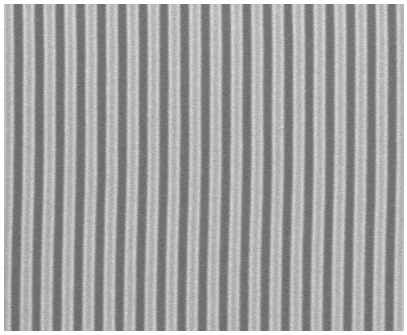
DIMENSIONAL

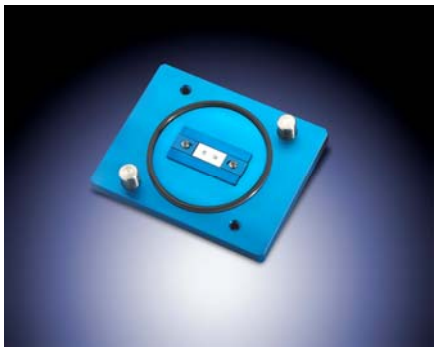
VLSI Standards

NanoLattice Pitch Standard for Analytical Instruments

SET THE SCALE FOR ELECTRON MICROSCOPY. The NanoLattice™ (NLSM) 100 nm pitch standard utilizes gratings with near perfect periodicity to calibrate magnification and scan linearity of Electron and Atomic Force Microscopes (AFM). Make the grade, with the highest quality pitch standard of its kind available.

On the left is a 2 µm FOV CD-SEM micrograph of a NanoLattice Standard. The image on the right shows stub mounted standards mounted in perpendicular XY configurations and attached to the base of an anodized aluminum package.





PRODUCT DESCRIPTION

The NanoLattice Pitch Standard for Analytical Instruments is an etched silicon grating with a nominal pitch of 100 nm. Each grating is continuous over a large certified area, permitting tens of thousands of measurements. The silicon die's dimensions are 1.2 mm x 1 mm.

For analytical instruments, VLSI Standards mounts the standard(s) into a universal mount adaptor. This mounting configuration will allow VLSI Standards to clean and recertify the Nanolattice Standard and allow users to extend the lifetime and traceability of the standard. Users can use the standard(s) mounted in this universal mount adaptor directly in the instrument or they may mount the standard onto a stub mount of their own choosing. VLSI Standards may also be able to mount the universal mount adaptor onto a customer-supplied stub mount. Contact VLSI Standards customer support to review all the details and available options.

PRODUCT SPECIFICATIONS

- **Certified Pitch Values**
  100 nm, 200 nm, 400 nm, 800 nm, 1000 nm
- **Uncertainty of 100 nm Pitch Metrology**
  < 1 nm
- **Nominal Pitch Value**
  100 nm ± 2 nm
- **Material**
  Silicon <100>
- **Pattern Defect Density**
  Less than 1 defect size > 0.2 µm per 50 image frames of size 1.5 µm x 1.5 µm
- **Certified Area**
  800 µm x 800 µm
- **Traceability**
  Traceable to SI units through NIST
- **Universal Mount Adaptors**
  Thin: 0.8 mm thickness
  Thick: 4.2 mm thickness

See next page for universal mount adaptor diagrams.

Revision NLSMMount041512
Specifications subject to change.

Five Technology Drive, Milpitas, CA 95035-7916 phone 800.228.8574 fax 408.428.9555 www.vlsistandards.com