

KFM Spinning Disk Confocal Microscope

3D Experience on your Desktop



→ OPM ←

Optische Präzisionsmesstechnik

See the difference!

KFM Confocal Mikroskope Adaptor

The ideal sensor for rapid acquisition of microscopic samples providing superior and detailed reproduction of all surface details within seconds.

- ▶ Microscopic technology with true depth discrimination provides superior surface acquisition right to the physical limit.
 - ▶ Surface based video realtime acquisition principle for reliable results within seconds.
 - ▶ Tough, maintenance free, long-lived construction.
 - ▶ Extensive assortment of selected premium class objectives available.
 - ▶ Ideal for measurement of topography, geometry, form and position in 3D.
- Destinated especially for applications
 - ▶ in semiconductor industry
 - ▶ in optical system engineering, materials science, mechanical engineering and metrology
 - ▶ health care

KFM Confocal Mikroskope

Principle of Operation

Video real time based confocal detection using a spinning nipkow disk. Tiny pin holes on the disk provide true depth discrimination, imaging only surface details within the focus of the objective. Surface parts outside the focus remain dark and do not interfere with the imaging and evaluation process. A dedicated authentic peak algorithm determines both the profile value and an omnifocal image.

Electronics Configuration

Integrated sensor and piezo controller, sockets for power supply, USB2.0 and RS232.

Microscope

Internal bright field reflected light illumination, motorised switching into confocal mode.

Camera

camera resolution 768x582 pixel², up to 48 fps.

Light Source

high power LED (505nm, cyan) illumination.

Measurement Range

up to 400µm (piezo axis), several mm (motorised Z axis) depending on microscope.

Objective	10x	20x	40x	50x	100x
Numerical Aperture	0.5	0.75	0.95	0.8	0.9
Stand Off (mm)	1.0	1.0	0.14	1.0	1.0
Image Field (µm x µm)	1210x908	605x445	302x223	243x181	121x91
Lateral resolution (µm) ¹	1.58	0.8	0.40	0.32/0.42	0.158/0.37
Axial resolution (µm)	0.01	0.003	0.002	0.002	0.001

Weight

aprox. 5kg

Dimensions

ca 300mm x 140mm x 100mm

System Interfaces

USB 2.0, RS232, Driver-DLL

Software Integration

Complete integration into measurement and evaluation software Inspector

Options

piezo axis or motorised Z axis
motorised X/Y axes
image stitching software

¹ geometrical/optical resolution.

² megapixel camera available

Specifications subject to change

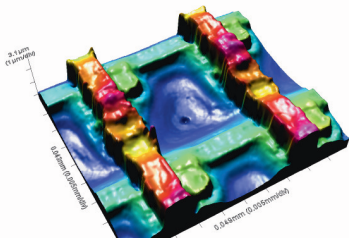
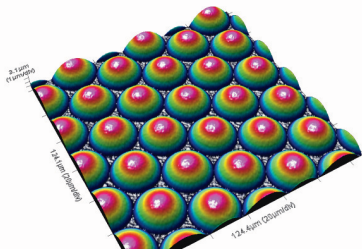
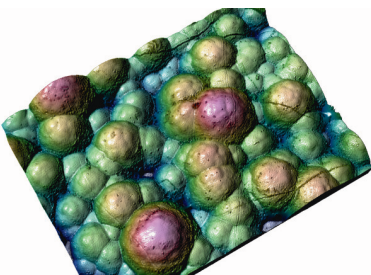


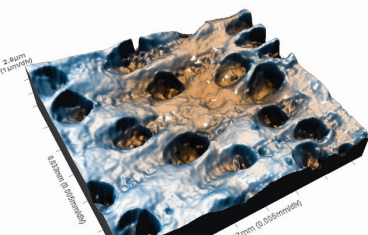
Photo diode cell in a CMOS array
50 x 40 µm



Mico-lens array
125 x 125 µm



Chromium spheres on a roller
300 x 230 µm



tooth surface
40 x 30 µm

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