

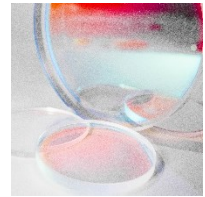
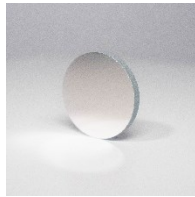
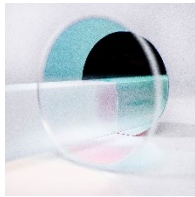
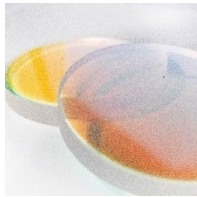
CUSTOM & CATALOG OPTICS

Catalog Options

MIRRORS

ARO's mirrors have industry leading high reflectance, high laser damage thresholds, excellent durability, and long operational lifetimes. We have extensive experience with large optics up to 17 inches in diameter. Our ultrafast mirror selection includes an E-max coating with superior damage thresholds and a B-max coating with broadband optimization.

Product	Wavelength Selections (nm)	Diameter (mm)	Thickness (mm)	Angle of Incidence	Reflectivity (%)
<i>UV Laser Mirrors</i>	193, 248, 266, 308, 351, & 355	25.4 or 50.8	9.525	0° or 45°	95-99.5
<i>High Energy Laser Mirrors</i>	532, 800, 1053, & 1064	25.4 or 50.8	9.525	0° or 45°	98.5-99.5
<i>Tl:Sapphire Mirrors</i>	800 (B-Max & E-Max)	25.4 or 50.8	9.525	0° or 45°	99.5



POLARIZERS

ARO offers polarizers with narrow and broadband options. Our coatings have high damage thresholds and high extinction ratios with S or P pol optimization capabilities.

Product	Wavelength Selections (nm)	Dimensions (mm)	Thickness (mm)	Angle of Incidence	Extinction Ratio
<i>Ultrafast Polarizers</i>	740-860 & 700-900	28.6 x 14.3	3.2	70° ± 3°	98/75 & 75/95
<i>UV Polarizers</i>	266 & 355	28.6 x 14.3	3.2	56° ± 3°	200:1
<i>High Energy Polarizers</i>	266, 355, 532, 1053, & 1064	28.6 x 14.3	3.2	56° ± 3°	200:1

Custom Laser Optics

For custom optics including
– mirrors, polarizers, windows, lenses, beamsplitters, and filters –
please send us your specs or drawings

arocorp.com

sales@arocorp.com

(303) 444-3420



FABRICATION & COATING CAPABILITIES

ARO offers an extensive range of in-house polishing and coating capabilities. Our superior polishing process is key for minimizing subsurface damage to reduce damage sites and extend the lifetime of your finished optic. Our coatings are optimized for superior laser damage threshold and surface quality to maximize the performance of your laser optic.

Fabrication Capabilities

With over 30 years of experience, ARO excels at fabricating substrates to tight specifications with a specialty in creating extremely flat plano surfaces on increasingly larger substrates.

Materials

Fused silica, N-BK7, Borosilicate, ULE, Optical Crystals (CaF₂ & MgF₂), & Optical Ceramics (Spinel & Zerodur)

Surface Roughness

3Å with the ability to provide below 1Å if requested

Surface Flatness

1/10λ - 1/40λ Peak to Valley at 632.8nm

Surface Quality

10/5 Laser Quality

Size

3mm to 430mm

Equipment

24-64" continuous, spindle, and CNC grinders and polisher



Coating Capabilities

ARO utilizes E-beam, IBS, Magnetron Sputtering, and Ion Assisted Deposition coating technologies to produce a wide variety of optics. We are able to coat optics we polish in-house or customer supplied material. We have a strong reputation for coating performance in the deep UV region down to 193 and our capabilities extend to 2000nm.

Functional Coatings

HR % Reflectivity / AR % Transmissive / Anti-Reflective Multiple Band / High Reflective Metallic / High Reflective Dielectric / Metal Coatings / Dichroic Long Pass / Dichroic Short Pass / Polarizing Beam Splitters

Wavelength Range

DUV to Near IR: 193 nm – 2 microns
Up to 99.5% reflectance, down to 99.8% transmission

Coating Technology

E-Beam, Ion Assisted E-Beam, Magnetron Sputtering, IBS

Angle of Incidence

0-70°

Representative Laser Damage Thresholds

26 J/cm² average @ 1064nm, 20ns pulse width @ 0° AOI
35 J/cm² average @ 1053nm, 20ns pulse width @ 45° AOI
8.5 J/cm² average @ 308nm, 152ns pulse width @ 0-45° AOI

Environment

Laminar Flow Hoods Class <100
Clean Space Class <10,000

Metrology

Lambda 1050 and 900 PE Spectrophotometers / Zygo NewView Surface Profiler / Angular Attachment Polarizer for Spectrophotometer Measurements / Vertical and Horizontal Zygo Verifire Interferometers / Environmental Chamber BHD-203

In-House Environmental Testing

Adhesion Test / Abrasion Test / Thermal-Humidity Test / Temperature Influence Test / Stress Test

Production Quantities

Prototype to Mid-Production Volumes

Certifications

ISO 9001:2015 Registered