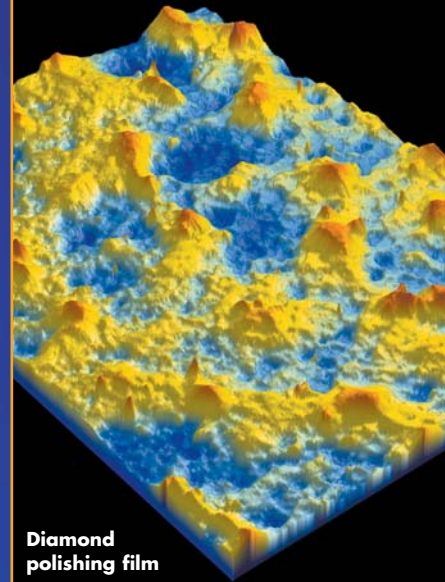
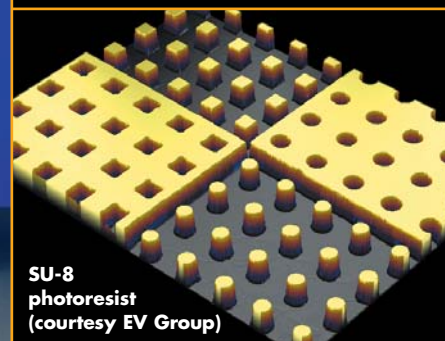


Wyko NT1100 Optical Profiling System

Quantitative 3D Topography for Research and Low-Volume Production



Diamond polishing film



SU-8 photoresist (courtesy EV Group)



Stitched dataset:
1 Euro coin

The Wyko[®] NT1100 provides accurate, non-contact surface metrology for applications in MEMS, thick films, optics, ceramics, advanced materials and many more.

- Accurate surface topography in a small footprint
- Sub-nanometer vertical resolution at all magnifications
- Motorized stage for stitching large area measurements
- Complete system including Wyko Vision[®] analysis software



Fast and repeatable, the NT1100 utilizes white light interferometry for high-resolution 3D surface measurements, from sub-nanometer roughness to millimeter-high steps. On super-smooth or rough surfaces, the versatile NT1100 provides repeatable surface measurement for R&D, wear and failure analysis, and process control.

The cost-effective NT1100 offers all the advantages of industry-standard Wyko optical profiling, including the full Wyko Vision[®] analytical software package. Vision, the industry's most comprehensive analysis program, provides over 200 tools to quantify and visualize surface data — all standard.

The NT1100 has the performance features of larger NT Series instruments: easy measurement setup, fast acquisition, comprehensive analysis and Angstrom-level repeatability. The Data Stitching option adds a motorized stage and support software to rapidly scan large surface areas.



Call 520.741.1044 or 1.888.24.VEECO
 Fax: 520.294.1799 • www.veeco.com
 2650 E. Elvira Road • Tucson, AZ 85706 USA

¹As demonstrated by a PSI measurement with nulled fringes on a SiC reference mirror.

²As demonstrated by taking the one sigma Rq value of 30 PSI repeatability measurements on a SiC reference mirror.

U.S. Patents: 4,931,630; 5,133,601; 5,204,734; 5,122,648; 5,335,221; 5,471,303; 5,446,547. Celeron is a registered trademark of Intel Corporation. Microsoft and Windows XP are registered trademarks of Microsoft Corporation. Wyko and Vision are registered trademarks of Veeco Instruments Inc. Specifications are subject to change without notice. Copyright © 2006 Veeco Instruments Inc. DS501, Rev A5

Specifications

SYSTEM

Measurement Techniques

optical phase-shifting and white light vertical scanning interferometry

Measurement Capability

three-dimensional, non-contact, surface profile measurements

Objectives

1.5X, 2.5X, 5.0X, 10X, 20X, 50X; long working distance objectives available; optional manual turret

Field-of-View Lenses

0.5X, 0.75X, 1.0X, 1.5X, 2.0X

Measurement Array

user-selectable, maximum array 736 x 480

Light Source

tungsten halogen lamp (user-replaceable); manual filter selection

Stages

manual; ± 50.8mm (± 2 in.) X/Y translation, ± 4° tip/tilt; optional automated stitching stage, ± 50.8 mm (2 in.) X/Y

Optical Assembly

integrated illuminator; interchangeable discrete field-of-view lenses; closed-loop precision vertical scanning assembly

Video Display

127mm (5 in.) monochrome monitor

Computer System

PC with latest Celeron[®] processor, 430mm (17 in.) SVGA monitor; optional printers and network cards

Software

Wyko Vision[®] software running under Microsoft[®] Windows XP[®]

PERFORMANCE

Vertical Measurement Range

0.1 nm to 1 mm

Vertical Resolution¹

< 1 Å Ra

RMS Repeatability²

0.01 nm

Vertical Scan Speed

up to 7.2 μm/sec (288 μin./sec)

Lateral Spatial Sampling

0.08 to 13.1 μm

Field-of-View

8.24 mm to 0.05 mm (larger areas with Data Stitching option)

Reflectivity

1% to 100%

ENVIRONMENT

Temperature Range

between 15 and 30 °C (59 to 86 °F)

Humidity Range

≤ 80%, non-condensing

Vibration

optional isolation system (recommended)

DIMENSIONS

Microscope

399mm W x 508mm D x 737mm H (15.5 in. W x 20 in. D x 29 in. H)

WEIGHT

Microscope

does not exceed 56.7 kg (125 lbs)

Shipping Weight

204.1 kg (450 lbs)

POWER REQUIREMENTS

Input Voltage

user-selectable 100–120 VAC / 200–240 VAC, 50–60 Hz

Power Consumption

< 300 W

Compressed Air

4.2–7.0 kg/cm (60–100 PSI) for optional isolation system