



G-S PLASTIC OPTICS

Precision Polymer Optics

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**Summer
Newsletter**

Volume 2, July 2016

www.gsoptics.com

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**Proudly Celebrating 100 Years
Manufacturing Quality Products in the USA**



Focusing on Quality --- Delivering Optics that Perform

The optics that we create at GS Plastic Optics are key enabling components for our clients' optical systems. Therefore, we test the molded optics to verify compliance with the required surface form-error and dimensional specifications.

Metrology is an absolute requirement when manufacturing optics. Without it, there is no reasonable way to assess the precision of your optical components. Our metrology lab's high level of expertise protects you against project downtime by assuring that all parts perform as needed once integrated into your system.



<https://youtu.be/YjBtTZZj1gg>

Understanding Metrics -- Supporting Customer Needs

GS Plastic Optics places heavy emphasis on quality and has developed a highly trained quality team that works with each client to understand the key performance metrics for the optic being produced.

Our Metrology team adheres to these practices in order to support the needs of each customer:

- Determine the critical to function attributes
- Develop a quality plan that specifies which features are measured, how often, on how many samples, and by what equipment
- Scrutinize these features during the development phase to guarantee that the manufacturing process is capable of consistently meeting the requirements in the future
- Provide continuous feedback to our production specialists, in turn protecting our clients against project downtime



Zygo – GPI Phase Measuring Interferometer

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Offering a Full Suite of Inspection Equipment

To ensure all parts are fully characterized, GS Plastic Optics maintains the following equipment inhouse:

- **Bruker Contour GT-K1 3D Optical Microscope:** Employs phase shifting and vertical scanning white light interferometry technology
- **Zygo Verifire XPZ Interferometer:** Measures spherical and flat surfaces
- **Zeiss Surfcom 3000A:** Used to measure aspheres and equation driven freeforms
- **Mitutoyo Bright 504 CMM:** Used for more exotic freeform surfaces, off-axis aspheres, or to assess an optic's 3D location error
- **OGP Flash 302:** Measures the size and location of mechanical features, including non-contact measurement of step heights
- **Wells Research OS210B Optical Test Bench:** Used for checking focal length (EFL/BFL) and/or image quality (MTF); optics can also be tested in the near IR, which is not possible with manual systems.
- **Olympus BX-41 Nomarski Prism Microscope:** Allows us to test within tight tolerances the aspheric and freeform optics that we are producing in our diamond turning lab
- **Perkin Elmer lambda 950 UV/VIS Spectrometer:** Used primarily in our thin-film coating lab for measuring the reflective (HR), and single or multi-layer anti-reflection (AR) coatings we are applying to plastic components

In addition to ongoing inspection results, GS Plastic Optics can provide further analytical support to clients through capability studies (to calculate C_{pk}), Failure Mode and Effects Analysis (FMEA), Production Part Approval Process (PPAP), Gauge R&R and SPC techniques.

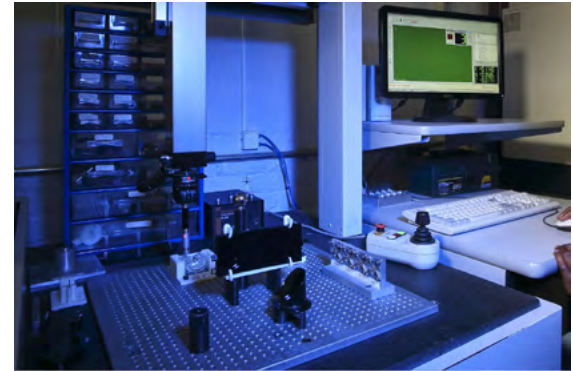
Our dedicated team of engineers and technologists, working with the most up-to-date equipment, look forward to creating polymer optics that will help to increase your market share and competitiveness.

[View More](#)

Contact us today to see how we can bring your product to life.
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Zeiss Surfcom 3000A Stylus Profilometer



Mitutoyo Touch Probe CMM



OGP Smart Scope Multi-Sensor CMM

2016 TRADESHOW EVENTS

SPIE. OPTICS+PHOTONICS

SPIE Optics+Photonics 2016

August 30-September 1, 2016 | San Diego, CA
San Diego Convention Center

Booth #413

www.spie.org

OSA
Frontiers in Optics | Laser Science
APS/DLS

OSA Frontiers in Optics 2016

October 19-20, 2016 | Rochester, NY
Rochester Riverside Convention Center

Booth #501

www.frontiersinoptics.com/