

PECVD-SiO2 standard recipe-1000A			PECVD1 SiO2 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_SO 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:gas stabilization, t=30" step6:etch chamber, t=30" step7:evacuate, t=10" step8:N2 purge step9:evacuate step10:loop step11:SiO2 gas stabilization step12:SiO2 deposition(200A coat) step13:evacuate step14:N2purge, t=30" step15:end	3.SiO2 Deposition SiO_10 step1: Initial t=10" step2: N2 purge t=30" step3: evacuate, t=10" step4:loop step5: SiO2 gas stabilization, t=30" step6:SiO2 deposition Time=2'56.6" Temperature=250°C Pressure=900mT Gas Flow: SiH4=100sccm N2O= 300sccm 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 SiO2-1000A Typical Film properties Deposition rate~35nm/min Refractive index@632.8nm=1.461 Stress=(-410MPa) HF etch rate=630nm/min Particle count (min=47, max=307) Mostly small particles size (0.160-0.213)um Uniformity within the wafer (87.7-97.6)%

