X
		1/4" Sensor	0.57 - 0.09	0.43 - 0.07	0.29 - 0.04	0.17 - 0.03
		1/3" Sensor	0.86 - 0.13	0.65 - 0.10	0.43 - 0.07	0.26 - 0.04
		1/2" Sensor	(1) 1.00 - 0.17	0.86 - 0.14	0.57 - 0.09	0.35 - 0.05
		2/3" Sensor	(1) 1.03 - 0.24	1.00 - 0.19	0.79 - 0.12	0.48 - 0.07
50X 0.55 NA* 1-60229	13	Mag.	17.40X - 114.30X	23.00X - 150.00X	34.80X - 228.60X	57.42X - 377.19X
		1/4" Sensor	0.23 - 0.03	0.17 - 0.03	0.11 - 0.02	0.07 - 0.011
		1/3" Sensor	0.30 - 0.05	0.26 - 0.04	0.17 - 0.03	0.10 - 0.020
		1/2" Sensor	(1) 0.31 - 0.07	0.30 - 0.05	0.23 - 0.04	0.14 - 0.020
		2/3" Sensor	(1) 0.30 - 0.10	(1) 0.30 - 0.07	(1) 0.30 - 0.05	0.19 - 0.030

NOTE: (1) Entire zoom range is not used. *NA at high mag. NA varies with zoom settings.



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Zoom 6000 with Co-axial Illumination Field of View Matrix

Zoom 6000 with Co-axial Illumination Field of View Matrix 1-60123 (in mm at nominal W.D.)

Lens Attachment	W.D. (mm)	Camera Format/Parameters	.5X Adapter Low - High	.67X Adapter Low - High	1X Adapter Low - High	1.33X Adapter Low - High	2X Adapter Low - High	3.3X Adapter Low - High	5X Adapter Low - High
None 0.023- 0.071 NA	92 (nominal)	Mag.	0.35X - 2.25X	0.47X - 3.00X	0.70X - 4.50X	0.93X - 6.00X	1.40X - 9.00X	2.45X - 15.75X	3.50X - 22.50X
		1/4" Sensor	11.43 - 1.78	8.51 - 1.33	5.71 - 0.89	4.30X - 0.67	2.86 - 0.45	1.63 - 0.25	1.14 - 0.18
	90-93 (1) W.D. range	1/3" Sensor	(2) 11.10 - 2.67	(2) 11.40 - 2.01	8.58 - 1.33	6.45 - 1.00	4.29 - 0.67	2.45 - 0.38	1.72 - 0.27
		1/2" Sensor	(2) 11.20 - 3.56	(2) 11.46 - 2.62	11.42 - 1.77	8.60 - 1.33	5.71 - 0.89	3.27 - 0.51	2.28 - 0.36
		2/3" Sensor	(2) 11.06 - 4.89	(2) 11.54 - 3.60	11.40 - 2.44	11.00 - 1.83	7.86 - 1.22	4.49 - 0.70	3.14 - 0.49
1.5X 0.034- 0.106 NA 1-60112	51 (nominal)	Mag.	0.53X - 3.38X	0.71X - 4.50X	1.05X - 6.75X	1.40X - 9.00X	2.10X - 13.50X	3.70X - 23.60X	5.25X - 33.75X
		1/4" Sensor	7.62 - 1.18	5.67 - 0.89	3.81 - 0.59	2.85 - 0.44	1.91 - 0.30	1.08 - 0.17	0.76 - 0.120
	51-53 (1) W.D. range	1/3" Sensor	11.32 - 1.78	8.52 - 1.33	5.72 - 0.89	4.29 - 0.67	2.86 - 0.44	1.62 - 0.25	1.14 - 0.18
		1/2" Sensor	(2) 11.20 - 2.37	11.34 - 1.77	7.62 - 1.19	5.71 - 0.89	3.81 - 0.59	2.16 - 0.34	1.52 - 0.24
		2/3" Sensor	(2) 11.20 - 3.25	(2) 11.20 - 2.44	10.48 - 1.63	7.86 - 1.22	5.24 - 0.81	2.97 - 0.47	2.10 - 0.33
2.0X 0.046- 0.1421 NA 1-60113	36 (nominal)	Mag.	0.70X - 4.50X	0.94X - 6.00X	1.40X - 9.00X	1.86X-12.00X	2.80X - 18.00X	4.90X-31.50X	7.00X - 45.00X
		1/4" Sensor	5.71 - 0.89	4.26 - 0.67	2.86 - 0.45	2.15 - 0.33	1.43 - 0.23	0.82 - 0.13	0.57 - 0.09
	36-37 (1) W.D. range	1/3" Sensor	8.57 - 1.33	6.39 - 1.00	4.29 - 0.67	3.22 - 0.50	2.15 - 0.33	1.22 - 0.19	0.86 - 0.13
		1/2" Sensor	(2) 11.20 - 1.77	8.51 - 1.33	5.71 - 0.89	4.30 - 0.67	2.86 - 0.44	1.63 - 0.25	1.14 - 0.18
		2/3" Sensor	(2) 11.20 - 2.44	(2) 11.70 - 1.83	7.86 - 1.22	5.91 - 0.92	3.93 - 0.61	2.24 - 0.35	1.57 - 0.24

NOTE:

The internal coax will illuminate a circular area of about 11 mm in diameter. Any field of view larger than 11 mm will have darkened corners.

