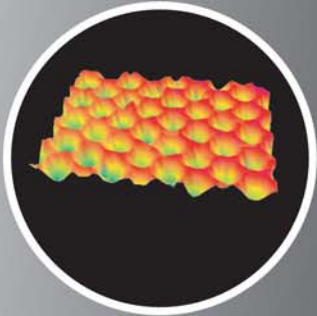


# ZOOMSURF 3D

## Highest performance 3D measurements

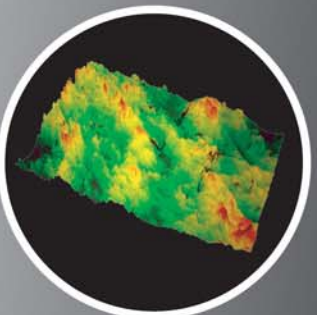
**Fully automated optical profiling system for research and production applications**



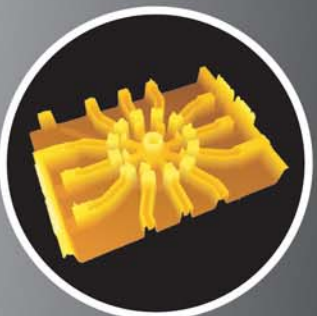
*Printing sample measurement*



*Diffraction grating height and shape characterization*



*Sub-nanometric roughness measurement*



*MEMS micromotor static and dynamic characterization*



- **Sub-nanometer vertical resolution (down to 0.1 nm) at all magnifications**
- **Non-contact measurements allowing accurate and repeatable results**
- **All axes motorization enabling automatic stitching of multiples fields of view**
- **Automated measurement sequence**
- **Sub-nanometric roughness measurements**
- **Easy to use and production-ready**
- **Automated step height and surface flattening functions**

# ZOOMSURF 3D is the most powerful static and dynamic 3D measurements system with motorized stage for very large sample

## SPECIFICATIONS

### Measurement techniques

Scanning white light and phase-shifting interferometry.

### Light source

White or monochromatic source, automatic switching and intensity adjustment

### Objectives

x 2.5, x 5, x 10, x 20, x 50, x 100 (tip/tilt optional)

### Zoom

x0.35 to x1.6 (in standard)

### Field of view

7.2 x 5.4 mm to 80 x 60 nm

### Measurement array

Selectable measurement area 32 x 32 up to 768 x 580 pixels

### Scanner

500 µm piezo scanner, with feedback loop using linear highly capacitive sensor technology. (More than 2 mm available on request)

### Sample Stages

Large sample handling capabilities

200 x 200 mm motorized translation stage

150 mm motorized Z translation

Rotative stage (optional)

6-8" vacuum chuck wafer (optional)

### Video Display

LCD color monitor 17"

### Computer

Video acquisition card, Intel® or AMD® processor

HDD 80 GB, Ethernet 10/100 MB, keyboard / mouse, digital I/O card

512 MB memory, CD ROM reader / writer

### Software

Fogale 3D running under Microsoft® Windows 2000 Professional

## ENVIRONMENT

Temperature Range

15 to 30 °C

Humidity Range

< 80 %, non-condensing

## DIMENSIONS

Microscope

800 mm x 800 mm x 1800 mm

## WEIGHT

Microscope

700 kg

Shipping Weight

900 kg

## PERFORMANCE

Vertical measurement range

0.1 nm to 500 µm standard

Vertical resolution

< 1 Å

RMS repeatability

0.3 nm RMS

Lateral spatial sampling

0.1 to 9.3 µm

Field of view

7.2 mm to 80 µm

Reflectivity

1% to 100%

### Sub-nanometer resolution

ZoomSurf 3D brings a new level of performance to non-contact 2D and 3D measurement with vertical resolution down to 0.1 nm.

### Non contact measurements

All measurements are non-destructive and require no sample preparation.

### Step height, thickness, surface topography, bump size, field stitching, Roughness measurement

### Versatile

All types of materials can be measured without difficulty. Reflectivity range 1% to 100%

### Automation

Complete motorization enables easier handling as well as auto focus and automatic stitching of numerous fields of view.

### Automatic measurement sequences

### System stability

ZoomSurf 3D provides highly stable metrology thanks to its design including advanced anti-vibration systems and its capacitive feedback loop technology.

### Powerful analysis software

Fogale 3D is an intuitive, interactive and very powerful metrology software providing an extensive range of data analyses and visualization.

### A large range of options is available for various applications :

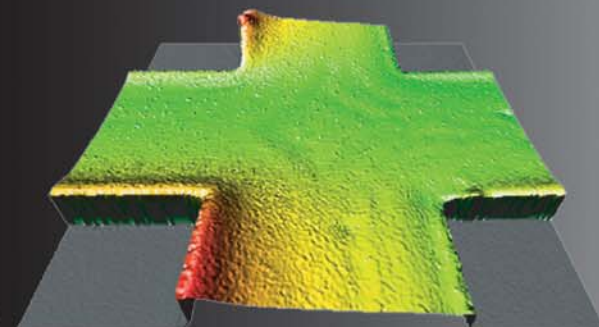
>Vibrations analysis

>MEMS solution

>Circular and cylindrical stitching

>MEMS vacuum box

>Laser Doppler vibrometer



FP\_PRO\_Z53D\_UK04\_V1

### Fogale Nanotech

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