

# OAPs & ELLIPSOIDAL MIRRORS

Spectrum Scientific's off-axis parabolic (OAP) mirrors eliminate aberrations that are present when trying to use spherical mirrors in off axis conditions and ensure high resolution in compact system designs.

These mirrors feature light weight monolithic designs which can incorporate mounting features onto the mirror itself for easy alignment and offer achromatic focusing on collimation coupled with low scatter for UV applications.

Our ellipsoidal mirrors are perfect for minimizing the number of optical components in a system. They can efficiently refocus light from one focal point to a second without the need for additional optical components thus allowing for a more compact optical system.



Off-Axis Parabolic &  
Ellipsoidal Mirrors

λ/10 or Better  
Surface Figure

Eliminate  
Aberrations

Achromatic  
Focussing

UV, VIS and NIR  
Optimised Coatings

Deep UV  
Coatings down  
to 120 nm

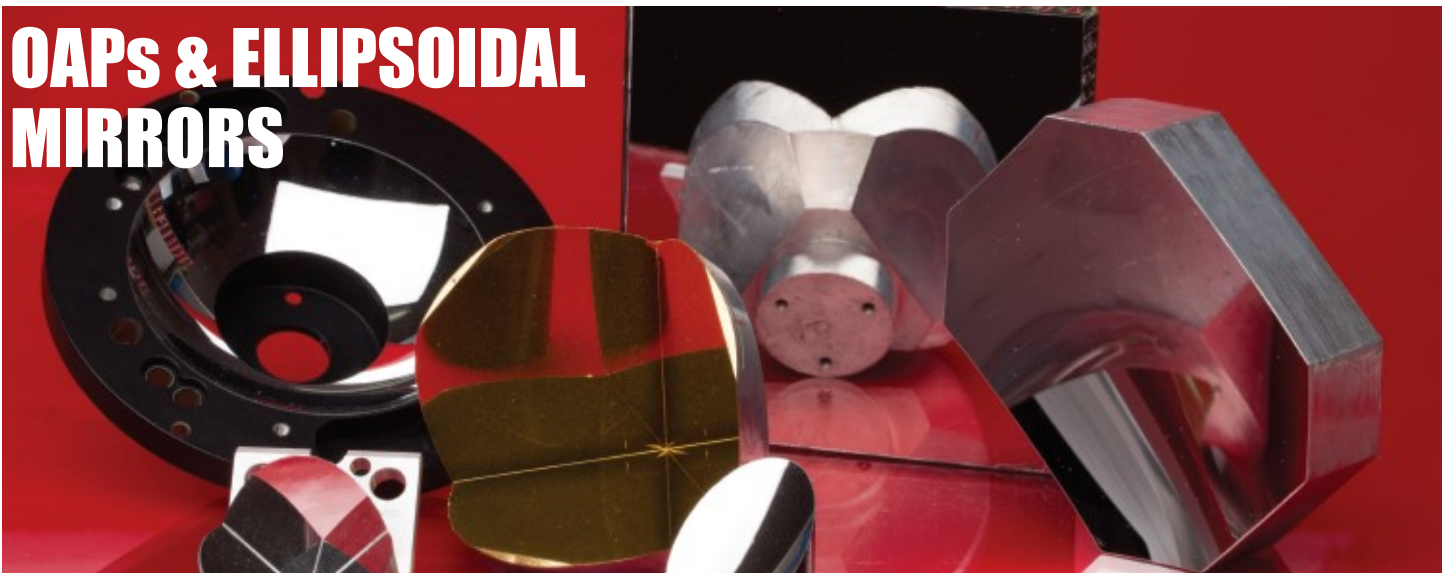
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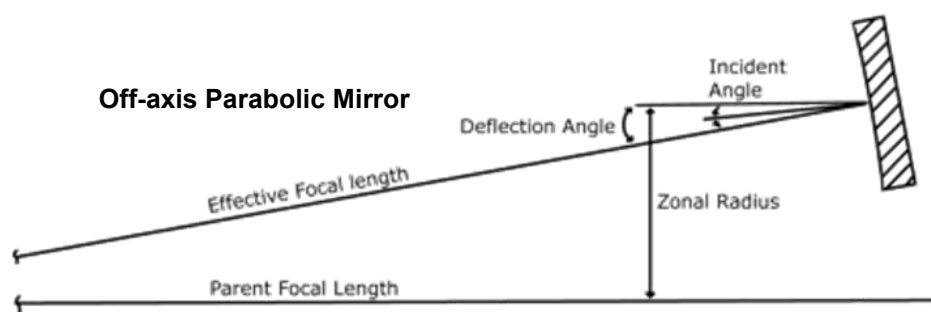
## Replicated High Precision Mirrors

Spectrum Scientific offers a cost-effective solution to producing low or high-volume precision mirrors and optical components using the replication process. The optical performance and environmental stability of replicated optics is identical to optics produced using conventional methods.

Available on a wide range of substrates, including glass and aluminum, replicated optics can be used in a variety of applications where complex optical surfaces are utilized.

In addition, often an optical surface can be replicated on to the mounting structure leading to easier alignment and further cost savings.

Replicated optics are manufactured by first producing a master to the required specification and then transferring the optical quality of the master to a substrate through a replication process rather than by conventional polishing. This allows the production of high volume, high precision optics that have identical performance as the originals at a fraction of the cost of conventional optical manufacturing.



Parameter	Description
Effective Focal Length	Distance from the focal point of the optic to the principal planes
Parent Focal Length	The distance from the focal point of the optic along the parent axis
Deflection Angle	The deviation of reflectance
Incident Angle	The angle between a ray incident on a surface and the line perpendicular to the surface at normal
Zonal Radius	Distance between the parent focal length and normal