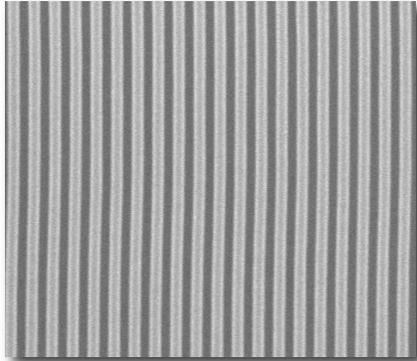


# Nanolattice Pitch Standard

**SET THE SCALE FOR ADVANCED LITHOGRAPHY.** The NanoLattice™ (NLSM) 100 nm pitch standard utilizes gratings with near perfect periodicity to calibrate magnification of CD-SEM and Atomic Force Microscopes (AFM). Make the grade, with the only pitch standard of its kind available below the 130 nm node.

On the left is a 2 $\mu$ m FOV CD-SEM micrograph of a NanoLattice Standard in the X configuration. The image on the right shows a 300 mm wafer with optional gratings, mounted in perpendicular XY configurations.



## PRODUCT DESCRIPTION

The NanoLattice standard is a 1.2 mm x 1 mm etched silicon grating with a nominal pitch of 100 nm. Each grating is continuous over a large certified area, giving thousands of sites for tens of thousands of measurements. Global alignment marks located 25 mm from the center of wafer on both sides of the chip can be used to assist pattern recognition and automation. Each standard is individually mounted on a carrier wafer, compatible with 200 mm and 300 mm wafer handlers and storage.

## PRODUCT SPECIFICATIONS

### • Certified Pitch Values

100 nm, 200 nm, 400 nm, 800 nm, 1000 nm

### • Uncertainty of 100 nm Pitch Metrology

< 1 nm

### • Nominal Value

100 nm  $\pm$  2 nm

### • Material

Silicon <100>

### • Pattern Defect Density

Less than 1 defect size > 0.2  $\mu$ m per 50 image frames of size 1.5  $\mu$ m x 1.5  $\mu$ m

### • Silicon Die Dimensions

1.2 mm x 1 mm

### • Certified Area

800  $\mu$ m x 800  $\mu$ m

### • Traceability

Traceable to SI units through NIST

Specifications subject to change.