

ALTIMET

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2D-3D surface metrology



AltiSurf®

From standard to custom

100



500



520



Clean room



Microforce



Training centre

AltiSurf®

Multi-sensor platforms

All kind of materials

Surface characterization

Car manufacturers, research centers, corrosion, defectology...

Micromechanics

Watch manufacturers, medical, electromecanic...

Paper

Papers, printing works, fiduciary, ink, forestry research

Chemistry

Paints, inks, varnishes, glues, coatings...

Glass

Optics, lens, Watch manufactures...

Micro-electronics

Wafers, optronic, matrix sensors...

Multi probes

OPTIC

Confocal optical probe

Triangulated laser

Interferometric probe

CCD Camera

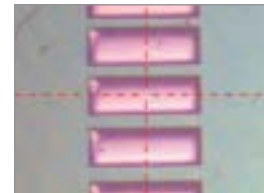
MECHANIC

Mechanical probe

Microforce probe
(inf. 1mg)



CCD image on semiconductor



CCD Image on substrate glass



The new AltiSurf® range is optimized for the characterization and study of relationships between surfaces and coatings micro-roughness as well as the mechanical or the chemical elements used in their production process, and final performance or quality appreciated by the end user : aSpect, behavior, wearing, porosity, adherence...

Surfaces characterization instruments

In the AltiSurf® range of products, the AltiSurf® lab-workstation is composed of an optical sensor, a motion controller, translation stages and a microtopography analysis software.

AltiSurf® can be used for laboratory investigation and for automated quality control, from standard to custom solutions.

Multi sensors technology

AltiSurf® offers high resolution measurements with different probes for multi sensors automated measurement : confocal optical probes based on White light chromatic aberration principle, interferometric probes, triangulated laser, mechanical probe, Microforce cantilever sensor (inf. 1mg, carbon arm with silicium mirror and tungstene microprobe), CCD camera with automated zoom, ...

A metrology instrument

AltiSurf® is composed with 100% granite frame with full stage and sensor calibration performed on COFRAC-ISO gauges (probe linearization...)

AltiSurf® solution allows to characterize and manage the specifications and quality perception of materials and coatings.

2D - 3D Powerful analysis software

A complete set of analytical tools

2D Profilometry

3D State of surface

Topographic analysis

Roughness

Micro-dimensions in Z

Form analysis...

Altimap® is the industry leading topography software, offering a wide range of analysis and measuring tools in respect of the international standards, integrated in a really userfriendly interface.

2 D state of surface and roughness analysis

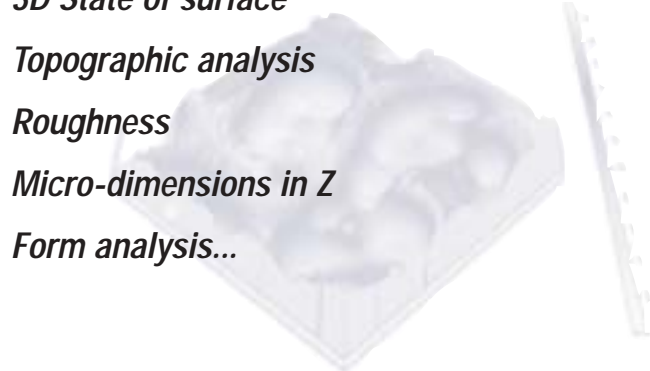
Roughnesses, wavinesses, form, step height, depth distribution and Abbott-Firestone curve, spectral analysis, distance measurement, form and boolean removal, roughness parameters : Ra, Rt, Rp, Rv...

3D state of surface and topographic analysis

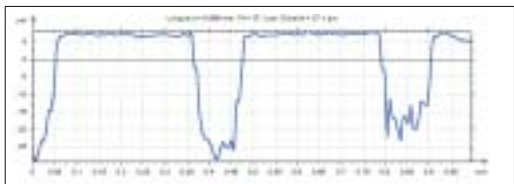
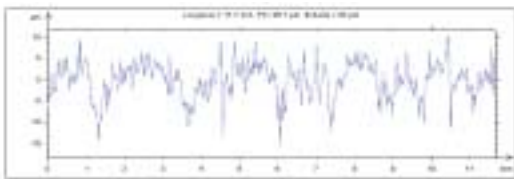
Shaded Visualisation, texturing directions, Isotropy/anisotropy, Fast Fourier Transform, spectral density, autocorrelation, angles and dimensions, 3D modelling, fractal studies...

