Optimax Coatings
For High Performance Optics

Dedicated to supporting projects that require:
Small volume • High quality • Quick delivery
Coating Capabilities

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diameter</td>
<td>3mm</td>
<td>500mm</td>
</tr>
<tr>
<td>Wavelength</td>
<td>193nm</td>
<td>5000nm</td>
</tr>
<tr>
<td>Use Environment</td>
<td>Vacuum</td>
<td>&gt;95% RH</td>
</tr>
<tr>
<td>Durability</td>
<td>Moderate abrasion</td>
<td>Severe abrasion</td>
</tr>
<tr>
<td>Measurement</td>
<td>Spectrophotometry</td>
<td>Cavity Ring-Down Reflectivity and Loss</td>
</tr>
<tr>
<td>Space Radiation</td>
<td>—</td>
<td>Co60, 1Mrad</td>
</tr>
</tbody>
</table>

**Optimax Coating Uniformity**
Non-uniform coatings can lead to degraded performance. Our deterministic technique applies uniform coatings on curved surfaces, giving us the ability to ensure good spectral performance across the entire clear aperture.

**High Laser Damage Threshold**
Our fabrication and coating processes have been developed specifically to achieve world class laser damage thresholds for both pulsed and CW applications. Some of the highest energy laser systems in the world rely on our optics.

**High Laser Damage Threshold Coatings**

<table>
<thead>
<tr>
<th>Type</th>
<th>Wavelength</th>
<th>Pulse Length</th>
<th>Typical Specifications</th>
<th>Optimax Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>HR</td>
<td>1064 nm</td>
<td>10 ns</td>
<td>&gt; 40 J/cm²</td>
<td>&gt; 125 J/cm²</td>
</tr>
<tr>
<td>AR</td>
<td>1064 nm</td>
<td>10 ns</td>
<td>&gt; 30 J/cm²</td>
<td>65 J/cm²</td>
</tr>
<tr>
<td>AR</td>
<td>1064 nm</td>
<td>3 ns</td>
<td>&gt; 15 J/cm²</td>
<td>40 J/cm²</td>
</tr>
<tr>
<td>AR</td>
<td>1064 nm</td>
<td>CW</td>
<td>&gt; 1MW/cm²</td>
<td>&gt; 1 GW/cm²</td>
</tr>
</tbody>
</table>

Performance routinely verified through independent test laboratories. 100x-200x Normarski inspection. Note: These values are for antireflection coatings only. High Reflector (HR) values will be higher.

**State-Of-The-Art Facility**
Our 4,000 sq ft cleanroom facility houses ten optical coating chambers, three environmental testing chambers and metrology equipment for UV through IR.
**IBS Coatings**

**Why Choose Optimax?**

**Made in USA**
Serving sensitive defense and directed energy programs

**Size Capabilities**
Optimax can IBS coat up to 350mm

**Metrology**
Optimax has invested in advanced metrology, including custom metrology options. *Laser-based instrumentation.*

**Specifications**

**Ion Beam Sputtered Coatings: 350mm**

**Mirrors, ARs and Filters**

Absorption: <2ppm ARs, <5ppm Mirrors in the NIR

Laser Damage Thresholds: >10MW/cm² CW

For more information visit www.optimaxsi.com/optical-coatings
Coatings are a critical and often risky step in manufacturing complex optical systems. You’ll get finished optical systems faster because of our ownership of the complete manufacturing process.

Optimax manufactures optical coatings for wavelengths from 193nm to 5000nm and diameters up to 500mm. Our range of thin film coating technologies are tailored to each customer’s spectral, environmental, mechanical and laser damage threshold requirements.

**Types of Coatings**
- Antireflection
- Mirrors
- Polarizers
- Beamsplitters
- Filters

**Optimax Precision Optical Coatings**
- DUV through Mid-IR coatings
- High laser damage threshold coatings for pulsed and CW applications
- Uniform coatings on curves and flats
- Long-life DUV lithography coatings
- Low coating stress for improved wavefront control
Optimax manufactures the optics behind breakthrough technologies in aerospace, defense, semiconductor and medical devices. Our advanced manufacturing systems allows us to test and deliver highly complex optics with the speed and performance your programs require.

Optimax Capabilities

Aspheres

Spheres

Prisms / Flat Optics

Cylinders / Freeforms

Coatings

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