SILIOS TECHNOLOGIES

AFM/SPM calibration standards

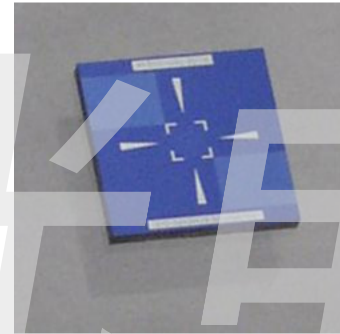
As nanotechnology has an increasing importance in industrial and academic activities, the demand for accurate measurement of sub-micron features is growing. It is so for Atomic Force Microscopes (AFM) and Scanned Probes Microscopes (SPM) metrology tools which need to be calibrated with a standard to achieve higher accuracy.

SILIOS Technologies has developed and patented standards for calibrating vertical dimensions under the twenty nanometer level for both AFMs and SPMs. It proposes different step heights ranging from 1 to 20 nm. The calibration standards can be supplied separately or gathered in a single standard.

Step height ranges

Code	Step Height Range(1)
SIL020	20 nm
SIL010	10 nm
SIL005	5 nm
SIL001	< 3 nm

(1) Nominal value may vary by +/- 2 nm



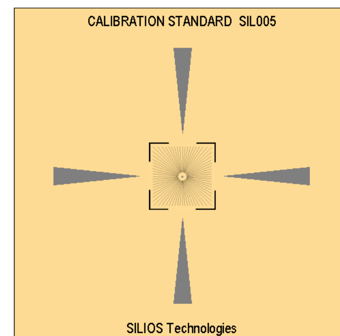
Tolerances : Typical : +/- 1 nm

Option 1 : SILIOS certified (optical and mechanical measurements)

Option 2 : Certification from an accredited laboratory (ISO5436 based)

Specifications

Chip size: 5 x 5 x 0,5 mm^3
Effective area: 1 x 1 mm^2
Material: SiO_2 or Si
Grating pitch: 5 microns
Configuration : classic or stairs



Applications

Atomic Force Microscope (AFM)
Scanned Probe Microscopes (SPM)

Fields

Scientific and Industrial Metrology

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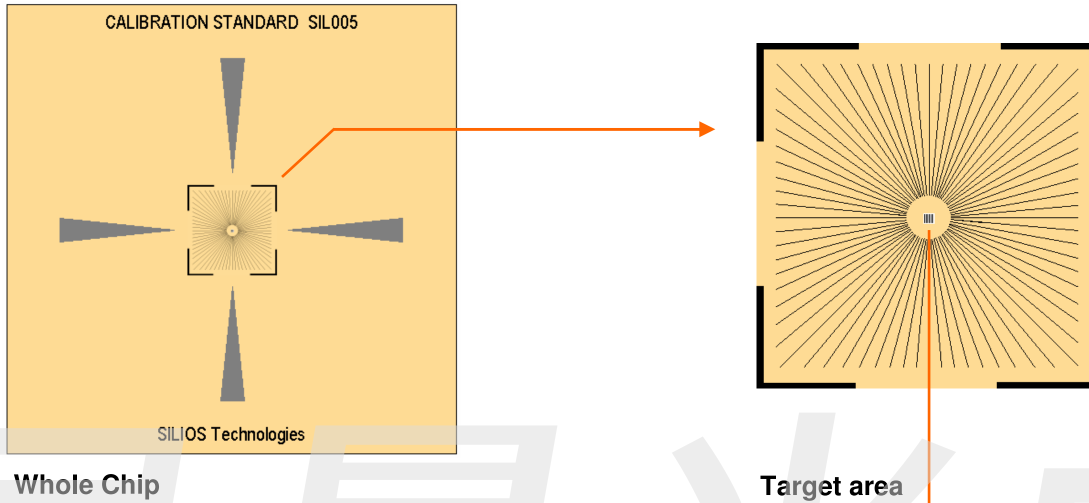
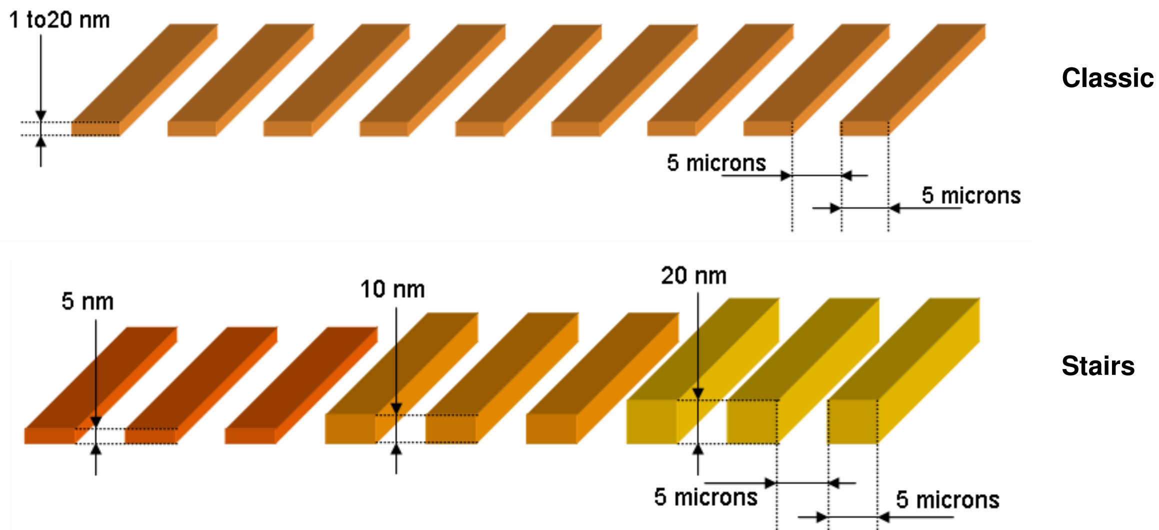


Grating configurations



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