Form analysis and micro-dimensions in Z

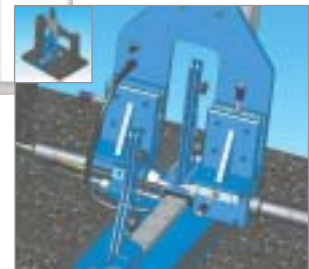
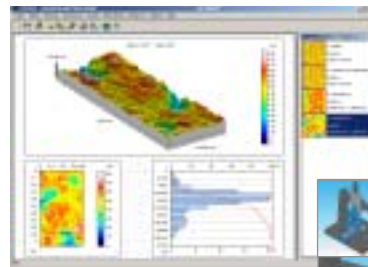
2D Form deviation (contour) or in 3D (flatness, volume, radius calculation, spheres, cylinders or polynoms which bestfits the surface, cuts, surface subtraction, step heights ...)



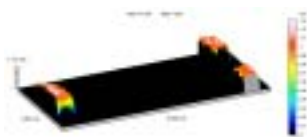
Profiles



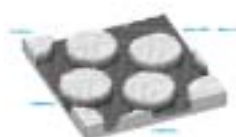
Step height analysis



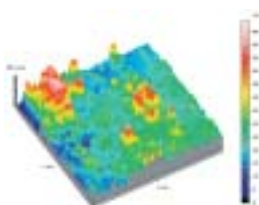
Solidworks® Engineering



Flatness analysis



Measurement on Wafer



Corrosion marks



Topographic analysis

The key pro's from Altisurf®

- Large range of metrology instruments
- 100% granite frame
- Stage correction
- Linear motion stages
- Probes automated linearization
- Automated multi-probe measurement
- High magnification CCD camera and zoom
- On-screen measuring path programming
- Powerfull analysis software
- New platform and software ergonomy

Technical specifications

AltiSurf	100	500	520	535
X, Y travel (mm)	100x100	100 x 100	200 x 200	100 x 350
Z travel (mm)	25 (manual)	100 (motorized)	200 (motorized)	100 (motorized)
Encoder resolution (µm)	0,5 (optional 0,1µm)			
Rectitude profil (PT)	0,4 µm on 100mm			
Dimensions (mm)	L500 x W540 x H730	L500 x W540 x H730	L800 x W600 x H1000	L950 x W700 x H750
Weight (kg)	105	110	200	260
Weight capacity (kg)	10	10	15	15

Probe	AltiProbe Optic
Principle	White light chromatic aberration
Range	6 optic probes from 20 µm to 10 mm
Vertical Resolution	1 to 300 nm
Lateral Resolution	up to 0,5 µm

Probe	AltiProbe Laser
Principle	Triangulated laser
Range	10 mm
Vertical Resolution	1µm
Lateral Resolution	15 µm

Probe	AltiProbe Mecanic
Principle	Mechanical probe
Range	2,5 mm to 100 µm
Vertical Resolution	60 to 2 nm
Lateral Resolution	2 µm

Probe	AltiProbe Micro-Force
Principle	Microforce cantilever sensor : inf. 1mg, Tungstene microprobe Ø 60µm, radius 2µm
Range	2,5 mm to 100 µm
Z Resolution	1 nm
Lateral Resolution	up to 250 nm

Probe	AltiProbe Caméra
Principle	CCD
Magnification	maxi. 1200x - motorized zoom
Pixel size standard	752 x 582



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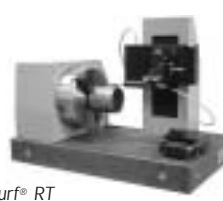
From standard to custom



AltiSurf® 520



AltiSurf® 100



AltiSurf® RT



AltiSurf® Round