

# White light interferometry for height artifact calibration specimen

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## ABSTRACT

**Measurement** process means determination of the magnitude of a quantity by comparison with a standard for that quantity. As dimensional tolerances for such applications as semiconductors and optical discs get tighter, the need for precision length standards at the nanometer length scales becomes more important. They require periodic **calibration** to produce accurate results. **Calibration** is the process of checking and correcting the performance of a measuring instrument or device against the accepted standard. **Calibration specimens or artifacts** with feature sizes or positions directly traceable to international length standards are key tools to producing accurate and reliable results. Instruments used in nanotechnologies are generally very sensitive in z directions.

We describe a traceable to meter method to measure the height of an artifact used as a calibrator for observation instruments in nano-technologies and sciences.