

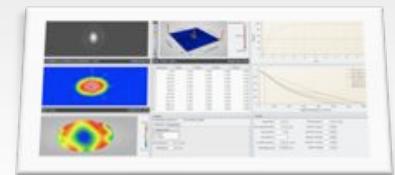
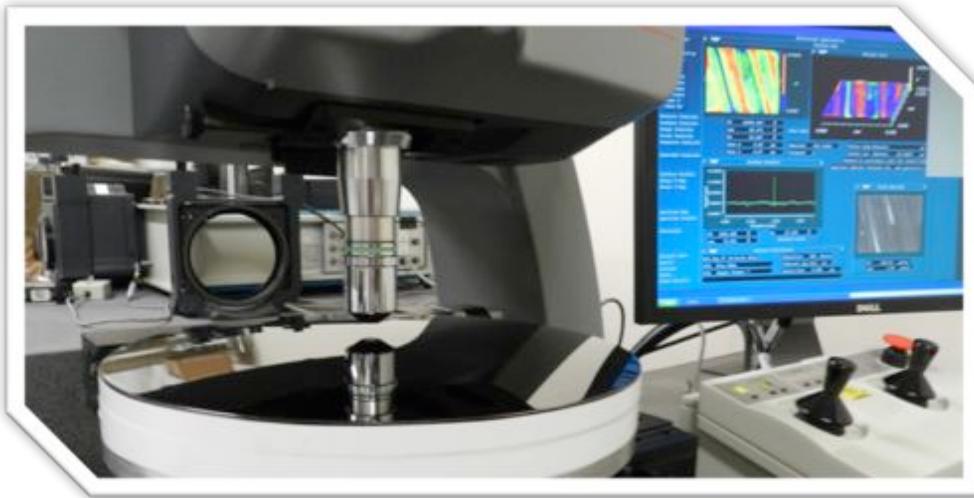
Aperture Optical Sciences Inc. provides some of the most unique custom precision optics and systems made in the world today. We develop and employ advanced technology for making aspheric mirrors and lenses, SiC optics, optics for high energy lasers and engage in developmental processes of advanced materials. AOS optics are deployed in aircraft vision systems, industrial scanners, research facilities using advanced lasers, and remote sensing applications.



Silicon Carbide (SiC) is an advanced composite ceramic material developed for applications in Aerospace, Semiconductor Lithography, and Astronomy. This unique material has the highest combination of thermal and mechanical stability of any material which can be optically polished making it perfect for high performance lightweight mirrors mounted on aircraft and spacecraft for imaging, laser targeting and communications applications. Silicon carbide is also used in commercial applications such as lightweight scan mirrors, semiconductor wafer handling, and reflective imaging systems. AOS has pioneered an industry-leading process for manufacturing SiC optics for industry, defense, and research applications.

