

Sapphire Optical Components Material & Optical Performance Test Report

Felix Glass

Brand Intro & Document ID

Felix Glass specializes in custom precision optical components for machine vision, laser systems, medical optics, spectroscopy and industrial imaging. OEM & ODM manufacturing services are available worldwide. Document No. : FG-CUSL-001 | Rev.1.0 | Issue Date:2026

Test Equipment

Interferometer, UV-Vis-NIR full spectrum spectrometer, hardness tester, thermal shock environmental chamber, scratch resistance tester, corrosion soaking test tank

Full Test Parameters

- Dimensional tolerance of windows, lenses, domes and rods
- Sapphire surface flatness, roughness and surface quality grade
- Spectral transmittance across UV to mid-infrared waveband
- Hardness, scratch resistance and acid/alkali corrosion resistance
- Thermal shock stability under rapid high-low temperature switching
- AR coating adhesion, wear resistance and temperature durability

Batch Test Summary

- Sapphire Windows: Stable transmittance under hundreds of Celsius high temperature, perfect for furnace observation
- Sapphire Domes: Uniform hemispherical surface, low infrared distortion for aerospace tracking
- Sapphire Rods: Low light loss, stable laser transmission as laser crystal medium
- Custom Sapphire Lenses: Wear-resistant surface, long service life for medical disposable endoscopic optics
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Test Conclusion

All sapphire optical components pass full material and optical performance testing; complete batch test data reports can be supplied for customer aerospace project audit and third-party certification review.

The information contained in this document is provided for reference only. Final specifications are subject to mutually approved engineering drawings, production capability review, and customer project requirements.

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