

SuperSapphire™ Optical Ceramic

TECHNICAL DATA

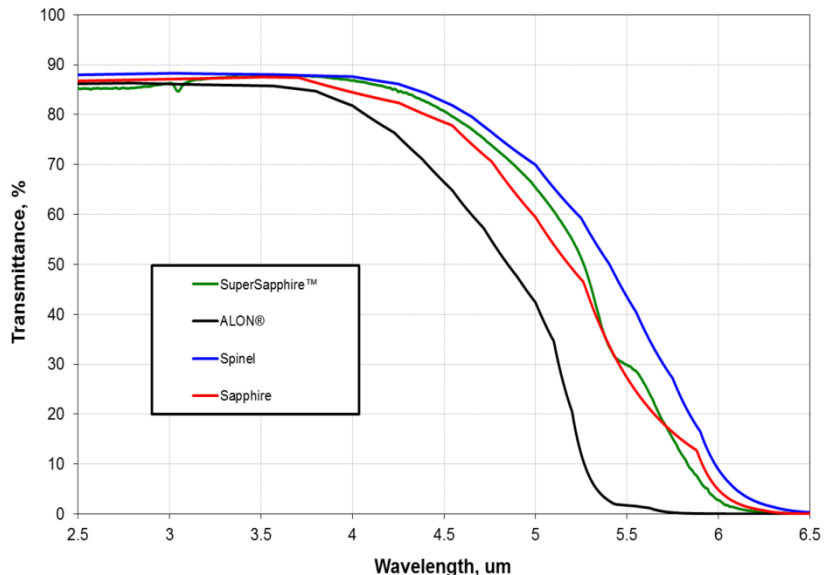
- SuperSapphire™ is a polycrystalline transparent ceramic material with sapphire-like spectral transmission
- Unlike sapphire, which is grown as single crystal boules and then cut into shapes, SuperSapphire™ is made from powder.
- Polycrystalline means that it can be made into any shape and size (such as domes, lenses, curved windows and complex geometries) using conventional ceramic processing
- Applications: Infrared Optics (domes, lenses, sensor and reconnaissance windows), transparent armor, protective windows, etc.



TYPICAL PROPERTIES

Composition	Proprietary
Form	Polycrystalline
Density	3.60 – 3.62 g/cc
Melting Point	>2000°C
Avg. Grain Size	100 – 300 microns
Crystal Structure	Cubic, Spinel
Hardness	1600 +/-100 kg/mm ² (Knoop Indent, 200g load)
Flexure Strength	200 - 350MPa (depends on processing Parameters and surface finish)
Transmission range	0.25 to 6.5 microns
Refractive index	1.72– 1.75 @ 633nm 1.71– 1.73 @ 1064nm

IR transmittance @5mm thickness



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