

WHITE LIGHT INTERFERENCE MEASURING MICROSCOPE

CODE ISM-A8000

NON-CONTACT
ROUGHNESS MEASUREMENT

SUB-NANOMETER
VERTICAL RESOLUTION

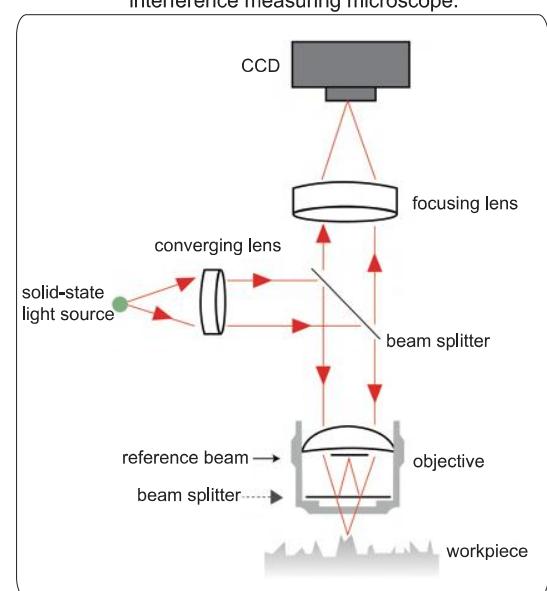
MICRO 3D MORPHOLOGY
MEASUREMENT

MOTORIZED STITCHING



- Using white light source to combines non-coherent light interference with high-resolution microscopic imaging to generate microscopic three-dimensional profiles, by employing objectives with different magnification levels, the vertical measuring resolution can achieve the sub-nanometer range
- 3D surface micro-measurement and roughness evaluation are widely applied in precision machining, semiconductor processing, and materials analysis
- Suitable for precision optical components, micro-nano machined devices, metal machined parts, wafers, and other components
- Sub-nanometer vertical resolution, suitable for smooth surface measurement and analysis
- Including nanoscale micro-profile analysis, 2D dimensional measurement, and roughness measurement, etc.
- Using high-sensitivity, high-speed sensors and large-range, high-precision, high-speed piezoelectric ceramic units to achieve high scanning efficiency
- Supporting measurement in 2D and 3D modes
- Automatic stitching for large field view and measurement after stitching
- Measurements can be saved in reports and exported
- Vibration isolation platform is standard to ensure stable operation

working principle of white light
interference measuring microscope:



SPECIFICATION

Measuring mode	PSI (physiognomic scanning)/VSI (vertical scanning)/bright field
Light source	white light, green light
Resolution of camera	1600×1100
View field (20X interference objective)	414×414μm
Travel of Z-axis	20mm motorized+50mm manual
Scanning range of Z-axis	10mm
Resolution of Z-axis	0.1nm
XY stage	size 200×200mm
	range 50×50mm
	max. weight of workpiece 3kg
	resolution 0.2μm
	control method motorized
Range of horizontal adjustment	±12° manual
Reflectance of measuring samples	0.1%-100%
Repeatability of roughness measurement	0.1nm
Accuracy of height measurement	<0.75% (VSI mode)
Measurement time	<5s (PSI mode)
Environmental requirement	temperature: 23±3°C, relative humidity: 25-65%, equipment installation should be kept away from vibration sources
Power supply	220V, 50/60Hz
Dimension (L×W×H)	750×750×1330mm
Net weight	100kg

OBJECTIVES SPECIFICATION

Objective	2.5X(optional)	5X(optional)	10X(optional)	20X(included)	50X(optional)	100X(optional)
Numerical aperture	0.075	0.13	0.3	0.4	0.55	0.7
Optical resolution@550nm	3.7μm	2.1μm	0.92μm	0.69μm	0.5μm	0.4μm
Range of depth of field	48.6μm	16.2μm	3.04μm	1.71μm	0.9μm	0.56μm
Working distance	10.3mm	9.3mm	7.4mm	4.7mm	3.4mm	2.0mm

ANALYSIS FUNCTION

Software function	laser-assisted stripe positioning automatic roughness software measurement module, capable of measuring Ra, Rq, Rz, Rp, Rv, Sa, Sa, Sq, Sz, Sp, Sv
Analysis function	profile height analysis module, capable of measuring vertical distance, horizontal distance, Pa, Pq, Pt
3D data output	height measurement, dimensional measurement, roughness analysis 3D point cloud data, grayscale image data, customized reports

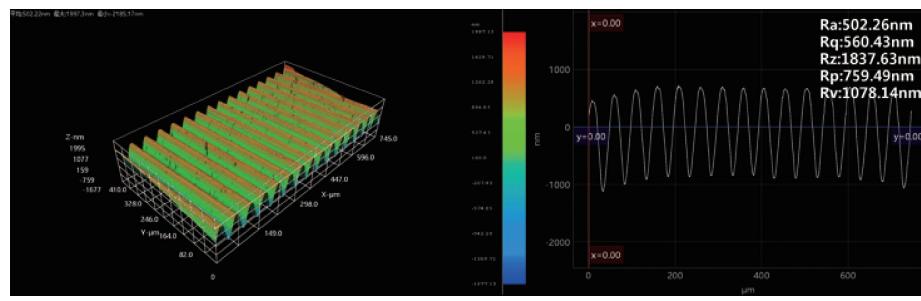
STANDARD DELIVERY

Main unit	1pc
20X interference objective	1pc
Computer	1pc
Industrial computer	1pc
Vibration isolation platform	1pc
Air pump	1pc
Software	1pc

