

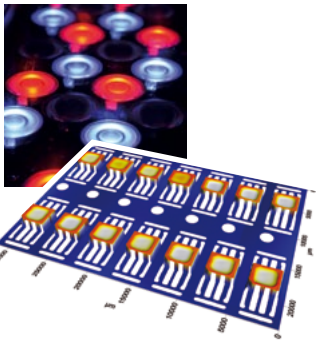
PRODUCT

# cyberSCAN CT 300

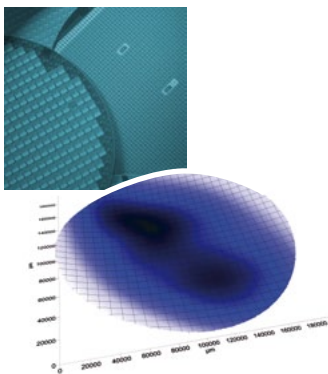
- FAST, PRECISE AND ACCURATE MEASUREMENT ON SMALL AND LARGE SAMPLES
- LARGE 315 MM x 315 MM SCANNING AREA
- USER FRIENDLY CONCEPT
- SOPHISTICATED ANALYSIS AND AUTOMATION SOFTWARE



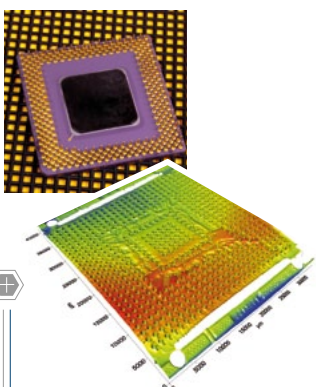
Geometry of LED devices



Flatness of a silicon wafer



Warpage of electronic components



## OVERVIEW

The cyberSCAN CT 300 is a non-contact profilometer with a 315 mm x-, y-motion system. It can scan up to 12" wafers or other large substrates and parts. It is ideal for measuring flatness with submicron accuracy over the complete 315 mm travel. Using a chromatic white light sensor and a data rate of up to 4 kHz the inspection time is minimized. The sensors are available with a z-resolution down to 3 nm and a measurement range up to 25 mm. With our multi-sensor technology several sensor heads can be mounted simultaneously including infrared interferometers for measuring wafer thickness.

## APPLICATIONS

Typical applications are the analysis and quality control of printing processes, such as for PV solar cells, incoming inspection of substrate materials, thick-film measurement on a variety of substrates, volume measurement of paste depots, epoxy-film, dots or other printed and dispensed features. Geometry and position measurement of highly contoured objects like solder bumps, micro-lenses, and MEMS devices, as well as flatness and coplanarity analysis are other popular applications. Since the CT 300 maintains high accuracy across the entire travel, larger parts such as wafers, gaskets, or glass lenses are inspected fast and precisely.

- Printed products, systems or devices
- Device packaging
- Printed circuits
- MEMS
- Fuel cell elements
- Lenses, gaskets, larger mechanical parts
- Soft and transparent materials or coatings
- Medical devices
- Wafer Thickness, Bow, TTV

## SOFTWARE

The proprietary cyberTECHNOLOGIES, Windows-based software package SCAN SUITE combines system control, data collection and data analysis in a user friendly interface. Comprehensive profile, 3D and roughness analyses conforming to DIN ISO are included. The software can handle up to 10.000 x 10.000 data points in one scan.

An outstanding feature is the ASCAN Software:

- Automation of measurement routines
- Easy programming using tasks and templates
- Offset and fiducial correction
- Built-in SPC Charts with reporting function
- Flexible, user defined data output format
- Barcode or user field input
- Step & Repeat function

## TECHNOLOGY

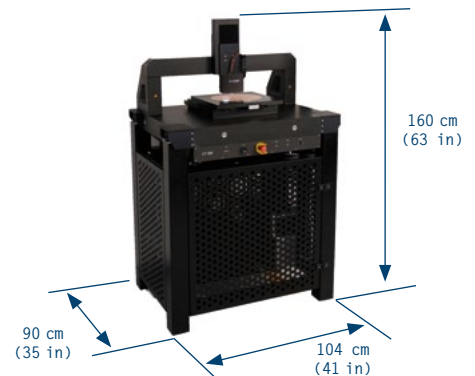
- Fast and accurate magnetic linear stage
- Measurement speed: 2 kHz (4 kHz and 14 kHz optional)
- 315 mm travel in x- and y-direction, lateral resolution 0.05 µm, optional motorized z-axis
- 2D profiles and 3D topographical maps
- Large scanning area, up to the maximum travel of 315 mm at maximum x-, y-, z-resolution
- Laser confocal and chromatic white light sensors
- Resolution down to 3 nm, measurement range up to 25 mm
- On-axis camera or high resolution off-axis camera

## SYSTEM INCLUDES

- CT 300 base unit with manual z- and motorized x- and y-stage
- One sensor of choice (see sensor specifications)
- Integrated system controller with USB interface
- PC Workstation (current version)
- Factory installed Windows 7 64-bit and cyberTECHNOLOGIES SCAN SUITE license
- 23" widescreen monitor, keyboard, mouse
- Reference manuals and user guides

## OPTIONS

- ASCAN Software for automation of measurement tasks and analyses, 2D and 3D, Step & Repeat
- Motorized z-axis
- High speed sensor and controller (4 kHz and 14 kHz)
- Additional sensors including infrared interferometers
- Traceable calibration tools and certification targets
- Vacuum chucks (porous ceramics)



## SPECIFICATIONS

**DIMENSIONS**  
(L X W X H)

900 x 1040 x 1600 [mm] standing workstation  
(35 x 41 x 63 [in])

**WEIGHT**

400 kg (880 lbs)

**SYSTEM CONTROLLER**

Includes Motion Control, Sensor Controller (2 kHz), Power Supplies, USB Interface to Workstation

**WORKSTATION PC**

Inquire about current specifications, 22" widescreen monitor

**CONNECTIONS**

Ethernet, DVD Drive, USB (front and back side), Parallel Port, Keyboard, Mouse, DVI and Analog Video Output

**POWER REQUIREMENTS**

100-240V AC, 50-60 Hz, 2 amps (240 V), 5 amps (100 V)

**OPERATING TEMPERATURE**

20°-30° C (68-86 F)

**MEASUREMENT SURFACE SIZE**

400 x 400 [mm] (16 x 16 [in])

**LINEAR ENCODER RESOLUTION**

0.05 µm (2 µin)

**MINIMUM LATERAL RESOLUTION**

1 micron

**TRAVEL LIMITS IN X AND Y (MOTORIZED)**

315 x 315 [mm] (12 x 12 [in])

**TRAVEL LIMIT IN Z (MANUAL)**

50 mm (2 in)  
(adjustable level to 100 mm)

**MOTORIZED Z-AXIS**

100 mm travel, 0.1 µm resolution

**MAXIMUM LOAD ON PLATFORM**

10 kg

**AVAILABLE SENSORS**

Confocal White Light Sensors  
Confocal Laser Sensors  
Laser Triangulations Sensors  
Interferometers (white light and infrared)