AOS MANUFACTURING CAPABILITIES

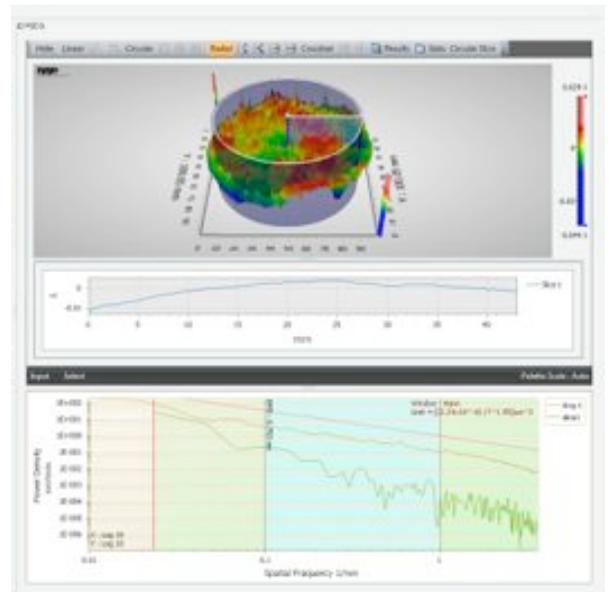
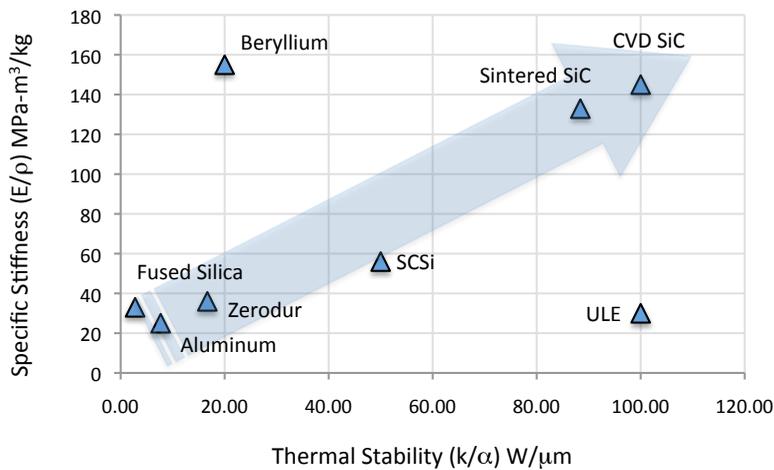
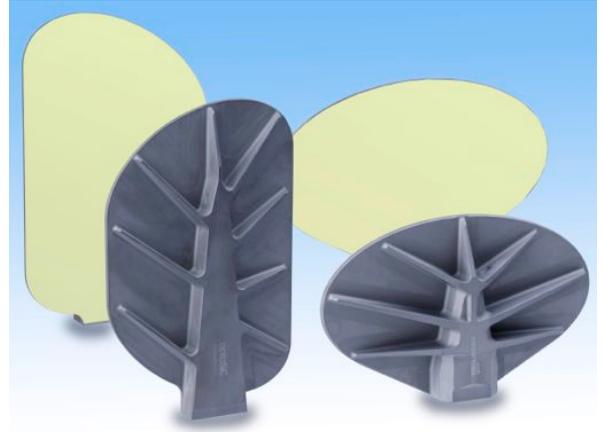
Form Tolerance	> $\lambda/100$ rms
Diameter	< 1-meter
Surface Quality	< 20/10
Coating	Al, Ag, Au, specialty designs for high damage threshold
Materials	CVD SiC, CVD clad, Si clad, CVC™
Component Types	Flats, spheres, aspheres, lightweight mirrors & wafer chucks



SiC Optics – The ultimate opto-mechanical combination

Aperture Optical Sciences Inc. works with customers seeking to enhance the performance of their instruments and systems using advanced materials like SiC. We are now employing and continue to pioneer manufacturing techniques and technology to enable the insertion of composite ceramic materials into next generation optical sensors and imaging equipment.

AOS is today's premier supplier of silicon carbide optics - the material for optics with the highest combination of specific stiffness (E/ρ) and thermal stability (k/α). High specific stiffness, high thermal conductivity and low thermal expansion make SiC an ideal material for maintaining both optical and mechanical performance in rapidly changing thermal environments. SiC Optical Mirrors resist dynamic & gravitational deflection and enable can athermal opto-mechanical designs ultimate performance in thermally variable environments.



Key Benefits of AOS SiC Mirrors

- Resistant to dynamic & gravitational deflection
- Fast thermal stabilization
- Optically finished to state of the art surface specs
- Lightweight
- Integrated mechanical fasteners
- Standard and custom designs



Aperture Optical Sciences Inc.'s mission is to provide its customers with optical components, systems and optically driven technologies that will fuel the growth of their businesses in the US, Japan, Europe and Asia. We are a privately owned US company and ITAR registered.

Our principal products are Silicon Carbide optics, Aspheric mirrors and lenses, laser optics, and opto-mechanical systems including precision beam steering systems, telescopes, and laser focusing systems. Our customers use our optics in high-energy lasers, airborne vision systems, remote sensing, optical lithography, and a variety of scientific research applications.

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