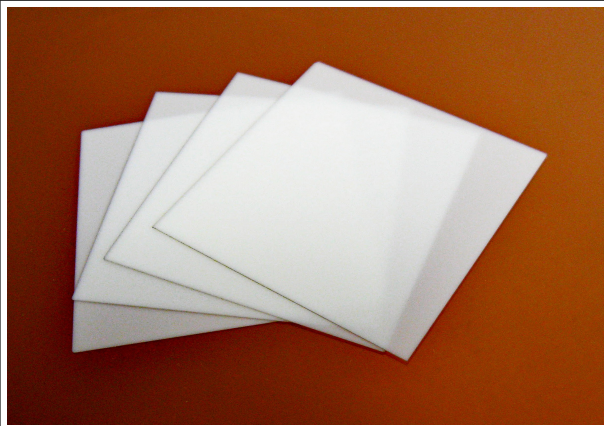
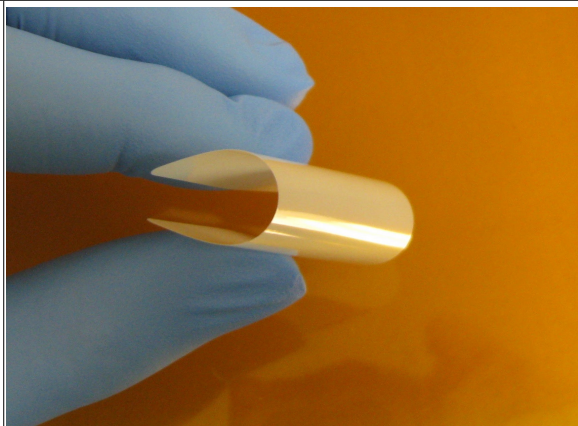




C12 Advanced Technologies



Highly planar, 3 mol% Yttria Stabilized (3YSZ) Zirconia Substrates can be laser cut to size.



Super flexible (40µm thick) 3YSZ Zirconia Substrates have high bending strength.

C12 Flexible 3YSZ Zirconia Substrates are ideally suited for electronics and applications that require strong, thin ceramic membranes. This material is characterized by its excellent flexibility, very high bending strength, and high fracture toughness. Flexible 3YSZ Zirconia Substrates are a perfect choice for thin and thickfilm processes or curved fittings. Flexible 3YSZ Zirconia Substrates can be manufactured as thin as 20-40 micrometers and up to 300 micrometers thick.

3 mol% Yttria Stabilized Zirconia (3YSZ)		
Property	Value	Unit
Composition	95% ZrO ₂ + 5% Y ₂ O ₃	%
Density	6.03	g/cm ³
Surface roughness Ra	~ 50*	nm
Bending strength	600	MPa
Thermal expansion coefficient	~ 12	10 ⁻⁶ /K
Thermal conductivity	2	W/mK
Dielectrical strength	60	kV/mm
Notes: *3YSZ plates are available with Ra = 20 – 25nm in standard thickness of 20 or 40 microns.		

Advantages

- Excellent mechanical strength.
- Very fine-grained homogeneous grain structure of 1 µm.
- High electric insulation properties at room temperature.
- Can be cut by laser or wafer saw.
- Low surface roughness.
- Standard thickness of 40, 90, 150, and 300 micrometers.