

# WHITE LIGHT INTERFERENCE MEASURING MICROSCOPE

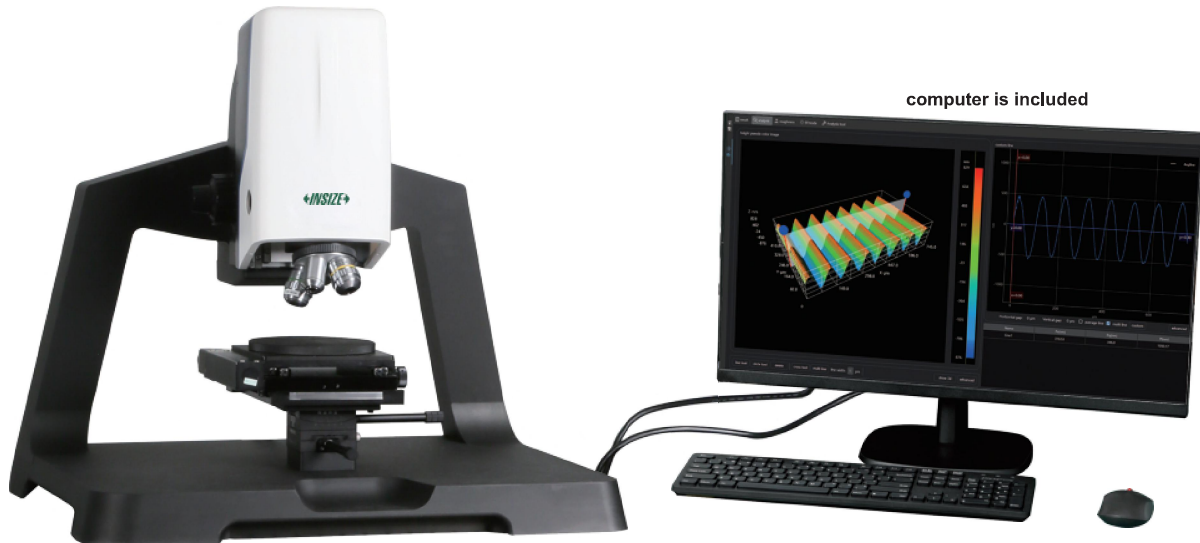
## PART No. ISM-A8000-U

NON-CONTACT  
ROUGHNESS MEASUREMENT

SUB-NANOMETER  
VERTICAL RESOLUTION

MICRO 3D MORPHOLOGY  
MEASUREMENT

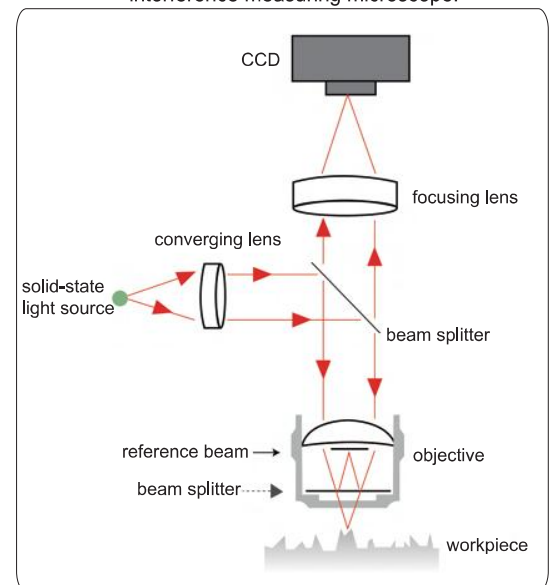
MOTORIZED STITCHING



computer is included

working principle of white light interference measuring microscope:

- Using white light source to combine 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



