

Zoom 6000 Performance Specifications

Zoom 6000 Combinations Lens Attachment + Prime Lens + Adapter	W.D.	System Magnification		N.A.-obj-		Resolve Limit (microns)		Matching Pixel Size (microns)		Depth of Field	
		Low Mag.	High Mag.	Low Mag.	High Mag.	Low Mag.	HighMag.	Low Mag.	HighMag.	Low Mag.	HighMag.
0.25x + 6.5X Zoom + 0.5x	356	0.09	0.56	0.006	0.018	27.78	9.26	2.50	5.19	13.89	1.54
0.25x + 6.5X Zoom + 0.67x	356	0.12	0.75	0.006	0.018	27.78	9.26	3.33	6.95	13.89	1.54
0.25x + 6.5X Zoom + 1.0x	356	0.18	1.13	0.006	0.018	27.78	9.26	5.00	10.46	13.89	1.54
0.25x + 6.5X Zoom + 1.33x	356	0.23	1.51	0.006	0.018	27.78	9.26	6.65	13.91	13.89	1.54
0.25x + 6.5X Zoom + 2.0x	356	0.35	2.25	0.006	0.018	27.78	9.26	9.72	20.84	13.89	1.54
0.25x + 6.5X Zoom + 3.5x	356	0.61	3.98	0.006	0.018	27.78	9.26	17.50	36.61	13.89	1.54
0.25x + 6.5X Zoom + 5.0x	356	0.88	5.62	0.006	0.018	27.78	9.26	24.45	52.04	13.89	1.54
0.5x + 6.5X Zoom + 0.5x	175	0.18	1.13	0.011	0.035	15.15	4.76	2.73	5.38	4.13	0.41
0.5x + 6.5X Zoom + 0.67x	175	0.23	1.50	0.011	0.035	15.15	4.76	3.48	7.14	4.13	0.41
0.5x + 6.5X Zoom + 1.0x	175	0.35	2.25	0.011	0.035	15.15	4.76	5.30	10.71	4.13	0.41
0.5x + 6.5X Zoom + 1.33x	175	0.47	3.03	0.011	0.035	15.15	4.76	7.05	14.24	4.13	0.41
0.5x + 6.5X Zoom + 2.0x	175	0.70	4.50	0.011	0.035	15.15	4.76	10.61	21.42	4.13	0.41
0.5x + 6.5X Zoom + 3.5x	175	1.22	7.93	0.011	0.035	15.15	4.76	18.55	37.49	4.13	0.41
0.5x + 6.5X Zoom + 5.0x	175	1.75	11.25	0.011	0.035	15.15	4.76	26.51	53.55	4.13	0.41
0.75x + 6.5X Zoom + 0.5x	113	0.26	1.69	0.017	0.053	9.80	3.14	2.55	5.32	1.73	0.18
0.75x + 6.5X Zoom + 0.67x	113	0.35	2.25	0.017	0.053	9.80	3.14	3.43	7.08	1.73	0.18
0.75x + 6.5X Zoom + 1.0x	113	0.53	3.38	0.017	0.053	9.80	3.14	5.20	10.63	1.73	0.18
0.75x + 6.5X Zoom + 1.33x	113	0.70	4.54	0.017	0.053	9.80	3.14	6.92	14.13	1.73	0.18
0.75x + 6.5X Zoom + 2.0x	113	1.05	6.75	0.017	0.053	9.80	3.14	10.30	21.23	1.73	0.18
0.75x + 6.5X Zoom + 3.5x	113	1.86	12.06	0.017	0.053	9.80	3.14	18.20	37.21	1.73	0.18
0.75x + 6.5X Zoom + 5.0x	113	2.63	16.88	0.017	0.053	9.80	3.14	25.74	53.09	1.73	0.18
None + 6.5X Zoom + 0.5x	92	0.35	2.25	0.023	0.071	7.25	2.35	2.54	5.28	0.95	0.10
None + 6.5X Zoom + 0.67x	92	0.47	3.00	0.023	0.071	7.25	2.35	3.41	7.04	0.95	0.10
None + 6.5X Zoom + 1.0x	92	0.70	4.50	0.023	0.071	7.25	2.35	5.08	10.55	0.95	0.10
None + 6.5X Zoom + 1.33x	92	0.93	6.05	0.023	0.071	7.25	2.35	6.76	14.03	0.95	0.10
None + 6.5X Zoom + 2.0x	92	1.40	9.00	0.023	0.071	7.25	2.35	10.15	21.11	0.95	0.10
None + 6.5X Zoom + 3.5x	92	2.45	15.93	0.023	0.071	7.25	2.35	17.78	36.93	0.95	0.10
None + 6.5X Zoom + 5.0x	92	3.50	22.50	0.023	0.071	7.25	2.35	25.38	52.76	0.95	0.10
1.5x + 6.5X Zoom + 0.5x	51	0.53	3.38	0.034	0.106	4.90	1.57	2.60	5.32	0.43	0.04
1.5x + 6.5X Zoom + 0.67x	51	0.70	4.50	0.034	0.106	4.90	1.57	3.43	7.09	0.43	0.04
1.5x + 6.5X Zoom + 1.0x	51	1.05	6.75	0.034	0.106	4.90	1.57	5.15	10.63	0.43	0.04
1.5x + 6.5X Zoom + 1.33	51	1.40	9.08	0.034	0.106	4.90	1.57	6.85	14.14	0.43	0.04
1.5x + 6.5X Zoom + 2.0x	51	2.10	13.50	0.034	0.106	4.90	1.57	10.29	21.26	0.43	0.04
1.5x + 6.5X Zoom + 3.5x	51	3.68	23.89	0.034	0.106	4.90	1.57	18.03	37.21	0.43	0.04
1.5x + 6.5X Zoom + 5.0x	51	5.25	33.75	0.034	0.106	4.90	1.57	25.73	53.16	0.43	0.04
2.0x + 6.5X Zoom + 0.5x	36	0.70	4.50	0.046	0.142	3.62	1.17	2.54	5.29	0.24	0.02
2.0x + 6.5X Zoom + 0.67x	36	0.94	6.00	0.046	0.142	3.62	1.17	3.41	7.05	0.24	0.02
2.0x + 6.5X Zoom + 1.0x	36	1.40	9.00	0.046	0.142	3.62	1.17	5.08	10.58	0.24	0.02
2.0x + 6.5X Zoom + 1.33	36	1.86	12.10	0.046	0.142	3.62	1.17	6.76	14.07	0.24	0.02
2.0x + 6.5X Zoom + 2.0x	36	2.80	18.00	0.046	0.142	3.62	1.17	10.15	21.15	0.24	0.02
2.0x + 6.5X Zoom + 3.5x	36	4.90	31.85	0.046	0.142	3.62	1.17	17.78	37.03	0.24	0.02
2.0x + 6.5X Zoom + 5.0x	36	7.00	45.00	0.046	0.142	3.62	1.17	25.38	52.88	0.24	0.02

Assumptions:

1. Minimum resolvable feature size is half of the threshold line pair limit. Calculation = $1/(3000 \times \text{Lens N.A.})$
2. Matching pixel size is that which will permit the minimum feature size to overlap two pixels. Calculation = $1/2(\text{Feature Size} \times \text{System Magnification})$
3. If the matching pixel size is greater than the camera pixel size, the system is "lens limited."
4. If the matching pixel size is less than the camera pixel size, the system is "camera limited."

