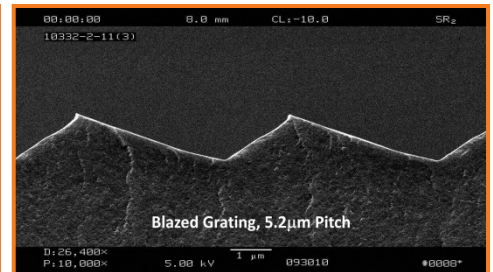
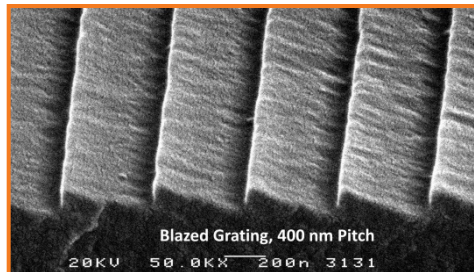
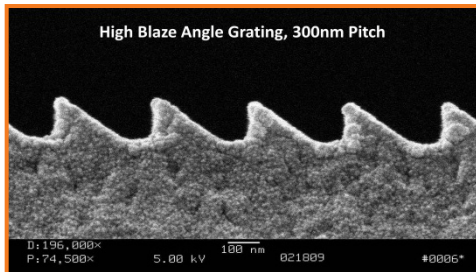


Custom Blazed Gratings



High Performance Gratings Built to Your Specifications!

**Your single source for blazed grating design,
prototyping, and manufacturing.**

The Holographix Advantage:

- ▣ ***Optical Design:*** Custom-designed high performance blazed gratings.
- ▣ ***Exceptional Performance:*** >90% diffraction efficiency with low stray light.
- ▣ ***Development Flexibility:*** Unique manufacturing technology allows for state-of-the-art blazed grating-based solutions.
- ▣ ***Manufacturing Excellence:*** High quality, custom blazed gratings with repeatable performance!

Capabilities and Resources

Custom Blazed Gratings

Holographix now offers proprietary custom blazed grating mastering that, when coupled with our cost-effective nano-replication technology, enables us to meet or exceed your most challenging diffraction grating needs!

Blazed Mastering

In order to provide high quality custom replicated diffraction gratings, a high quality master mold is required. Holographix has developed a proprietary ion milling process that allows us to manufacture custom blazed masters of exceptionally high quality. Our unique process allows us to produce large area blazed masters.

Opto-Mechanical Assemblies

Holographix is well positioned to add value to our custom blazed gratings by taking them through the next steps in your assembly process. Holographix has the capability and experience required to support your production requirements ranging from simple component/mount assemblies to more complex assemblies involving the build-out of fully aligned optical systems.

Quality Assurance

Over the past 25 years, Holographix has earned a reputation for providing our customers with outstanding development and manufacturing services for custom surface relief patterns. Custom binary and blazed gratings, microlens arrays, and diffractive waveguides are our main focus. With a companywide emphasis on quality, Holographix maintains a rigorous ISO 9001:2008 certified Quality Assurance program.

Standard Blazed Grating Properties

| | |
|------------------------------|---|
| Grating Size: | > 200 mm x 200 mm |
| Spatial Frequency: | up to 5000 g/mm |
| Wavefront: | <1/10 P-V per inch |
| Diffraction Efficiency: | within 5% of theoretical performance |
| Temperature Range: | -50°C to 260°C (solder reflow compatible) |
| Chemical Resistance: | most common solvents |
| Damage Threshold: | >1 MW/cm ² |
| Transmission Gratings | |
| Refractive Index: | 1.52 to 1.68 (multiple materials available) |
| Optical Transmission: | 400 nm to 3 μm |
| Anti-Reflection Coating: | custom multilayer coatings available |
| Reflection Gratings | |
| Reflection Coating: | custom metallic coatings available |
| Protective Overcoat: | custom dielectric coatings available |

Replication Benefits

Holographix manufactures custom blazed gratings using our proprietary replication technology. Blazed gratings are replicated from custom Holographix supplied, or customer provided master molds. Our replication process is capable of producing a wide spectrum of groove pitches and aspect ratios.

Holographix' replication process is also suitable for a variety of other groove profiles including sinusoidal, rectangular (binary), multilevel, slanted or undercut, as well as high aspect ratio profiles for both transmission and reflection applications.

Replication Facilities

Production of replicated components and assemblies requires a significant investment in capital equipment. Our 15,000 square foot facility in Hudson, MA is equipped with:

- ADE and Zygo 4 phase-shift interferometers (Qty 4)
- ADT 7100 Dicing System
- AFM Workshop TT- Atomic Force Microscope (AFM)
- Amray 3600 Scanning Electron Microscope (SEM)
- Cary 500 UV-Vis-NIR Spectrophotometer
- Custom fully automated UV curing stations
- Denton DESK II sputtering systems (Qty 2)
- Denton Infinity 22 thin-film box coater
- Keyence VK-X260K Violet Laser Confocal Microscope
- March Plasma AP-1000 plasma treatment system
- Mitutoyo Vision Systems (Qty 2)

Production Capabilities

Holographix specializes in the manufacture of custom replicated components and assemblies in production quantities. The inherent speed of our cold-forming replication process allows us to offer economical volume pricing without the associated high tooling costs. Whether your production requirements call for 100 individual components or 100,000 wafers, we can offer you a cost-effective solution.

Please contact us via phone, e-mail, or fax with any inquiries you may have regarding our services. We will be happy to assist you!

For a more comprehensive overview of Holographix and our technology, please visit our website below.

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