**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)	.016×.016"	
Travel of Z-axis	.78" motorized+1.97" manual	
Scanning range of Z-axis	.39"	
Resolution of Z-axis	.003μm/0.1nm	
XY stage	size	7.87×7.87"
	range	1.97×1.97"
	max. weight of workpiece	6.61lb
	resolution	7.87μm
	control method	motorized
Range of horizontal adjustment	±12° manual	
Reflectance of measuring samples	0.1%-100%	
Repeatability of roughness measurement	.004μm/0.1nm	
Accuracy of height measurement	<0.75% (VSI mode)	
Measurement time	<5s (PSI mode)	
Environmental requirement	temperature: 73±5.4°F, relative humidity: 25-65%, equipment installation should be kept away from vibration sources	
Power supply	110V, 50/60Hz	
Dimension (L×W×H)	29.53×29.53×52.36"	
Net weight	220lb	

**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	145.7μm	82.6μm	36.2μm	27.1μm	19.7μm	15.7μm
Range of depth of field	1913.4μm	637.8μm	119.7μm	67.3μm	35.4μm	22μm
Working distance	.40"	.36"	.29"	.18"	.13"	.078"

**ANALYSIS FUNCTION**

Software function	laser-assisted stripe positioning
	automatic roughness software measurement module, capable of measuring Ra, Rq, Rz, Rp, Rv, 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

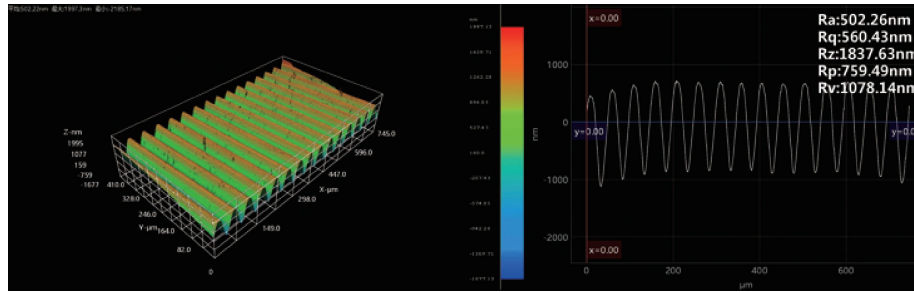
**STANDARD DELIVERY**

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

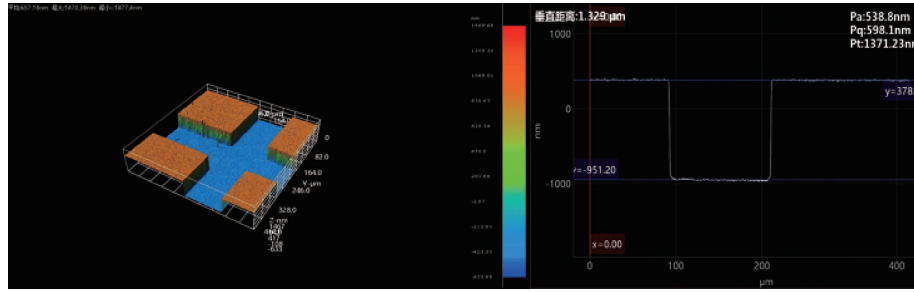
**OPTIONAL ACCESSORY**

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

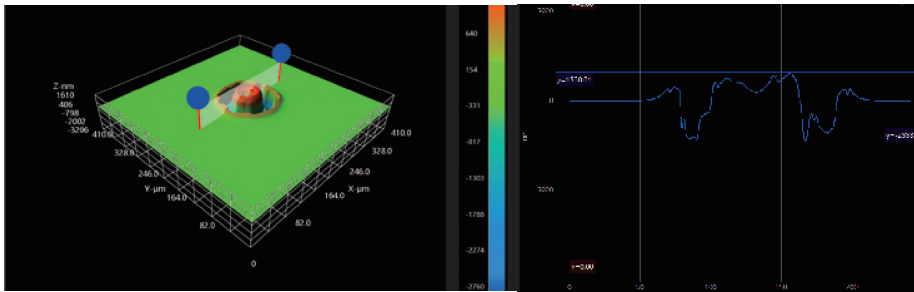
# APPLICATION



roughness measurement



height difference measurement



microstructural analysis

# SOFTWARE (INCLUDED)

toolbar

3D analysis chart

section view

measurement results

Name	Height	Height	Height
Line1	2761.11	2741.42	8852.87