

PECVD-SiO2 standard recipe-1000A			PECVD1 SiO2 1000A Typical Film Properties
<b>1. Chamber Clean ( wet clean)</b> <b>WET CLEAN</b> Wipe clean upper chamber walls with DI Wipe off upper chamber walls with IPA	<b>2. Chamber (clean+coat)</b> <b>30CLN_SO</b> 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 gass stabilization step12:SiO2 deposition( 200A coat) step13:evacuate step14:N2purge, t=30" step15:end	<b>3.SiO2 Deposition</b> <b>SiO_10</b> step1: Initial t=10" step2: N2 purge t=30" step3: evacuate, t=10" step4:loop step5: SiO2 gass stabilization, t=30" <b>step6:SiO2 deposition</b> Time=2'56.6" Temperature=250°C Pressure=900mT <b>Gas Flow:</b> SiH4=100sccm N2O= 300sccm <b>Power:</b> 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  <b>SiO2-1000A Typical Film properties</b> Deposition rate~35nm/min Refractive index@632.8nm=1.46 Stress=(-410MPa) HF etch rate=630nm/min Particle count ( min=47, max=828) Mostly small particles size (0.160-0.213)um Uniformity within the wafer (87.7-97.6)%

