



3D Optical Profiler

Objectives Specifications



SENSOFAR®

Objectives Specifications

The S neox uses premium CF60-2 Nikon objectives lenses that have been designed to correct for chromatic aberrations and produce sharp, flat and clear images with high contrast and high resolution. Phase Fresnel lenses improve the operability and the working distance, meaning that S neox objectives provide the largest available working distance for each NA.

The S neox also uses interferometric objectives. The TI series are based on Michelson interferometer. They have an external reference mirror mounted on two tip-tilt screws. The DI series are Mirau objectives that creates the interference internally by dividing the wavefront with a beamsplitter. The TI series are used for low magnification and numerical aperture, being ideal objectives for the measurement of very flat at and thin samples. The DI series can have up to 0.55NA.

Bright field objectives

Magnification	NA	WD (mm)	FOV (μm)	Spatial Sampling (μm)	Optical Resolution Green (μm)	Optical Resolution Blue (μm)	Optical Resolution Red (μm)	Optical Resolution White (μm)	Maximum Slope (°)	Vertical Resolution (nm)
1X EPI	0.03	3.80	17540 x 13200	12.90	4.88	4.67	5.69	5.59	1	-
2.5X EPI	0.075	6.50	7016 x 5280	5.16	1.95	1.87	2.27	2.23	3	300
5X EPI	0.15	23.50	3508 x 2640	2.58	0.97	0.93	1.13	1.11	8	75
10X EPI	0.30	17.50	1754 x 1320	1.29	0.48	0.46	0.56	0.55	14	25
20X EPI	0.45	4.50	877 x 660	0.65	0.32	0.31	0.37	0.37	21	8
50X EPI	0.80	1.00	351 x 264	0.26	0.18	0.17	0.21	0.20	42	3
50X EPI	0.80	2.00	351 x 264	0.26	0.18	0.17	0.21	0.20	42	3
50X EPI	0.95	0.35	351 x 264	0.26	0.15	0.14	0.17	0.17	71	3
100X EPI	0.90	1.00	175 x 132	0.13	0.16	0.15	0.18	0.18	51	2
100X EPI	0.90	2.00	175 x 132	0.13	0.16	0.15	0.18	0.18	51	2
100X EPI	0.95	0.32	175 x 132	0.13	0.15	0.14	0.17	0.17	71	2
150X EPI	0.90	1.50	117 x 88	0.09	0.16	0.15	0.18	0.18	51	1
150X EPI	0.95	0.20	117 x 88	0.09	0.15	0.14	0.17	0.17	71	1
20X ELWD	0.40	19.00	877 x 660	0.65	0.36	0.35	0.42	0.41	21	10
50X ELWD	0.60	11.00	351 x 264	0.26	0.24	0.23	0.28	0.27	30	5
100X ELWD	0.80	4.50	175 x 132	0.13	0.18	0.17	0.21	0.20	42	3
10X SLWD	0.20	37.00	1754 x 1320	1.29	0.73	0.70	0.85	0.83	11	50
20X SLWD	0.30	30.00	877 x 660	0.65	0.48	0.46	0.56	0.55	14	20
50X SLWD	0.40	22.00	351 x 264	0.26	0.36	0.35	0.42	0.41	21	15
100X SLWD	0.60	10.00	175 x 132	0.13	0.24	0.23	0.28	0.27	30	10

The highest quality objectives,
the highest quality performance

Water immersion objectives

Magnification	NA	WD (mm)	FOV (μm)	Spatial Sampling (μm)	Optical Resolution Green (μm)	Optical Resolution Blue (μm)	Optical Resolution Red (μm)	Optical Resolution White (μm)	Maximum Slope (°)
10X WI	0.30	3.50	1754 x 1320	1.29	0.48	0.46	0.56	0.55	14
20X WI	0.50	2.00	877 x 660	0.65	0.29	0.28	0.34	0.33	23
63X WI	1.00	2.00	292 x 220	0.22	0.14	0.14	0.17	0.16	-

Collar ring depth focusing correction objectives

Magnification	NA	WD (mm)	FOV (μm)	Spatial Sampling (μm)	Optical Resolution Green (μm)	Optical Resolution Blue (μm)	Optical Resolution Red (μm)	Optical Resolution White (μm)	Maximum Slope (°)
20X EPI CR	0.45	10.9 – 10.0	877 x 660	0.65	0.32	0.31	0.37	0.37	21
50X EPI CR	0.70	3.9 – 3.0	351 x 264	0.26	0.20	0.20	0.24	0.23	42
100X EPI CRA	0.85	1.2 – 0.85	175 x 132	0.13	0.17	0.16	0.20	0.19	43
100X EPI CRB	0.85	1.3 – 0.95	175 x 132	0.13	0.17	0.16	0.20	0.19	43

Interferometry objectives

Magnification	NA	WD (mm)	FOV (μm)	Spatial Sampling (μm)	Optical Resolution Green (μm)	Optical Resolution Blue (μm)	Optical Resolution Red (μm)	Optical Resolution White (μm)	Maximum Slope (°)
2.5X TI	0.075	10.30	7016 x 5280	5.16	1.95	1.87	2.27	2.23	3
5X TI	0.13	9.30	3508 x 2640	2.58	1.12	1.07	1.31	1.29	8
10X DI	0.30	7.40	1754 x 1320	1.29	0.48	0.46	0.56	0.55	14
20X DI	0.40	4.70	877 x 660	0.65	0.36	0.35	0.42	0.41	21
50X DI	0.55	3.40	351 x 264	0.26	0.26	0.25	0.31	0.30	25
100X DI	0.70	2.00	175 x 132	0.13	0.20	0.20	0.24	0.23	42
Vertical resolution		PSI/ePSI 0.1 nm (0.01 nm with PZT)					VSI 1 nm		



SENSOFAR is a leading-edge technology company that has the highest quality standards within the field of non-contact surface metrology.

We provide high accuracy optical profilers based on interferometry and confocal techniques. From standard setups for R&D and quality inspection laboratories to complete non-contact metrology solutions for online production processes, Sensofar offers technology that enables our customers to achieve breakthroughs, particularly in the semiconductor, precision optics, data storage, display devices, thick and thin film and material testing technologies fields. Sensofar is represented in over 20 countries through channel partners and has its own offices in Asia, Japan and the United States.

SENSOFAR®

HEADQUARTERS AND SALES OFFICE

SENSOFAR-TECH, SL.

Parc audiovisual de Catalunya

Crta. BV1274 Km 1

E-08225 Terrassa

Tel. (+34) 93 700 14 92

Fax (+34) 93 786 01 16

info@sensofar.com

www.sensofar.com

SALES OFFICE

SENSOFAR Japan Ltd.

Ichikawa Business Plaza 405,

4-2-5 Minami-Yawata

ICHIKAWA-SHI, CHIBA, 272-0023 (JAPAN)

Tel. (+81) 47 370 8600

Fax (+81) 47 370 8623

info@sensofar.co.jp

www.sensofar.co.jp

SENSOFAR LLC (USA)

PO Box 2013

Carefree AZ 85377

Tel. 1 800 530 3097

eFax 1 419 745 1516

info@sensofarusa.com

www.sensofarusa.com