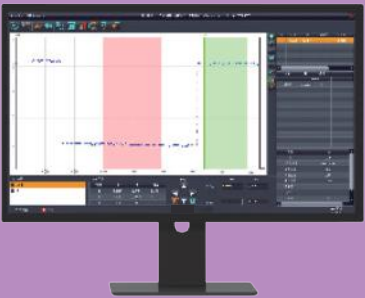


Stylus Nano Profiler NS200

Surface micro-nano profile measurements

- Powerful data collection and analysis system
- Excellent repeatability and reproducibility



Visual navigation system,
5MP colorful camera

Motorized X/Y/Z stage,
Motorized 360° rotation

Description

Stylus Nano Profiler NS200/NS200-D is an ultra-precision contact measuring instrument for measurement of surface roughness and microscopic profile, such as micro-nano step height, film thickness. The NS200 uses a displacement sensor with sub-angstrom resolution, ultra-low noise signal acquisition, ultra-fine motion control, and calibration algorithms technology with excellent performance. Its contact force is extremely small, and there are no special requirements for measuring surface reflection characteristics, material types, and material hardness, consequently, it is widely used to measure microscopic surface for industries of semiconductors and compound semiconductors, high-brightness LEDs, solar energy, MEMS micro-electromechanical systems, touch screens, automotive and medical equipment.

Application

Semiconductor	Large Substrate	Glass substrate and display	Film on flexible component
<ul style="list-style-type: none">• Step height of deposited film• Step height of thin Film Resist• Etch rate measurement• Chemico-mechanical polishing (corrosion, pitting, bending)	<ul style="list-style-type: none">• PCB protrusion, step height• Window coating• Wafer mask• Wafer chuck coating• polishing plate	<ul style="list-style-type: none">• AMOLED• Step height measurement during LCD screen development• Thickness measurement for touch panel film• Solar coating thin film	<ul style="list-style-type: none">• Organic photodetector• Organic films printed on film and glass• Touch screen copper traces

Parameters

Model No.		NS200	NS200-D
Sample Observation	Front View Navigation	5MP Colorful Camera F.O.V.: 2.2x1.7mm	5MP Colorful Camera F.O.V.: 10x13.4mm
	Side View Navigation	/	5MP Colorful Camera F.O.V.: 2x2.68mm
Sensor		Ultra low Inertia, LVDC sensor	
Measuring Force		1-50mg Adjustable	
Stylus		Tip radius 2μm, angle 60°	
XY Travel Range		Motorized X/Y (150mm150mm), manually adjustable leveling	
Sample R-θ Stage		Motorized, 0~360° continuous rotation	
Vacuum Chuck		8-inch vacuum chuck	
Single Scan Length		55mm	
Max Scanning Range		150(XY travel) + 55mm scanning range, max range is 8 inches	
Max Sample Height		50mm	
Max Wafer Size		200mm(8")	
Step Height Repeatability*1		5 Å @ Range 330μm/ 10 Å @ Range 1050μm (Measure step height 1μm, 1δ)	
Sensor Range*2		330μm or 1050μm	
Scanning Speed		2μm/s~10mm/s	
Max Scan Sampling Points		12000	
Size(L×W×H)		630×610×500mm	640×650×530mm
Weight		40kg	
Input		AC100~240V, 50/60 Hz, 200W	
Working Environment		Humidity: 30~40% RH(No condensation), Temp.: 16~25°C(Fluctuation < 2°C/h), Ground vibration: 6.35μm/s(1~100Hz), Audio noise: ≤80dB Air laminar flow: ≤ 0.508 m/s(Downward flow)	

Note:
*1 Repeatability data was measured in a laboratory environment that meets VC-C standards and it is equipped with an anti-vibration table. If these conditions are not met, the repeatability data will be doubled.
*2 The sensor range can only be selected between 330μm and 1050μm. Probes are installed by magnetic mounting. If there are no features requiring an ultra-large range probe, it is recommended to use the 330μm one.