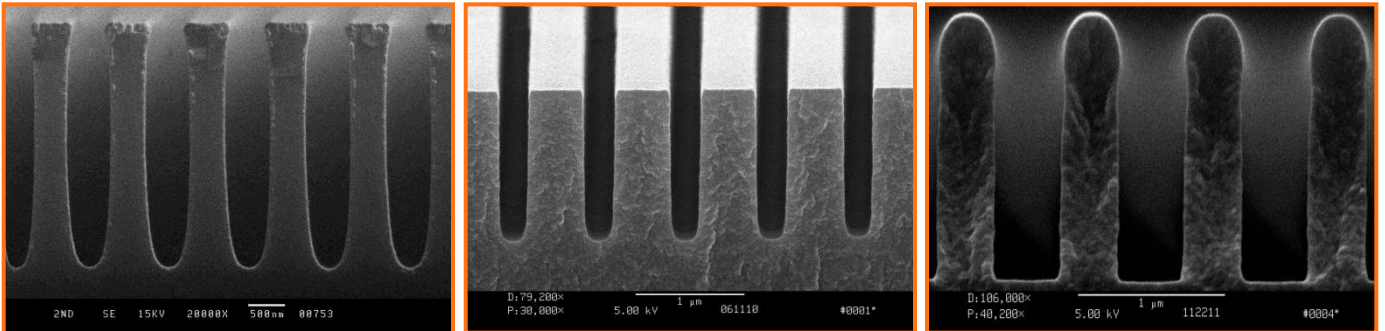


Low Stray Light Transmission Gratings



Cost-Effective Alternative to Volume Phase Gratings!

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

The Holographix Advantage:

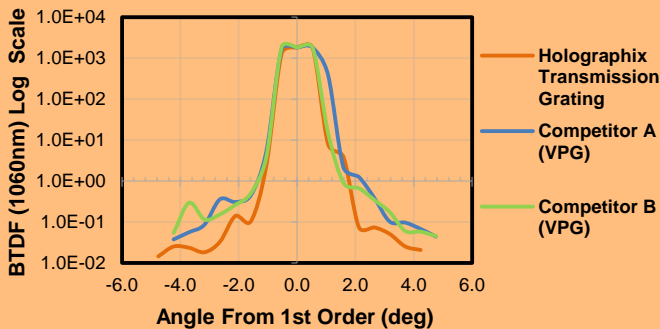
- ▣▣▣▣ **Optical Design:** *Custom-designed high aspect ratio gratings.*
- ▣▣▣▣ **Exceptional Performance:** *>90% diffraction efficiency with low stray light.*
- ▣▣▣▣ **Development Flexibility:** *Unique replication technology allows for state-of-the-art transmission grating-based solutions.*
- ▣▣▣▣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

Capabilities and Resources

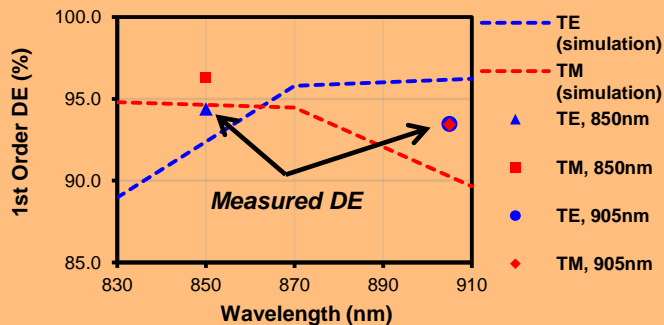
Low Stray Light Transmission Gratings

Holographix has successfully advanced the design and manufacturing processes for transmission gratings, allowing us to produce surface relief components that consistently meet or exceed the performance of volume gratings, but at a fraction of the cost!

**Independently Measured 1st Order Stray Light:
Holographix' Low-Scatter Transmission Grating (1200/mm)
vs. Competitors' Volume Phase Gratings (VPG)**



**Diffraction Efficiency (absolute):
Holographix' Low-Scatter Transmission Grating
(1200/mm) Measured Values vs. Simulation**



Standard Transmission Grating Properties

Grating Size:	up to 300mm diameter
Feature Size:	<100nm to >1mm
Spatial Frequency:	up to 5000 g/mm
Wavefront:	< $\lambda/10$ P-V
Diffraction Efficiency:	>90% (absolute)
Optical Transmission:	400 nm to >3 μ m
Temperature Range:	-50° C to 260° C (solder reflow compatible)
Chemical Resistance:	most common solvents
Damage Threshold:	>1 MW/cm ²

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 company-wide emphasis on quality, Holographix maintains a rigorous ISO 9001:2008 certified Quality Assurance program.

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:

- 5 Class 1000 cleanrooms
- 4 Custom UV replication labs
- March AP-1000 plasma treatment system
- Denton Infinity 22 thin-film box coater
- 2 Denton sputtering systems
- 4 ADE and Zygo phase shifting interferometers
- Cary 500 UV-Vis-NIR spectrophotometer
- 2 Mitutoyo Vision Systems
- Amray 3600 Scanning Electron Microscope (SEM)
- AFM Workshop TT – Atomic Force Microscope (AFM)
- ADT 7100 Dicing System

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.

www.holographix.com

