

## Optical Data and Measurement Accuracy table of INSPECTIS U30 and U30s with different lenses

U30/U30s & Close-up Lens	Optical Zoom pos. [times]	On-screen Magnification 28" monitor	Optical Magnification	Working Distance Range [mm]	How big an object to fill screen [mm]	Calibrated Pixel size [microns]	Resolution power On-axis [lp/mm]	Resolution power Off-axis [lp/mm]	Measurement accuracy Range [µm]	Maximum measurement accuracy [µm]	Remarks
Standard Lens	x1	1,9 x	0,6 x	> 228-178	325 x 182.8	80 µm	3	2.5	160 to 500 µm	~ 160 µm	
Standard Lens	x5	9,3 x	3,2 x	> 228-178	65.4 x 36.8	18 µm	13	13	18 to 36 µm	~ 18 µm	
Standard Lens	x10	17,8 x	6,2 x	> 228-178	34.1 x 19.2	9 µm	23	23	9 to 27 µm	~ 10 µm	
Standard Lens	x15	27,5 x	9,5 x	> 228-178	22.1 x 12.4	6 µm	36	36	6 to 18 µm	~ 10 µm	
Standard Lens	x20	36,5 x	12,7 x	> 228-178	16.6 x 9.3	4.4 µm	45	45	5 to 15 µm	~ 5 µm	
Standard Lens	x30	61 x	21 x	228-178	9.9 x 5.6	2.6 µm	48	48	2.5 to 7.5 µm	~ 2.6 µm	
Meniscus Close-up	x30 +1	75 x	26 x	188-145	8.1 x 4.6	2.1 µm	64	64	3 to 10 µm	~ 3 µm	Reduced contrast
Meniscus Close-up	x30 +2	88 x	30 x	159-128	6.9 x 3.9	1.8 µm	70	70	3 to 10 µm	~ 3 µm	Reduced contrast
Achromatic Close-up	x30 +2	88 x	30 x	159-128	6.9 x 3.9	1.8 µm	114	114	2 to 6 µm	~ 2.0 µm	
Achromatic Close-up	x30 +3	101 x	35 x	130-108	6 x 3.4	1.5 µm	128	128	1.5 to 5 µm	~ 1.5 µm	
Achromatic Close-up	x30 +5	132 x	46 x	100-75	4.6 x 2.6	1.2 µm	161	161	1 to 4 µm	~ 1 µm	
Achromatic Close-up	x30 +10	192 x	66 x	65-60	3.16 x 1.78	0.82 µm	228	228	0.8 to 3 µm	~ 0.6 µm	
High-mag Lens	x10 +28	123 x	43 x	> 18-16.5	4.92 x 2.77	1.28 µm	228	161	1.3 to 4 µm	~ 1.3 µm	Vignetting φ3.6mm
High-mag Lens	x30 +28	413 x	143 x	18-16.5	1.47 x 0.83	0.38 µm	362	362	0.4 to 1.2 µm	~ 0.4 µm	
High-mag Lens	x10 +56	213 x	74 x	> 18-17.5	2.85 x 1.6	0.74 µm	323	228	0.8 to 2.5 µm	~ 0.8 µm	Vignetting φ2.4mm
High-mag Lens	x30 +56	714 x	247 x	18-17.5	0.85 x 0.477	0.22 µm	512	406	0.2 to 0.6 µm	~ 0.2 µm	

### Important notes:

1. Field of View and Calibrated Pixel Size in table are valid for maximum Working Distance of digital microscope.
2. Maximum measurement accuracy achieved only if a highly accurate calibration using Inspectis micrometer rulers HD-053 or HD-054 is performed.
3. Resolution power is measured in Line Pairs per mm [lp/mm] using 1951 USAF resolution test chart.
4. Maximum Working Distance range of U30s is wider than indicated values at 1-29x zoom factors.

