

PECVD1-SiN standard recipe-1000A			PECVD1 SiN 1000A Typical Film Properties
1. Chamber Clean (wet clean) WET CLEAN Wipe clean upper chamber walls with DI Wipe off upper chamber walls with IPA	2. Chamber (clean+coat) 30CLN_SN step1: Initial t=10", p=2x10-2 T=250C step2: N2 purge t=30" p=300mT step3: evacuate, base pressure=2x10-2, t=10" step4:loop step5:gass stabilization, t=30" step6:etch chamber, t=30' step7:evacuate, t=10" step8:N2 purge step9:evacuate step10:loop step11:SiN gass stabilization step12:SiN deposition(200A coat) step13:evacuate step14:N2purge, t=30" step15:end	3.SiN Deposition SiN_10 step1: Initial t=10" step2: N2 purge t=30" step3: evacuate, t=10" step4:loop step5: SiN gass stabilization, t=30" step6: SiN deposition Time=9'28.1" Temperature=250°C Pressure=900mT Gass Flow: SiH4=150sccm N2=450sccm NH3=1.54sccm Power: RF1=22W step7:evacuate, t=10" step8:N2 purge t=30" step9:evacuate t=10" step10:loop	Calibrated every 2-4 weeks Check for the latest update on UCSB Nanofab WIKI SiN-1000A Typical Film properties Deposition rate~11nm/min Refractive index@632.8nm=1.94 Stress~509MPa HF etch rate=85nm/min Particle count (min=70, max=469) Mostly small particles size (0.160-0.213)um Uniformity within the wafer (98.1-99.9)%

Automatic - Process : _SIN10 Step: 6

Description	SiN Dep 1000 A		
Process Pump	LOVAC		
Deposition ID	SIN250		
Deposition [Å]	1000		
TEMPERATURE			
	Setpt	Actual	
Channel 2	250	248	
Pressure[mTorr]			
	Setpt	Actual	
	900	903	
GAS CHANNELS			
	Setpt	Actual	
SiH4	150	149	
N2	450	450	
NH3	1.54	1.56	
RF GENERATORS			
	RF1		
RF Control	POWER		
RF Config	PE		
	Setpt	Actual	
Power	22	21	
Ref		0.0	
DC		11	
Time			
	Setpt	Elapsed	Left
	09:28.1	08:16.0	01:12.1