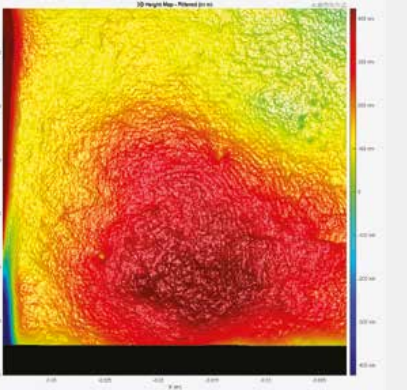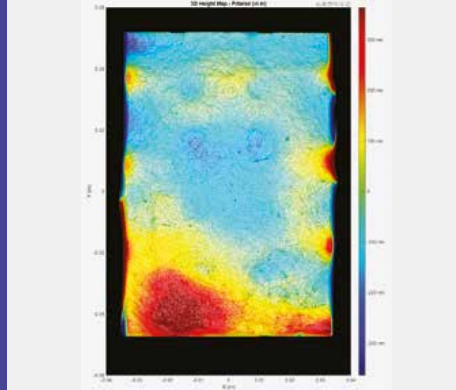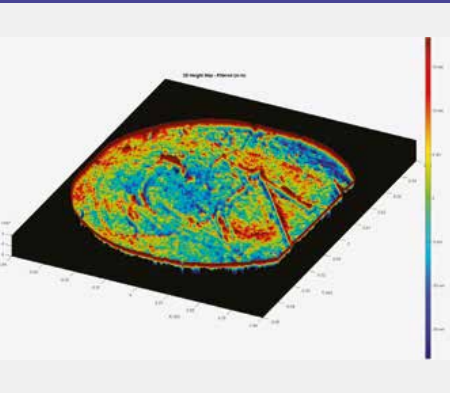## D-SURFACE TESTING SAMPLES
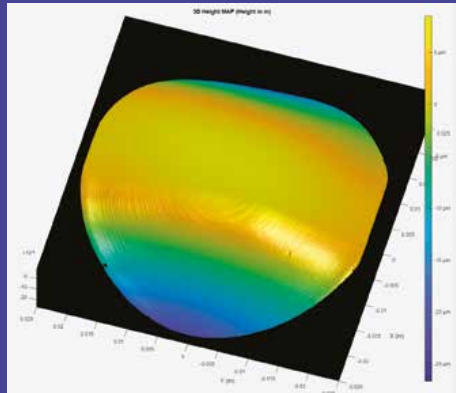

Phone fingerprint


Phone screen


Wafer roughness


Wafer shape

# SURFACE

## Deflectometry-based Surface Inspection & Flatness measurement

Local and Global inspection nm to mm

One shot measurement

Down to nanometer scale

**dip** VIEW
measurement
that goes beyond limits

CONTACT
sales@dip-view.com
Toulouse · France

**dip** VIEW
measurement
that goes beyond limits

## FEATURES

**Vertical dynamic range**
1 nm to 1mm

**Field of view**
up to 300mm

**Lateral resolution**
down to 10um

**Full diameter measurement of the sample without stitching**
1 shot measurement

**Software**
Easy-to-use software interface

## APPLICATIONS

**Texture**
2D and 3D roughness and waviness

**Form**
2D and 3D bow and shape

**Stress**
2D and 3D thin film stress

**Defect review**
2D and 3D defect surface topography

## INDUSTRIES

**Universities, research labs, and institutes**

**Semiconductor and compound semiconductor**

**Solar**

**LED Manufacturing**

**Data storage Automotive Medical devices**

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**D-Surface View** is intended to help manufacturers of wafers up to 300-mm diameter reduce costs and chipmakers to improve yields for devices made with finest process technology.

The equipment can be used for wafer surface quality control, it qualifies surface roughness, shape, flatness and topography in one single measurement of a bare or processed wafer.

Its very high resolution performances bring fast, reliable and highly sensitive solution particularly adapted to off-line or in-line, surface local / global inspections in multiple industries.


