# Precise Eye
# Performance Specifications

## Precise Eye Performance Specifications

| Precise Eye Combinations<br>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 x Lens NA)
2. Matching pixel size is that which will permit the minimum feature size to overlap two pixels. Calculation = 1/2(Feature Size x 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."