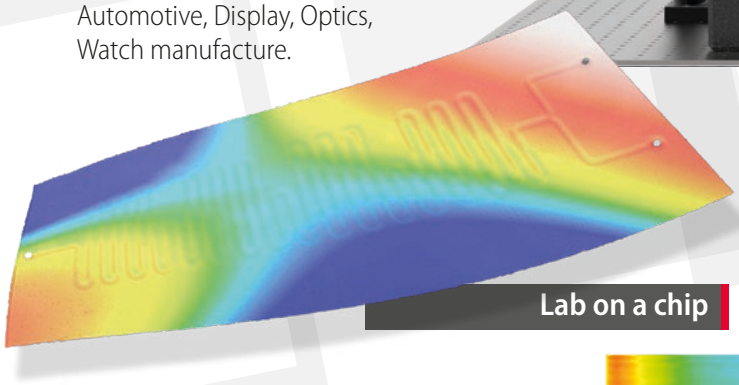
SENSOFAR

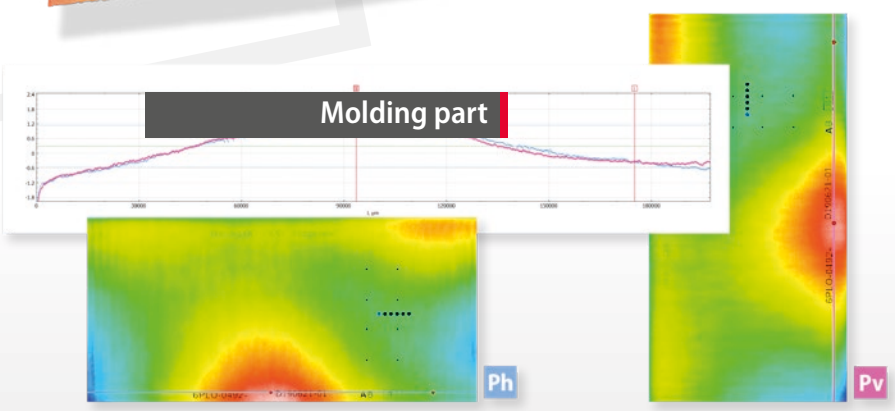
METROLOGY

Measuring flatness with high lateral and vertical resolution

The **S neox** continues to be a pioneer in versatility; this time bringing objective magnification with the largest field of view and highest precision stage, offering the best performance on flatness, parallelism and step height characterization.

Applications: Semiconductors, PCBs, Microfluidics, Aerospace, Automotive, Display, Optics, Watch manufacture.



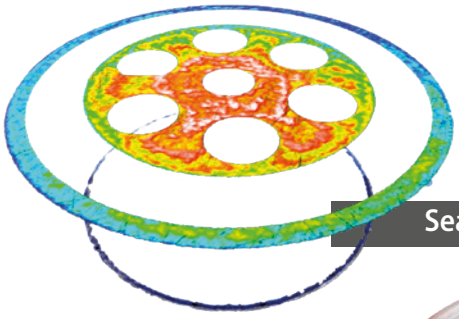


Sensofar 0.65X Michelson

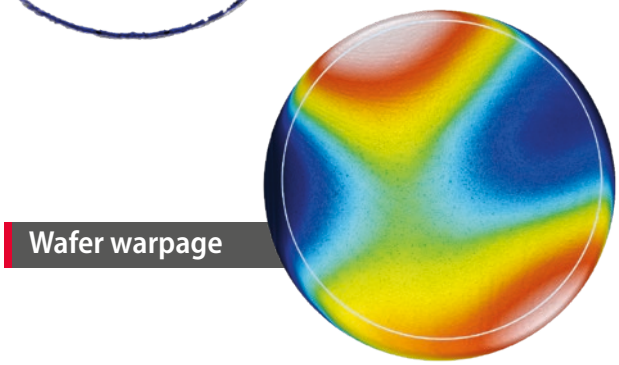
The 0.65X Michelson objective, Sensofar's own design, has been conceived to fulfill a single purpose: to measure flatness in a fast and accurate way. The combination of a dense sampling, a large field of view and the use of interferometry ensures the desired throughput.

High precision XY stage

A high performance XY stage is a key element when the demands of flatness are extremely high. The stage has noncontact optical linear encoders that directly measure the position right at the platform, and with the greatest accuracy.



Sealing component



Wafer warpage

Smartphone screen

Objective specifications

	INTERFEROMETRY
Measuring principles	PSI, ePSI, CSI
MAG	0.65X
NA	0.015
WD (mm)	49
FOV [1] (mm)	25.9 x 21.7
Spatial sampling [2] (µm)	10.6
Optical resolution [3] (µm)	21.5
Measurement noise (nm)	PSI/ePSI 0.1nm (0.01 nm with PZT) CSI 1 nm
Maximum slope (°)	0.8
Flatness error [4] (nm)	<25

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. Values for blue LED. **4** Peak-to-valley distance of the low frequencies in a mirror with flatness λ/20

XY Stage specifications

XY Range (mm)	305x305
Flatness (µm)	±4
Pitch (µrad)	±60
Max load (kg)	25

Since 2007, Sensofar has been member of the Technical Committee of the International Organization for Standardization (ISO/TC213 WG16).

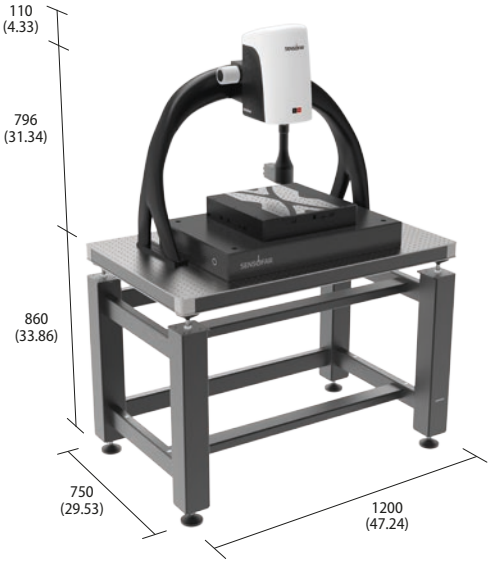
Quality inspection with a pass and fail report

Our acquisition software connects directly to SensoPRO, the best option for QA and QC. With our program the result of an acquisition comes as a pass or fail report. SensoPRO's plugin-based data analysis algorithms provide a high degree of flexibility. The analysis of flatness is automatically performed by SensoPRO, which applies all the required filters according to the ISO 25178 and also calculates height values.

SensoPRO

Dimensions

mm (inch)



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HEADQUARTERS
SENSOFAR | BARCELONA (Spain) | T. +34 93 700 14 92 | info@sensofar.com

SALES OFFICES
SENSOFAR ASIA | Shanghai, (CHINA) | T. +86 21 61400058 | info.asia@sensofar.com
| Taipei, (TAIWAN) | T. +886 988106002 | info.asia@sensofar.com
SENSOFAR DACH | LANGEN - (GERMANY) | T. +49 6103 3009699 | info.germany@sensofar.com
SENSOFAR USA | Newington, CT - (USA) | T. +1 617 678 4185 | info.usa@sensofar.com

sensofar.com

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