Extreme versatility

with high performance

4x4

4-in-1 technologies
Ai Focus Variation | Confocal
Interferometry | SR

4 LEDs
Red I Green I Blue I White

The **S neox** pushes versatility to the extreme: with 4-in-1 technology, providing unparalleled adaptability for shifty application requirements and maximum measurement flexibility on any surface. The re-design of some algorithms has increased the speed and capability of all technologies. The option to add a piezoelectric Z motor makes the **S neox** our top performer. The **S neox** also covers thicknesses measurements from 50 nm to 5 mm.

AUTOMATIC 3D

0.01 nm ↓↑ system noise

X 5 Speed thanks to new algorithms

Objective lenses

MAG	Brightfield						Interferometry					
	5X	10X	20X	50X	100X	150X	2.5X	5X	10X	20X	50X	100X
NA	0.15	0.30	0.45	0.80	0.90	0.95	0.075	0.13	0.30	0.40	0.55	0.70
WD (mm)	23.5	17.5	4.5	1.0	1.0	0.2	10.3	9.3	7.4	4.7	3.4	2.0
FOV[1] (µm)	3378x2826	1689x1413	845x707	338x283	169x141	113x94	6756x5652	3378x2826	1689x1413	845x707	338x283	169x141
Spatial sampling[2] (µm)	1.38	0.69	0.34	0.13	0.07	0.05	2.76	1.38	0.69	0.34	0.13	0.07
Optical resolution[3] (µm)	0.94	0.47	0.31	0.18	0.16	0.148	1.87	1.08	0.47	0.35	0.26	0.20
System noise[4] (nm)	100	30	8	5	3	1	PSI/ePSI 0.1 nm (0.01 nm with PZT) CSI 1 nm					
Maximum slope[5] (º)	9	17	27	44	64	72	4	7	17	24	33	44

System specifications

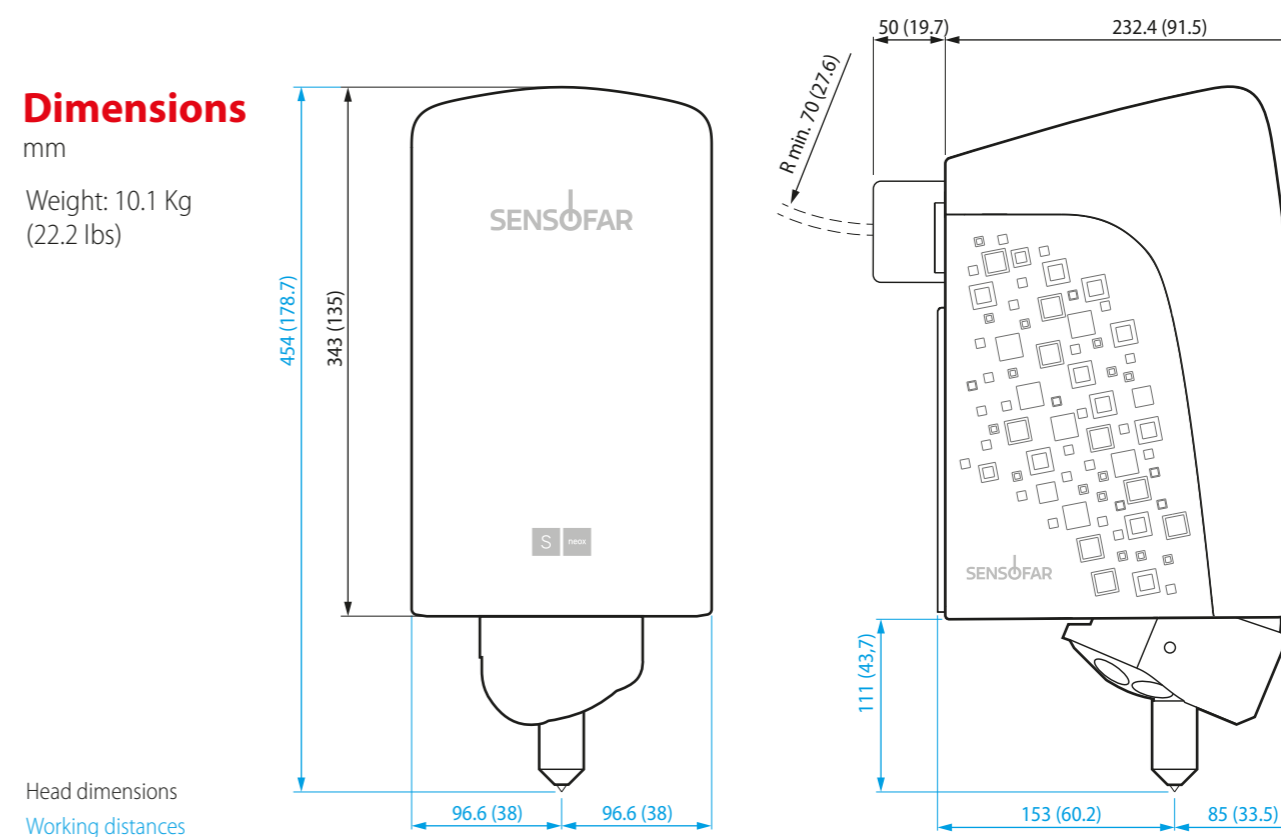|			
Measuring principle	Confocal, PSI, ePSI, CSI, Ai Focus Variation and Thin Film	Sample reflectivity	0.05 % to 100%
Measurement types	Image, 3D, 3D thickness, profile and coordinates	Advanced Software Analysis	Inc: SensoVIEW; Op: SensoPRO, SensoMAP
Camera	5Mpx: 2448x2048 pixels (60 fps)	Software communication	DLL (C++ or C#, Windows 10® – 64 bits) XML (any operating system)
Confocal frame rate	60 fps (5Mpx); 180 fps (1.2 Mpx)	Computer	Latest INTEL processor
Vertical scan range coarse	Linear stage: 40 mm range; 5 nm resolution	Operating system	Microsoft Windows 10®, 64 bit
Vertical scan range fine	Piezoelectric scanner with capacitive sensor: 200 µm range; 1.25 nm resolution	Cable Length	5 or 10 m
Max. Z measuring range	PSI 20 µm; CSI 10 mm; Confocal & Ai Focus Variation 34 mm	Environment	Temperature 10 ºC to 35 ºC; Humidity <80 % RH; Altitude <2000 m
LED light sources	Red (630 nm); green (530 nm); blue (460 nm) and white (575 nm; center)		
Nosepiece	6 position fully motorized		

Dimensions
mm

Weight: 10.1 Kg
(22.2 lbs)

50 (19.7) 232.4 (91.5)
R min. 70 (27,6)

454 (178.7)
343 (135)
111 (43.7)

96.6 (38) 96.6 (38)
153 (60.2) 85 (33.5)

Head dimensions
Working distances

1 Maximum field of view with 3/2" camera and 0.5X optics. **2** Pixel size on the surface. **3** L&S: Line and Space, half of the diffraction limit according to the Rayleigh criterion. Spatial sampling could limit the optical resolution for interferometric objectives. Values for blue LED. **4** System noise measured as the difference between two consecutive measures on a calibration mirror placed perpendicular to the optical axis. For interferometry objectives, PSI, 10 phase averages. The 0.01 nm are achieved with Piezo stage scanner and temperature-controlled room. Values for green LED (white LED for CSI). Values obtained in a VC-E vibration environment. **5** On smooth surfaces. Up to 86° on rough surfaces.