# 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></td>
<td></td>
<td>PCI Absorption (ppm resolution)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Laser Reflectometry</td>
</tr>
<tr>
<td>Space Radiation</td>
<td>—</td>
<td>Co60, 1Mracl</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 Optimax Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>HR</td>
<td>1064nm</td>
<td>10ns</td>
<td>&gt; 125 J/cm²</td>
</tr>
<tr>
<td>AR</td>
<td>1064nm</td>
<td>10ns</td>
<td>65 J/cm²</td>
</tr>
<tr>
<td>AR</td>
<td>1064nm</td>
<td>3ns</td>
<td>40 J/cm²</td>
</tr>
<tr>
<td>AR</td>
<td>1064nm</td>
<td>CW</td>
<td>&gt; 1 MW/cm²</td>
</tr>
</tbody>
</table>

Performance routinely verified through independent test laboratories. 100x-200x Normarski inspection.

## State-Of-The-Art Facility

We've expanded our coating facility to 20,000 sq. ft. housing 12 optical coating chambers, three environmental testing chambers and metrology equipment for UV through IR.
IBS Coatings

Why Choose Optimax?

Low-Stress
Proprietary low-stress IBS coatings

Size Capabilities
Optimax can IBS coat up to 400mm

Metrology
Optimax has invested in advanced metrology, including custom laser-based metrology options.

Specifications

Large aperture ion beam sputtered (IBS) coatings
AR absorption < 2ppm at 1064nm
Mirror absorption < 3ppm at 1064nm
Reflectivity > 99.999% at 1064nm

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 allow us to deliver highly complex optics with the speed and performance your programs require.

Aspheres

Coatings

Cylinders

Freeforms

Prisms

Spheres / Flats

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