

# SENSOFAR

4-in-1 Technology Automatic Non-Contact  
3D Surface Profiler

METROLOGY

Providing Solutions for variety of industry challenges!

## Table Top Systems

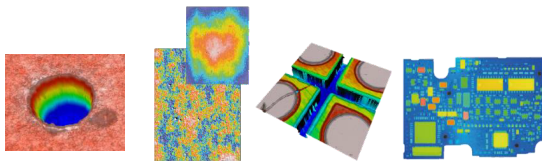
**S neox** Versatility First!  
3D Optical Profiler



Cater for different surface challenges  
(Reflective, Rough, high angle etc.)

Customizable Stage Size  
(up to 12" wafer sizes)

Transparent Film Thickness



## Integrable Inline Sensor

**S mart**

- 2-in-1 Technology (Confocal & Interferometry)
- All electronics and PC embedded
- Size: **90x200mm**
- Weight: **5.5kg**



## S-Wide

**S wide**



- 3x3cm per areal measurement for high throughput
- 300x300mm stage size

**Fringe Projection**

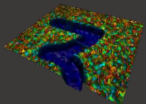


## Technologies in 1 Sensor Head



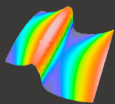
### 1) Confocal

Smooth to Rough Surface  
Good XY Resolution



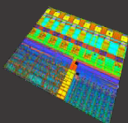
### 2) AI Focus Variation

High Slope Surface Up to 86°  
High Speed Scanning



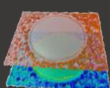
### 3) Interferometry

High Vertical Resolution  
Z-Height Down to:  
(0.1nm, 0.01nm Piezo)



### 4) Thin Film Measurement

Min 50nm to mm level  
Thickness



## Automatic Software



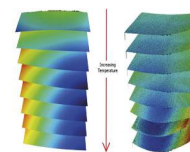
- Automated Multiple Measurement Points, Automatic **Fiducial Points** Alignment and more!



-Advance analysis tools for complex surface / tight analysis requirements



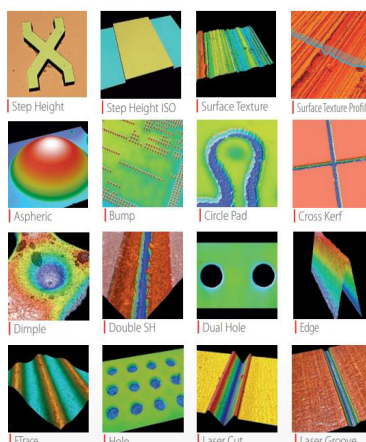
-Auto Data Analysis for Rapid **Pass & Fail** Judgement



**4D Application:**  
Die Warpage with  
Temperature &  
Time

16	110.792	112.209	8.1005 PASS
17	110.798	113.692	1.5182 PASS
18	109.344	113.853	1.2243 FAIL
17	104.681	110.679	11.7253 PASS
18	110.792	209.246	2.4912 PASS
19	110.412	139.242	3.2809 FAIL
20	110.797	118.976	1.1288 FAIL
21	99.276	111.127	0.20098 PASS
22	108.736	118.631	-3.4734 PASS

### Customizable Analysis Plugins:



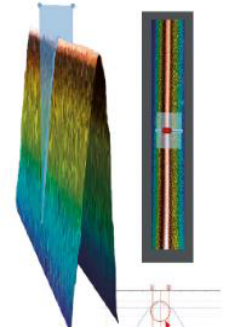
Speed	++	+	+++
Z resolution	++	+++	+
XY resolution	+++	++	+
Rough sample	+++	+	+++
Smooth Sample	++	+++	+
High Slope Surface	++	+	+++
Thickness	+++	+++	

## 5-axis

**S** **neox** Multi-angled measurement for cylindrical samples  
**Five Axis**



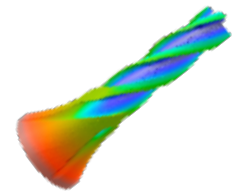
*Jig holder able to cater to different sample diameter*



*Cutting Radius analysis*



*Motorized stage with 5-axis movement for automatic measure*



*Example of results on measured cutting tools*

## Application Examples

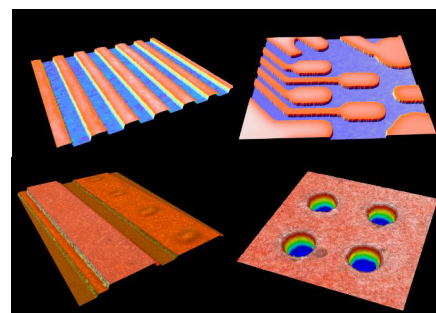
Automotive Piston surface roughness

**Area of friction**

**Colour topography results**

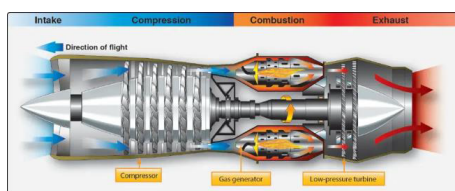
ISO 25178 / Height	
Sa	0.3246 µm
Sku	3.3862
Smean	0.0004 µm
Sp	1.9297 µm
Sq	0.4127 µm
Ssk	-0.0113
Sv	1.8504 µm
Sz	3.7801 µm

PCB dimension Measurements

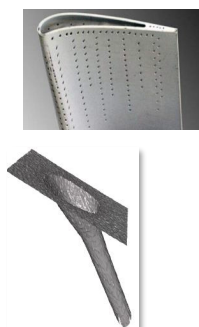


- Copper trace depth
- Dimple depth
- Via Hole
- Film thickness

Jet Turbine Measurements



*Cooling Holes on jet turbines*



Other Automotive Applications:



*Defect/Scratches on Disc Brake*

- Brake parts
- Clutch parts
- Cooling holes
- CVT Belts
- Pistons
- Leading and trailing edges of turbine blades
- Tires
- Other engine parts