

## GLOBAL OPTICS (UK) LTD

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### SAPPHIRE - $\text{Al}_2\text{O}_3$

The properties of Sapphire makes this material ideal for use in hostile environments with its unique combination of excellent physical, chemical, and optical properties retaining its high strength at elevated temperatures. Resists attack from acids and alkali up to 1000°C as well as HF below 300°C. Available as windows, lenses, prisms, blanks and tubing, all custom manufactured.

Transmission Range	0.17 - 6.5 $\mu$
Crystal Structure	-
Cleavage Plane	None
Colour	Colourless
Density	3.98
Melting Point (°)	2030
Reflection Loss	12.0% (4 $\mu$ ) for 2 surfaces
Solubility index	Insoluble
Hardness (Knoop)	1370
Thermal Conductivity (cal/cm sec°C)	6.0x10 <sup>-2</sup> (Parellel to C axis) 5.5x10 <sup>-2</sup> (Vertical to C axis)
Thermal Expansion coefficient (/°C)	6.7x10 <sup>-6</sup> (Parellel to C axis) 5.0x10 <sup>-6</sup> (Vertical to C axis)

Whilst every effort has been made to verify the data provided, no responsibility can be accepted for its accuracy