Optimax Systems Inc.

Since Optimax was founded in 1991, optics have been behind enormous progress in technologies as diverse as fiber optic telecommunications, solid-state lighting, digital photography, displays, and diagnostic medicine. We have worked on key programs in aerospace, government research, and defense.

Optimax specializes in Asphere, Cylinder, Sphere, Plano/Flat and now Freeform optics in sizes up to 500 mm. All parts are manufactured to customer-supplied specifications and include final inspection data.

Facility Size: 60,000 sq. ft.
Employees: 300+
Opticians: 100+
President: Michael Mandina
Founded: 1991


Registered: ISO 9001:2008 certified
US Dept of State: Registered with Directorate of Defense Trade Controls
Encryption: PGP® Desktop Email
D&B #78-706-4120 (Dunn & Bradstreet)
Payment Terms: N30 with approved credit or Credit Card
What is a Freeform?

An optical surface with little to no symmetry.

Why design with freeforms?

Designing with freeforms will make your project have:

- Fewer elements
- Lighter weight
- Increased flexibility

And in the end overall better performance.

Common Freeforms

Optimax Systems Inc.

Optimax helps its customers prove that great people can do great things with the right technology and support.

We leverage our optics manufacturing technology for programs that benefit mankind and projects that defend our freedom. Our know-how, innovation and speed enable quicker production of precision optics to meet emerging market needs.

Learn more | www.Optimaxsi.com/Freeforms

sales@optimaxsi.com | 585.265.1020

Freeform Tolerancing Limits for Freeform Surfaces

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Precision Tolerance</th>
<th>Freeform Tolerancing Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diameter (mm)</td>
<td>+0, -0.025</td>
<td>+0, -0.010</td>
</tr>
<tr>
<td>Center Thickness (mm)</td>
<td>± 0.100</td>
<td>± 0.050</td>
</tr>
<tr>
<td>Irregularity – Interferometry (HeNe fringes)</td>
<td>0.5</td>
<td>0.1**</td>
</tr>
<tr>
<td>Irregularity – Profilometry (μm)</td>
<td>± 5.0</td>
<td>± 1.0</td>
</tr>
<tr>
<td>Surface Roughness (Å RMS)</td>
<td>20</td>
<td>10</td>
</tr>
</tbody>
</table>

*Soft tolerancing limits. **Stitching/CGH dependent. For reference only.
Optimax can make low surface roughness optics from all of these materials.

*For reference use only*
Transmission Bands of UV, Visible and IR Materials*

- Glass
- Calcium Fluoride
- Sapphire
- Barium Flouride
- Spinel
- AION
- Diamond
- Magnesium Oxide
- Yttria
- Multispectral Zinc Sulfide
- Zirconia
- Polycrystalline Alumina
- Zinc Selenide
- Magnesium Fluoride (hot pressed)
- Chalcogenide
- Silicon
- Germanium

* For reference use only