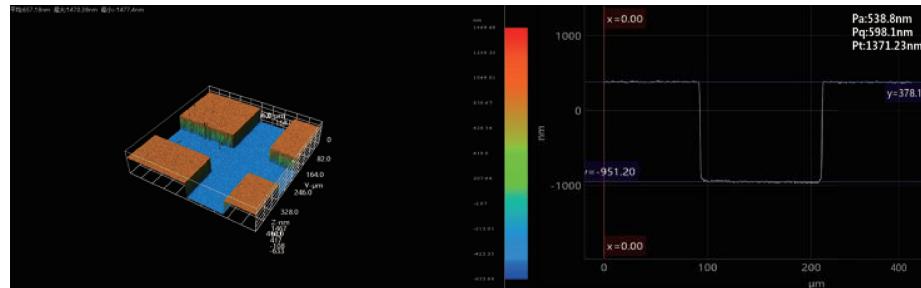
OPTIONAL ACCESSORY

2.5X interference objective	ISM-A-IF2D5X
5X interference objective	ISM-A-IF5X
10X interference objective	ISM-A-IF10X
50X interference objective	ISM-A-IF50X
100X interference objective	ISM-A-IF100X
20X brightfield objective	ISM-A-OB20X

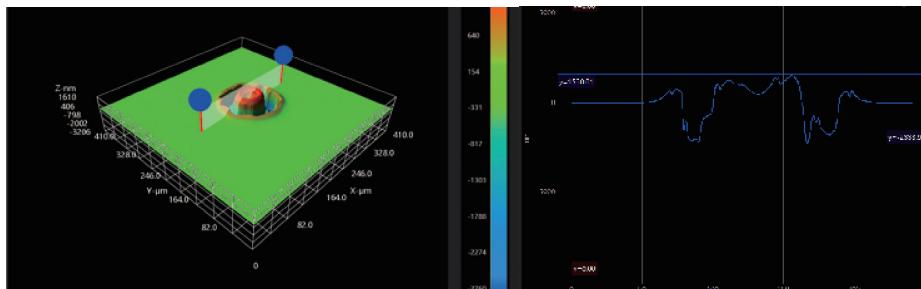
APPLICATION



roughness measurement



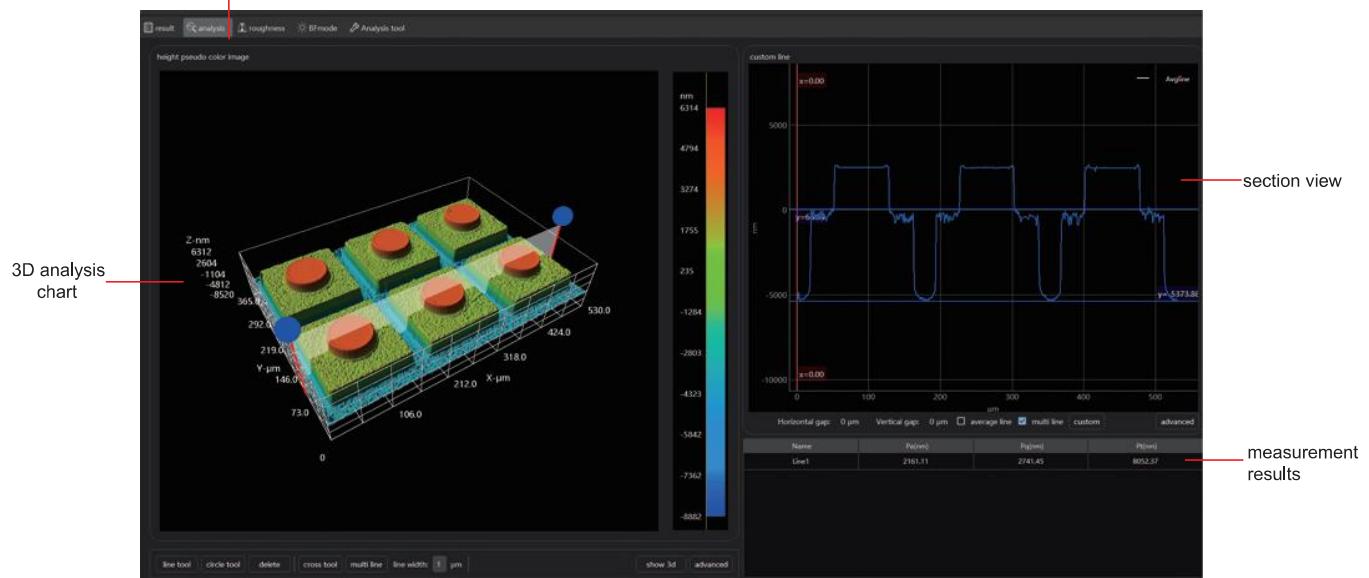
height difference measurement



microstructural analysis

SOFTWARE (INCLUDED)

toolbar



3D analysis chart

section view

measurement results