3D Height Map - Filtred (in mm)
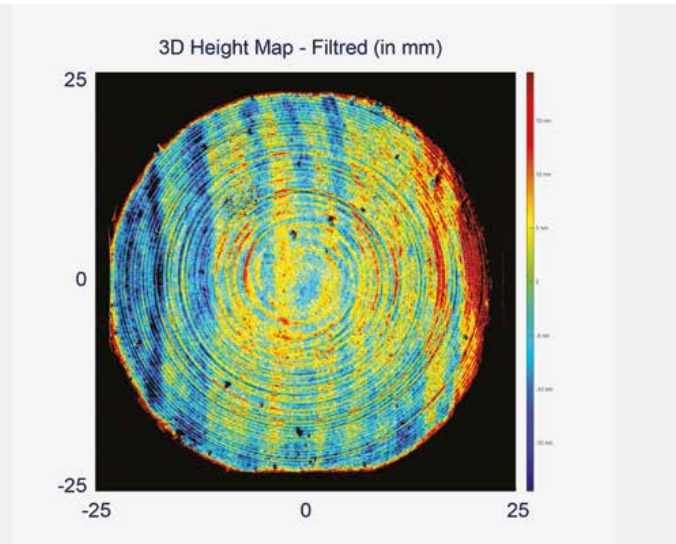
### OFFLINE ANALYSIS SOFTWARE

> **2D and 3D step heights** with cursors and histography analysis

> **2D profiles and 3D views** of the measurements

> **2D and 3D roughness** and waviness analysis

> **2D and 3D filtering** and leveling techniques

> **Thin film stress** and sample bow calculation
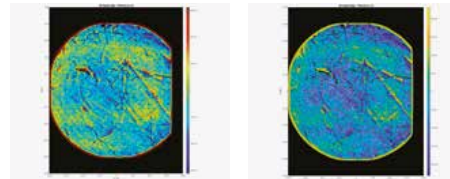
## MEASUREMENT APPLICATIONS
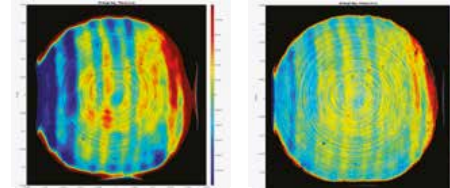


### Texture: Roughness and Waviness
Measure 2D and 3D texture while quantifying the sample's roughness and waviness. Distinguish between roughness and waviness components using software filters.
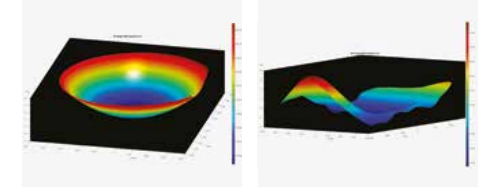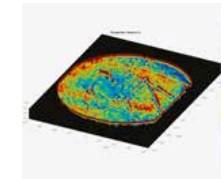


### Form: Bow and Shape
Measure the 2D shape or bow of a surface. Quantify the height and radius of curved structures, such as a lens.



### Defect Analysis
Measure the topography of defects, such as the depth of a scratch.



### Thin Film Stress
Measure 2D stress induced during the manufacture of semiconductor or compound semiconductor devices having multiple process layers.

## TECHNICAL CHARACTERISTICS

| | D-Surface View 100 | D-Surface View 200 | D-Surface View 300 |
|---|---|---|---|
| **Measuring surface** | 100 × 100 mm² (flat object) | 200 × 200 mm² (flat object) | 300 × 300 mm² (flat object) |
| **Out of plane tolerance** | +/- 1mm | +/- 2mm | +/- 3-4mm |
| **Lateral resolution** | 22 µm | 44 µm | 66 µm |
| **Vertical resolution** | <1 nm | 1-2 nm | 2 nm |
| **Measurement time** | typ. 1 sec | typ. 1 sec | typ. 1 sec |
| **Repeatability** | <0,05 nm rms | <0,05 nm rms | <0,05 nm rms |
| **Cameras** | 20 MPixels | 20 MPixels | 20 MPixels |
| **Outer dimensions W × H × D** | 400 × 300 × 300 mm³ | 450 × 600 × 400 mm³ | 500 x 900 x 500 mm³ |