

## SemDex 100 series

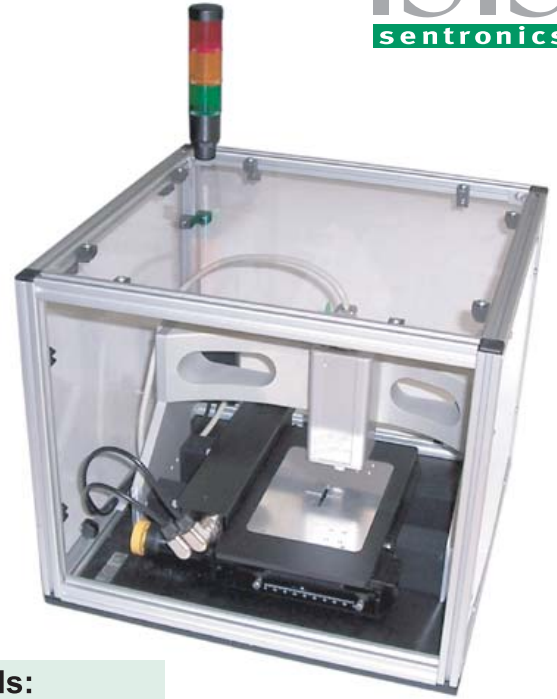
Depending on the application, various sensor heads are integrated into the table-top system. With SemDex 101 substrate layer thickness can be evaluated while SemDex 110 permits topographic features (as mini-bumps) to be inspected.

The wafer chuck can load wafer diameters of 2" and 4".

## SemDex 100

This most cost-effective fully manual system permits spot-to-spot measurements of (substrate-) layer thicknesses.

Wafers up to 8" can be evaluated.



### Applications:

- (Substrate-) layer thickness ( $t > 3 \mu\text{m}$ )
- Bow/ warp
- Flatness (SBIR, SFQR etc.)
- Topography (Mini-bumps)
- Roughness ( $R_a > 0.1 \mu\text{m}$ ) kness

### Substrat-Materials:

### Thin Layer-Materials:

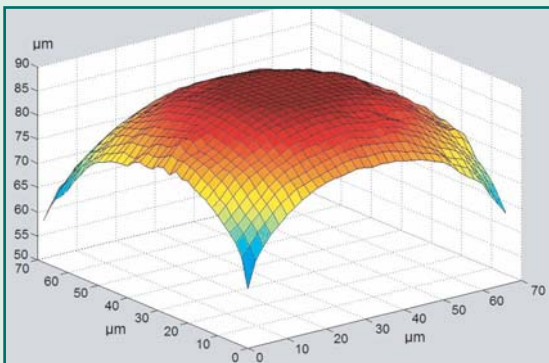
### Materials:

- Silizium
- GaAs
- CdTe
- Glass and others
- SOI
- Polyamide
- Photoresist (spin coating)

### Your benefits:

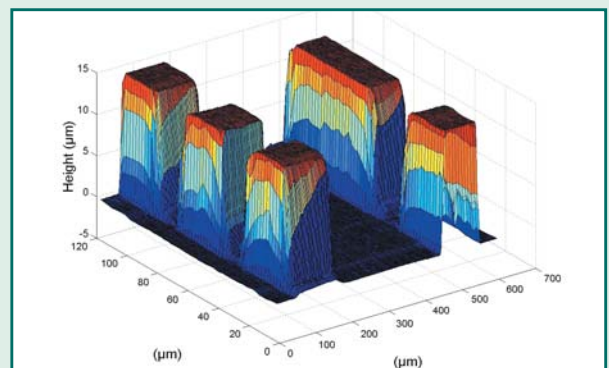
- † Contactless measurements in reflection mode
- † Very high acquisition rates of up to 16 kHz
- † Repeatabilities better than 50 nm
- † Near-edge exclusion or fine structures due to small spot size (20 or 5  $\mu\text{m}$ )
- † Substrate thickness measurements not affected by tape, bumps etc.

- † All different materials measurable: Silicon, InGaAs, InP, SiC, TFT-Glass, Ceramics, Tape, Photoresist, etc.
- † (Multiple-) layer thicknesses, bow/ warp and flatness in one scan available
- † Negligible shadowing at steep trenches (bumps)
- † Automatic beam refocussing at various working heights (multiple chuck)



**3D topography of a spherical bump**

Detail 3D topography of the surface of a 90 mm rounded bump. The false colors exhibit the reflected signal (red means plenty of signal while blue is the opposite).



**3D topography from squared mini bumps**

Detail 3D topography of the surface of squared bumps at 15  $\mu\text{m}$  height. The false colors exhibit the reflected signal (red means plenty of signal while blue is the opposite).