

Sapphire Lenses

Sapphire crystal (Al₂O₃) has high transmission from 150nm up to around 5µm which means it can be used for UV, Visible and IR applications. Sapphire lenses have excellent mechanical strength and hardness. With sapphire having superb thermal and chemical resistance and being scratch resistant, sapphire is a perfect choice for lens applications.

We supply a range of sapphire lens solutions and offer plano convex, biconvex and concave sapphire lens solutions. Our sapphire lenses can also be antireflective coated to increase efficiency in UV and IR applications.



Custom capabilities

Diameter Range	5mm-150mm
Material	Sapphire crystal (Al ₂ O ₃)
Diameter Tolerance	±0.1mm
Centre Thickness Tolerance	±0.2mm
Focal Length Tolerance	±2%
Centration	< 3 arc minutes
Surface Quality	< 60-40 scratch-dig (40-20 achievable) Random, C-Cut, Z-Cut,
Sapphire Grades available	Fluorescence free

Coatings available

Broadband Multilayer AR, Ravg.<0.5% @450-900nm (AV2)
Broadband Multilayer AR, Ravg.<0.4% @1050-1700nm (AI2)

We offer a range of stock sapphire lenses for a range of applications. However we also offer custom solutions to your specification or drawing requirements. Every component is individually tested by our highly skilled technicians in our state of the art metrology lab to ensure all components fully meet your requirements.

Contact our technical sales team to discover how Knight Optical sapphire lens solutions and supply chain can improve your instrumentation systems.