

Product Identification

Film Name: PECVD Standard Nitride
 Process ID: D01PSN
 Scientific: Silicon Nitride - SiN
 Classification: Standard

Features

Low Cost
 Variable Processing Parameters
 Large Batch Capacity
 Low Temperature - Widely Variable
 Custom Fixturing Available

Standards & Guarantees

Inspection: Standard I/O - First & Last
 Guaranteed: Thickness (On Si Monitors)
 Guaranteed: Refractive Index (On Si Monitors)

Items may vary when ordering outside the standard

Other Information

- Thicknesses of 2um or greater: For most applications, PECVD Silicon Nitride deposited using low frequency RF plasma (450kHz) is subject to stress induced cracking and delamination at or beyond 2um film thickness. To reduce the stress, and therefore go to thicker films, Strataglass offers PECVD Zero Stress Silicon Nitride, which is deposited using dual RF frequencies (450kHz and 13.5mHz). If you need film thicknesses beyond 2um, please see our product type: "PECVD Zero Stress Silicon Nitride".

Applications

Passivation
 Thick Structures
 Insulation Layer
 Inter-layer Dielectric
 Encapsulation
 Patterning
 Masking
 Adhesion Layer
 Barrier Layer
 Wear Coating

Film Specifications

Film Thickness	Standard	1000A to 10,000A ± 10%
	Adjustable Range	500A to 20,000A ± 10%
Refractive Index	Standard	2.05 ± .05
	Adjustable Range	Fixed
Film Uniformity	Edge to Edge	10%
	Across Load	10%
Deposition Temp	Standard	380C
	Adjustable Range	100C to 600C
Film Stress	Standard	- 700MPa ± 100MPa
	Adjustable Range	Fixed

Film Properties

Electrical	Insulating Quality	Good
	Dielectric Constant	N/A
Mechanical	Hydrogen Inclusion	Moderate
	Scratch Protect	Very Good
	Masking Ability	Good
	Diffusion Barrier	Very Good
	Thermal Stability	Good
Etch Rate	BOE (50%)	Very Slow
	KOH	N/A
	Plasma	Moderate
Hydrology	Hydrophobic	Weak