

Precise Eye Performance Specifications

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Precise Eye Combinations Lens Attachment + Precise Eye + Adapter	W.D. (mm)	Magnification	NA Object Side	Resolve Limits (μm)	Depth of Field (mm)	Required Matching Pixel Size (μm)
0.25x + Precise Eye + 0.5x	310	0.23x	0.018	18.8	1.59	2.1
0.25x + Precise Eye + 0.67x	310	0.30x	0.018	18.8	1.59	2.8
0.25x + Precise Eye + 1.0x	310	0.45x	0.018	18.8	1.59	4.2
0.25x + Precise Eye + 1.33x	310	0.60x	0.018	18.8	1.59	5.6
0.25x + Precise Eye + 2.0x	310	0.90x	0.018	18.8	1.59	8.4
0.5x + Precise Eye + 0.5x	175	0.45x	0.035	9.4	0.40	2.1
0.5x + Precise Eye + 0.67x	175	0.60x	0.035	9.4	0.40	2.8
0.5x + Precise Eye + 1.0x	175	0.90x	0.035	9.4	0.40	4.2
0.5x + Precise Eye + 1.33x	175	1.20x	0.035	9.4	0.40	5.6
0.5x + Precise Eye + 2.0x	175	1.80x	0.035	9.4	0.40	8.4
0.75x + Precise Eye + 0.5x	113	0.68x	0.054	6.2	0.18	2.1
0.75x + Precise Eye + 0.67x	113	0.90x	0.054	6.2	0.18	2.8
0.75x + Precise Eye + 1.0x	113	1.35x	0.054	6.2	0.18	4.2
0.75x + Precise Eye + 1.33x	113	1.80x	0.054	6.2	0.18	5.6
0.75x + Precise Eye + 2.0x	113	2.70x	0.054	6.2	0.18	8.4
None + Precise Eye + 0.5x	92	0.90x	0.071	4.6	0.10	2.1
None + Precise Eye + 0.67x	92	1.21x	0.071	4.6	0.10	2.8
None + Precise Eye + 1.0x	92	1.80x	0.071	4.6	0.10	4.2
None + Precise Eye + 1.33x	92	2.39x	0.071	4.6	0.10	5.6
None + Precise Eye + 2.0x	92	3.60x	0.071	4.6	0.10	8.4
1.5x + Precise Eye + 0.5x	51	1.35x	0.106	3.2	0.04	2.1
1.5x + Precise Eye + 0.67x	51	1.81x	0.106	3.2	0.04	3.0
1.5x + Precise Eye + 1.0x	51	2.70x	0.106	3.2	0.04	4.4
1.5x + Precise Eye + 1.33x	51	3.59x	0.106	3.2	0.04	5.8
1.5x + Precise Eye + 2.0x	51	5.40x	0.106	3.2	0.04	8.6
2.0x + Precise Eye + 0.5x	36	1.80x	0.142	2.4	0.02	2.1
2.0x + Precise Eye + 0.67x	36	2.41x	0.142	2.4	0.02	2.8
2.0x + Precise Eye + 1.0x	36	3.60x	0.142	2.4	0.02	4.2
2.0x + Precise Eye + 1.33x	36	4.79x	0.142	2.4	0.02	5.6
2.0x + Precise Eye + 2.0x	36	7.20x	0.142	2.4	0.02	8.4

Assumptions:

1. Minimum resolvable feature size is half of the threshold line pair limit. Calculation = $1/(3000 \times \text{Lens NA})$
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.", if it's less than the camera pixel size, the system is "camera limited."