

# Sapphire glass

Performance parameters of sapphire glass

Material Properties	Unit	Sapphire
Density	g/cm <sup>3</sup>	3.98
Vickers hardness	HV	2000
Bending strength	MPa	400
Compressive strength	MPa	2000
Elastic modulus	GPa	370
Toughness	MPa·m <sup>1/2</sup>	3.5
Poisson's ratio	—	0.23
Young's Modulus	GPa	370

Thermal Properties	Unit	Sapphire
Thermal conductivity	W/mK	46
melting point	°C	2050
Maximum operating temperature	°C	2000
linear expansion coefficient	10 <sup>-6</sup> /K	8



Electrical Properties	Unit	Sapphire
Dielectric constant	1 MHz	9.3
Breakdown voltage	V/cm	30
Dielectric loss	1 MHz	≤10 <sup>-4</sup>
Resistivity	Ω·cm	≥10 <sup>16</sup>

Note: This value is for reference only and may vary slightly depending on the batch conditions.

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