On the left is an isometric view of a NanoCD 70 nm line, which extends to 3 mm total certified length. At right, the NanoCD is shown mounted into a 6" x 6" x ¼" aluminum carrier, compatible with all reticle loaders and storage.

PRODUCT DESCRIPTION

The NanoCD consists of a small chip containing a single isolated line 4 mm long, offering thousands of distinct measurement sites. Chips are fabricated at VLSI Standards using a patented technique that results in high uniformity and low associated uncertainty lines, unachievable through conventional lithography methods. For compatibility with reticle loaders, the chip is mounted to an aluminum replica of a quartz photomask. Global alignment marks, rulers and pattern recognition features extending from the chip to the reticle ensure that the target is always located, and measurements can be repeated.

The width of the line, or the Critical Dimension (CD), is certified with TEM and is traceable to NIST and to the international system of units (SI) through the atomic lattice spacing of single crystal silicon.

PRODUCT SPECIFICATIONS

- Nominal Available CD Values
  25 nm, 70 nm, or 110 nm.

Accuracy
25 nm ± 0.5 nm, 70 nm ± 0.7 nm, 110 ± 0.8 nm

Material of CD Line
Amorphous Silicon

Length of Line
3 mm certified

Defectivity of Line
5% Max. (150 µm of total 3,000 µm)

Traceability
Traceable to the SI units through the atomic lattice spacing in the silicon crystal by TEM

Substrate
152 mm x 152 mm x 0.25 mm Aluminum.

Specifications subject to change.