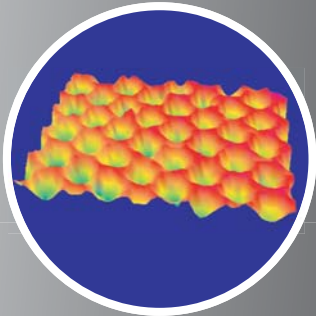


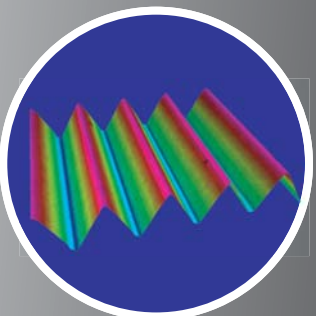
# MICROSURF 3D

**Compact microscope for fast and precise 3D measurement**

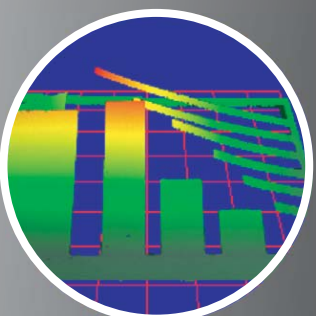
**MicroSurf 3D is a non-contact microscope designed for research and industrial laboratories**



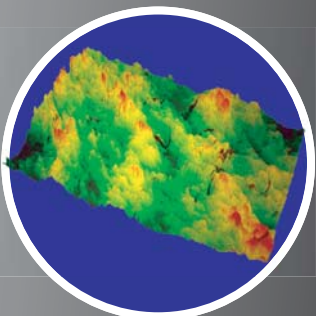
*Printing sample measurement*



*Diffraction grating height and shape characterization*



*Surface stress effect on microbeams*

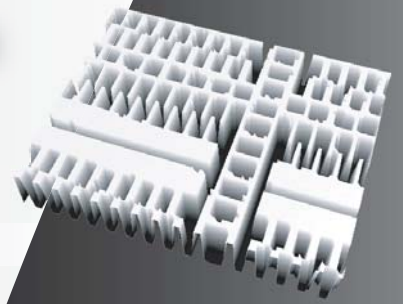


*Subnanometric roughness measurement*



- **Sub-nanometer vertical resolution for high resolution roughness measurements (down to 0.1 nm) at all magnifications**
- **Non-contact measurements allowing accurate and repeatable results**
- **Manual stitching**
- **Manual turret**
- **Easy to use**
- **Compact**

# MicroSurf 3D is the ideal compact microscope for high speed and precise measurements



## SPECIFICATIONS

### Measurement techniques

Non-contact, three-dimensional scanning, white light and phase-shifting interferometry.

### Light source

White or monochromatic source, automatic switching and intensity adjustment

### Objectives

x2.5, x5, x10, x20, x50, x100 (tip/tilt optional)

### Field of view

5x 3.8 mm to 260 x200  $\mu$ m (in standard)

7.2x5.4 mm to 80x60  $\mu$ m (with zoom option)

### Measurement array

Selectable measurement area 32x32 up to 768x580 pixels

### Scanner

500  $\mu$ m piezo scanner, with feedback loop using linear capacitive sensors technology

### Sample Stages

#### Standard

Large sample handling capabilities

70x50 mm manual stage

50 mm manual Z translation

#### Optional

200x200 mm motorized translation stage

### Video Display

LCD Colors monitor 17"

### Computer

Video acquisition card, latest 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 software package

running under Microsoft® Windows 2000 Professional

### Sub-nanometer resolution

Microsurf 3D brings a new level of performance to non-contact 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 (manual) Roughness measurement ...

### Versatile

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

### System stability

Microsurf 3D provides highly stable metrology thanks to its design it's possible to include advanced anti-vibration systems and it's capacitive feedback loop technology.

### Powerful analysis software

Fogale 3D software 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)

> laser doppler vibrometer

## ENVIRONMENT

Temperature Range	Between 15 to 30 °C
Humidity Range	< 80 %, non-condensing

## DIMENSIONS

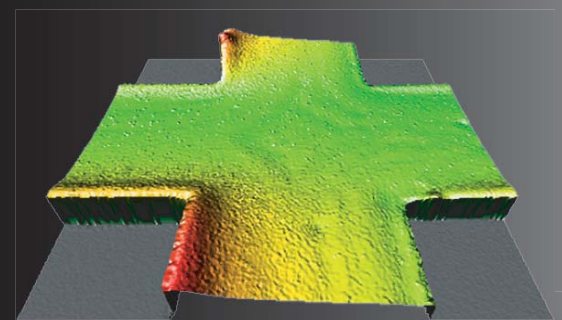
Microscope	600 mm x 400 mm x 800 mm
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## WEIGHT

Microscope	20 kg
Shipping Weight	60 kg

## PERFORMANCE

Vertical measurement range	0.1 nm to 500 $\mu$ m standard
Vertical resolution	< 1 Å
RMS repeatability	0.3 nm RMS
Lateral spatial sampling	0.17 $\mu$ m to 3.2 $\mu$ m (in standard)
Field of view	130 $\mu$ m x 100 $\mu$ m, 2.5 mm x 1.9 mm
Reflectivity	1% to 100%



FP\_PRO\_M3D\_UK04\_V1

### Fogale Nanotech

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