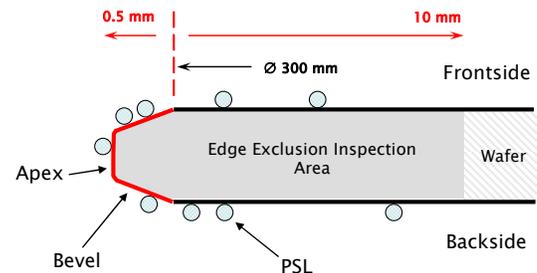
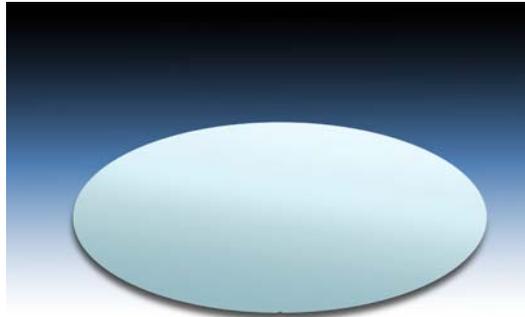


Edge Contamination Standards

TAKE YOUR METROLOGY TO THE BRINK. The Edge Contamination Standard (ECS) is a bare silicon wafer that has microscopic latex spheres which have been spot deposited on the wafer's edge. The ECS is designed for particle size calibration of instruments that detect and size particles on the substrate's edge.

On the left is the Edge Contamination Standard which appears to the naked eye as a bare silicon wafer. Microscopic polystyrene latex spheres are deposited at four distinct spot locations along its edge at an arc length of approximately 25 mm, and 10 mm deep. On the right is a wafer cross section schematic of the ECS.



PRODUCT DESCRIPTION

VLSI Standards' solution for edge contamination metrology utilizes precise spot deposition of polystyrene latex spheres (PSL) onto four distinct regions on the substrate's edge. Each deposition area covers the top and bottom near edges, the top and bottom wafer bevels, and the apex or true edge of the wafer. This allows the user to perform both topside and backside inspections to check the complete sensitivity of the tool.

The PSL spheres deposited on the Edge Contamination Standard are highly spherical, have well-characterized optical properties and a very tight monodisperse size distribution. These parameters make PSL spheres a useful material for the calibration and monitoring of particle counting instruments. These standards come with nominal 0.5 μm , 1.0 μm , 2.0 μm and 5.0 μm PSL sizes. Approximately a few thousand

particles are located in each deposited region.

Although VLSI provides you with the particle count value on the calibration certificate, the ECS is designed to calibrate particle size and tool sensitivity, and not necessarily particle count.

PRODUCT SPECIFICATIONS

- **SEMI Specification Silicon Wafers**
200 mm and 300 mm diameter silicon wafers
- **Deposition Locations**
From notch (0°): 35°, 145°, 205° and 325°
- **Polystyrene Latex Spheres**
Nominal 0.5 μm , 1.0 μm , 2.0 μm and 5.0 μm diameter (all on one wafer)
- **Traceability**
PSL diameter traceable to SI Units through NIST