

## ALD-Cap Physical Properties Table

Property	ALD-Cap	Parylene C	Urethane
Hardness (GPa)	8-10	0.13	<<0.13
Young's Modulus (GPa)	130-180	2.8-3.2	1.5
Elongation to Failure (%)	100-300	200	250
Density g/cm <sup>3</sup>	3-5	1.29	0.9-1.2
Index of Refraction	1.55-1.75	1.639	1.5-1.6
Dielectric Constant (DC)	6-9	3.15	3.5
Dielectric strength (MV/cm)	>8	2.2-2.8	1.4
Oxygen permeability, atm (cm <sup>3</sup> •mm/m <sup>2</sup> •day)	< 1x10 <sup>-7</sup>	2.83	80
Water Vapor permeability, 38°C (g•mm/m <sup>2</sup> •day)	< 4x10 <sup>-10</sup>	0.083	0.7
Maximum Temperature (°C)	>1500	290	130
Linear Coefficient of Expansion (10 <sup>-6</sup> /°C)	6	35	100-200
Heat dissipation (W/cm <sup>2</sup> C) <sup>1</sup>	2550	0.33	<0.16
Typical thickness (μm)	0.2	25	25-75

<sup>1</sup>At typical thickness