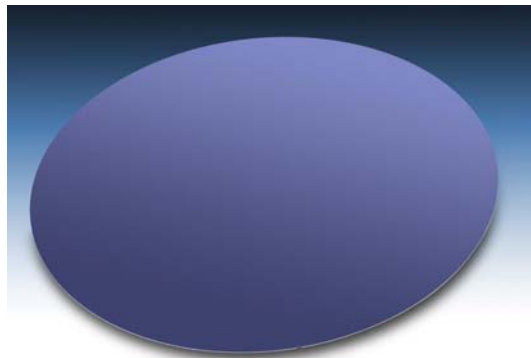


# Silicon Nitride Film Thickness Standards

**NOURISH YOUR THIN FILM MEASUREMENT.** Use the Silicon Nitride Film Thickness Standard (NFTS) to verify the accuracy of single wavelength or spectroscopic ellipsometers (SWE or SE) and reflectometers. Monitor long term tool stability in support of ISO and TS accreditation programs, and eliminate the unwanted effects of airborne molecular contamination (AMC) on your metrology.

Pictured is a 200 mm Silicon Nitride Film Thickness Standard. The certified area at its center is an ample 10 mm in diameter.



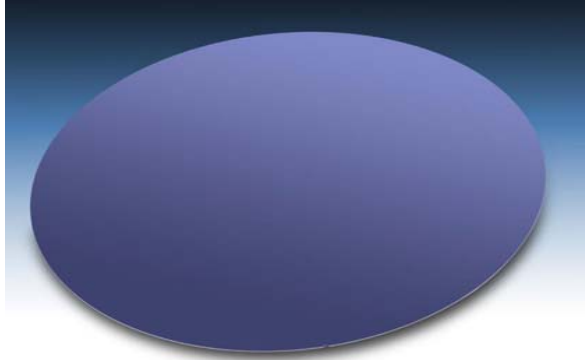
## PRODUCT DESCRIPTION

The Nitride Film Thickness Standard from VLSI Standards consists of a silicon wafer which has a uniform, PECVD deposited silicon nitride film on the polished surface. The silicon wafer meets all SEMI Standard specifications according to M1 – 9X for Polished Monocrystalline Silicon Wafers. The certified area of the standard is located within a 10 mm diameter from the center of the wafer. Available wafer sizes include, 100 mm, 125 mm, 150 mm and 200 mm.

The certified and NIST traceable value is the thickness of the silicon nitride film. This value is determined with spectroscopic ellipsometry (SE) over the wavelength range of 400 nm through 700 nm using a single layer film model with the refractive index and extinction coefficient of the silicon substrate chosen to match the values stated by NIST. The spectroscopic ellipsometry instrument used for such certifications is calibrated using NIST Standard Reference Materials 2532 and 2533.

## PRODUCT SPECIFICATIONS

- **SEMI Specification Silicon Wafers**  
100, 125, 150, and 200 mm diameter wafers
- **Available Silicon Nitride Thicknesses**  
20, 90, 120 and 200 nm
- **Traceability**  
NIST



## NFTS

## Nitride Film Thickness Standard

Application: Film Thickness Calibration  
 Equipment: Single Wavelength Ellipsometer (SWE), Spectroscopic Ellipsometer (SE), Reflectometer  
 Film: Silicon Nitride  
 Traceability: NIST  
 Product Range: 200 Å to 2,000 Å

Film Thickness (Å)	Wafer Diameter			
	100 mm	125 mm	150 mm	200 mm
200	NFTS4-200	NFTS5-200	NFTS6-200	NFTS8-200
900	NFTS4-900	NFTS5-900	NFTS6-900	NFTS8-900
1,200	NFTS4-1200	NFTS5-1200	NFTS6-1200	NFTS8-1200
2,000	NFTS4-2000	NFTS5-2000	NFTS6-2000	NFTS8-2000