

| Advanced PECVD-Nitride2(HF n=2.00, 9.3nm/min) | | | | Advanced PECVD Si~2700A Typical Film Properties |
|--|---------------------|--------------|-------------------|---|
| SiN deposition~2700A, 300C | | | | Deposition rate=9.03nm/min |
| Step1: NITRIDE2 coat | | | | Refractive index@632.8nm=1.952 |
| | Name | Value | Changeable | Stress=-484.21MPa |
| | Process pressure | 800 mtorr | N | HF etch rate=47.80nm/min |
| | RF setpoint | 30 W | N | |
| | stabilization time | 15 seconds | N | |
| | step time(m) | 10 | Y | |
| | step time(s) | 0 | Y | |
| | 2%SiH4 %He | 1040 | N | |
| | N2 | 980 | N | |
| | NH3 | 17 | N | |
| Step2: NITRIDE2 deposition | | | | |
| | Name | Value | Changeable | |
| | Process pressure | 800 mtorr | N | |
| | RF setpoint | 30 W | N | |
| | stabilization time | 15 seconds | N | |
| | step time(m) | 30 | Y | |
| | step time(s) | 0 | Y | |
| | 2%SiH4 %He | 1040 | N | |
| | N2 | 980 | N | |
| | NH3 | 17 | N | |
| Step3: STANDARD PLASMA CLEAN | | | | |
| 1. pump down | | | | |
| | Name | Value | Changeable | |
| | stabilization time | 15 seconds | N | |
| | step time(m) | 0 | N | |
| | step time(s) | 30 | N | |
| 2. Pre-purge | | | | |
| | Name | Value | Changeable | |
| | purge | 1 (Yes/No) | N | |
| | stabilization time | 15 seconds | N | |
| | step time(m) | 1 | N | |
| | step time(sec) | 0 | N | |
| 3.1 High Pressure | | | | |
| | Name | Value | Changeable | |
| | Cload position | 50% | N | |
| | Ctune position | 50% | N | |
| | DriveMatch | 1 (Yes/No) | N | |
| | Process pressure | 600 mtorr | N | |
| | RF setpoint=300 | 300 W | N | |
| | Stabilization time | 35 seconds | N | |
| | step time(m) | ENTER TIME | Y | For 7min(coat+deposition) run 1min CLEAN |
| | step time(s) | 0 | Y | |
| | CF4/O2(5) | 500 sccm | N | |