



Aperture Optical Sciences

Off Axis Parabolic Mirrors

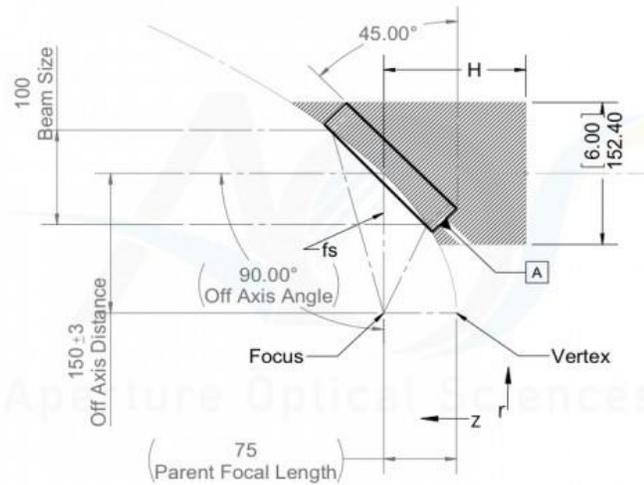
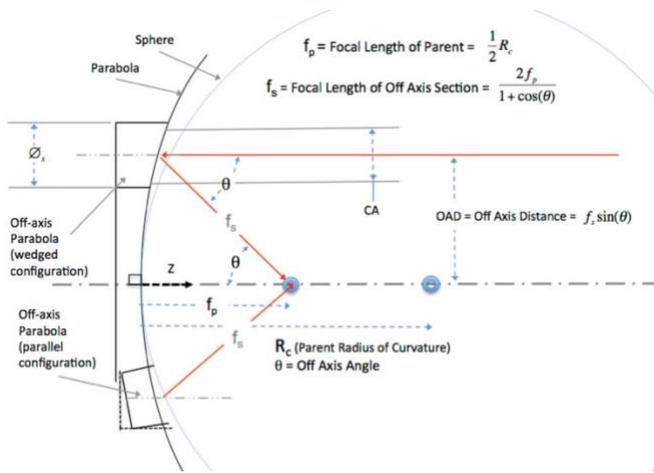


The need for powerful reflective optics operating over a broad bandwidth has motivated the development of off axis parabolas with higher imaging performance than ever before. Within the last five years everything about OAP's has evolved – tolerances for quality and performance, manufacturing methods, testing methods, thin film coatings and alignment technologies. AOS has re-engineered the Off-Axis Parabola for the 21st Century.

We've redefined the way that OAPs are specified and toleranced, as well as the way OAPs are made. Achieving the highest quality requires a comprehensive approach to mechanical design, optical quality, and mounting & alignment.



Available Specs & Definitions



Parent Axis: The optical axis normal to the center of the parent parabola.

Segment Axis: The axis of the off-axis parabola segment drawn parallel to the parent axis and corresponding to the geometric center axis of the collimated beam

***Parent Focal Length (fp):** The distance from the vertex to the focus along the parent axis. This spec is fundamental to all parabolas – even those off-axis.

Segment Focal Length (fs): The distance between the intersection of the segment axis on the surface of the OAP and the focus

***Off-Axis Angle (OAA):** The angle subtended between the segment axis and the segment focal length.

***Off-Axis Distance (OAD):** The distance between the parent axis and the segment axis.

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Aperture Optical Sciences designs and manufactures precision optics components and systems for space-based imaging and optical communications, high energy lasers, airborne imaging, and industrial machines and instruments. We employ advanced technologies for making high resolution satellite telescopes, aspheric mirrors, and have championed the implementation of Silicon Carbide Optics in the commercial marketplace. We add value by providing rare expertise in robotic optical fabrication, design for manufacturability and assembly, and verifying product performance using advanced optical metrology.



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