Low power lens attachments can be used but produce increasing vignetting.

(1) Working distance range when using 3 mm fine focus.

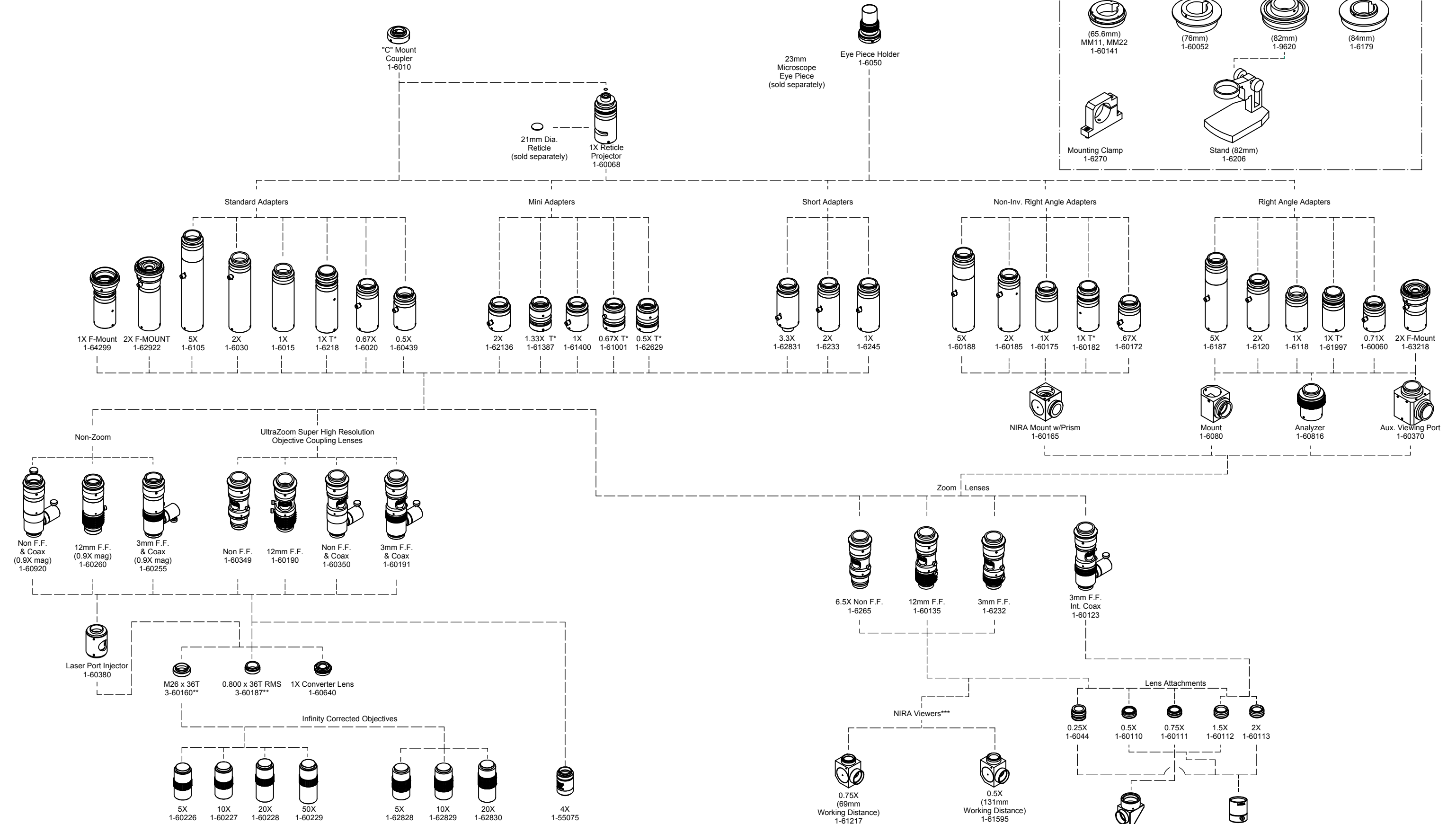
(2) Entire zoom range is not used.



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Zoom 6000 System Diagram



*T = Tele
 ** Included with UltraZoom
 *** Not Used with Internal Coaxial