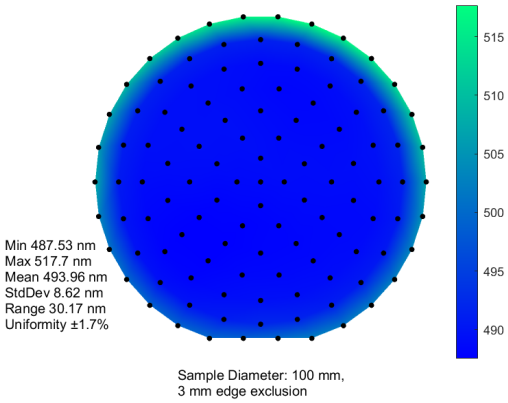
PT PECVD SiO2 Standard Recipe Information

Process information for silicon dioxide deposited on the Plasma-Therm Versaline PECVD system.

Recipe parameters

Recipe name	SiO2 Dep OEI SiO2 Dep
RF power (W)	90
Chamber pressure (mTorr)	1400
SiH_4 flow (sccm)	18
N_2 flow (sccm)	1400
N_2O flow (sccm)	1080
He flow (sccm)	342
Lower electrode temperature (°C)	325
Upper electrode temperature (°C)	200

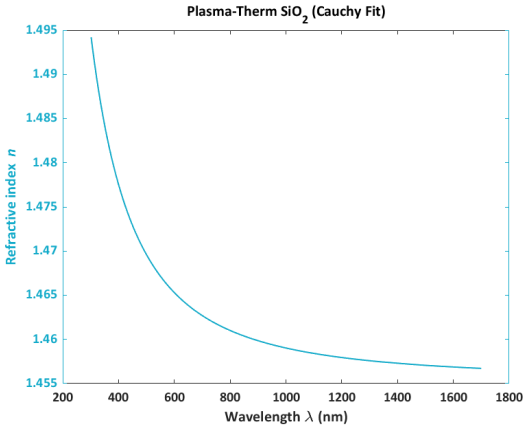
Uniformity



Film properties

Deposition rate (nm/min)	113.9
Uniformity, SUP (± %)	1.7
Refractive index (= 633 nm)	1.464
Stress (MPa)	-330 (compressive)

Optical constants



- VASE .mat data: sio2_cauchy_pt_pecvd_20220511.mat

Etch rates

Etch process	Etch rate (nm/min)
BOE (10:1)	• 144 with agitation • 124 without agitation
HF 49%	• Etches very fast. No material left even after 10 s on a ~500 nm layer