

Date	User	Material	Recipe	Substrate temperature	Measured Thickness	Dep.time	Dep.time	JAW EC-400 (Woolam Spectroscopic Ellipsometer)	Dep.rate	Stress	HF etch rate wafer	HF etch rate pieces	LPD ( light point defects)	AVG dep.rate	AVG+10%	AVG-10%	AVG index@632.8	AVG+2%	AVG-2%	Additional Notes	Brian Ling, PM	
1/1/2012	User	SIN	SIN_10	250 °C	(Å)	min/sec	sec	Index @ 632.8nm	Index@1550nm	(nm/min)	Tensile(+458MPa)	(nm/min)	(nm/min)	before dep.	after dep.							
<b>Comment:</b> Run SIN deposition1000A every two weeks, on Fridays! Measure thickness, index, dep.rate( center of the wafer) and HF etch rate( wafer, three points) Run SIN deposition1000A every 4 weeks, on Fridays! Measure LPD, stress, thickness uniformity																						
01/06/14	Biljana	SIN	SIN_10	250	1055.25	9'28.1"	568.1	1.949	1.899	11.15	571.87		78	547	11.26	12.39	10.14	1.959	1.998	1.920	4" Si wafer	12/9/2013 Pattern-Steven W.
01/23/14	Biljana	SIN	SIN_10	250	1133.40	9'28.1"	568.1	1.935	1.890	11.97	446.88	90.66	137	377	11.26	12.39	10.14	1.959	1.998	1.920	4" Si wafer	1/23/14
02/03/14	Biljana	SIN	SIN_10	250	1046.60	9'28.1"	568.1	1.937	1.893	11.05	486.75	81.21	322	604	11.26	12.39	10.14	1.959	1.998	1.920	4" Si wafer	
02/19/14	Biljana	SIN	SIN_10	250	1030.66	9'28.1"	568.1	1.935	1.890	10.89	353.92	77.32	75	323	11.26	12.39	10.14	1.959	1.998	1.920	4" Si wafer, some grouped particles	2/14/14 Silane change

Avg index@632.8	1.939	Avg Dep.Rate	11.26
Avg+2%	1.978	Avg +10%	12.39
Avg-2%	1.901	Avg -10%	10.14

- \* Ning, 2000A, stress=260MPa
- \* Ning, 2000A, HF e.r.=36nm/min
- \* Bilja, 1000A, stress=+350MPa
- \*\* Bilja, 3000A, HF e.r.=52nm/min
- SIN uniform HF etch!

