

Precise Eye

Performance Specifications

Precise Eye Combinations Lens Attachment + Precise Eye + Rear Adapter	W.D.	Magnification	N.A. Object Side	Resolve Limits (microns)	Depth of Field (mm)	Required Matching Pixel Size (microns)
0.25x + Precise Eye + 0.5x	310	0.23x	0.018	18.80	1.59	2.1
0.25x + Precise Eye + 0.67x	310	0.30x	0.018	18.80	1.59	2.8
0.25x + Precise Eye + 1.0x	310	0.45x	0.018	18.80	1.59	4.2
0.25x + Precise Eye + 1.33x	310	0.60x	0.018	18.80	1.59	5.6
0.25x + Precise Eye + 2.0x	310	0.90x	0.018	18.80	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	0.104	3.2	0.04	2.1
1.5x + Precise Eye + 0.67x	51	1.81x	0.104	3.2	0.04	3.0
1.5x + Precise Eye + 1.0x	51	2.70x	0.104	3.2	0.04	4.4
1.5x + Precise Eye + 1.33x	51	3.59x	0.104	3.2	0.04	5.8
1.5x + Precise Eye + 2.0x	51	5.40x	0.104	3.2	0.04	8.6
2.0x + Precise Eye + 0.5x	36	1.80x	0.141	2.4	0.02	2.1
2.0x + Precise Eye + 0.67x	36	2.41x	0.141	2.4	0.02	2.8
2.0x + Precise Eye + 1.0x	36	3.60x	0.141	2.4	0.02	4.2
2.0x + Precise Eye + 1.33x	36	4.79x	0.141	2.4	0.02	5.6
2.0x + Precise Eye + 2.0x	36	7.20x	0.141	2.4	0.02	8.4

Assumptions:

1. Minimum resolvable feature size is half of the threshold line pair limit. Calculation = $1/(3000 \times \text{Lens N.A.})$
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."