

| PECVD-SiO2 standard recipe-1000A  |   |  | PECVD1 SiO2 1000A Typical Film Properties   |
|---|---|--|---|
| <b>1. Chamber Clean ( wet clean)</b><br><b>WET CLEAN</b><br>Wipe clean upper chamber walls with DI<br>Wipe off upper chamber walls with IPA | <b>2. Chamber (clean+coat)</b><br><b>30CLN_SO</b><br>step1: Initial t=10", p=2x10-2 T=250C<br>step2: N2 purge t=30" p=300mT<br>step3: evacuate, base pressure=2x10-2, t=10"<br>step4:loop<br>step5:gass stabilization, t=30"<br>step6:etch chamber, t=30"<br>step7:evacuate, t=10"<br>step8:N2 purge<br>step9:evacuate<br>step10:loop<br>step11:SiO2 gass stabilization<br>step12:SiO2 deposition( 200A coat)<br>step13:evacuate<br>step14:N2purge, t=30"<br>step15:end | <b>3.SiO2 Deposition</b><br><b>SiO_10</b><br>step1: Initial t=10"<br>step2: N2 purge t=30"<br>step3: evacuate, t=10"<br>step4:loop<br>step5: SiO2 gass stabilization, t=30"<br><b>step6:SiO2 deposition</b><br>Time=2'56.6"<br>Temperature=250°C<br>Pressure=900mT<br><b>Gas Flow:</b><br>SiH4=100sccm<br>N2O= 300sccm<br><b>Power:</b><br>RF1=22W<br>step7:evacuate, t=10"<br>step8:N2 purge t=30"<br>step9:evacuate t=10"<br>step10:loop | Deposition rate=11.21nm/min<br>Refractive index@632.8nm=1.938<br>Stress=508.86MPa<br>HF etch rate=85.52nm/min |







