



Optical Physics Company

Innovation Through Light



Photo credit: R. Fugate, Air Force Research Laboratory



*A leading developer and
manufacturer of innovative
precision photonic components
and systems*



MARKETS/CUSTOMERS

OPC has been an active participant in multiple military and space R&D programs, such as ABL (Airborne Laser), SBL (Space Based Laser), MAWFEA (Multi-Access Wide Field of View Enhancement Activity), MALST (Multi-Access Laser Space Terminal), ALT (Airborne Lasercom Terminal), GOES-R (Geostationary Operational Environmental Satellite) and others. Currently, OPC is funded by the Navy Rapid Innovation Fund (RIF) to provide a star tracker which will be integrated onto a stellar inertial navigation system.

We have successfully delivered high-value wavefront sensors, deformable mirrors, silicon Risley beam steering telescopes, scene-based adaptive optic system, hyperspectral filters, and a compact AO system to proprietary programs.

Our customers include the US Air Force, Navy, Army, Office of Naval Research, Missile Defense Agency, High Energy Laser Joint Technology Office, NASA, NIST, Northrop Grumman, Boeing, Raytheon, Lockheed Martin, General Atomics, ITT, MIT Lincoln Labs, and Ball Aerospace.

Our strong team-based focus has resulted in OPC being rated a Northrop-Grumman Bronze Supplier one year and a Silver Supplier for two more years, recognizing our contribution to strategic programs.

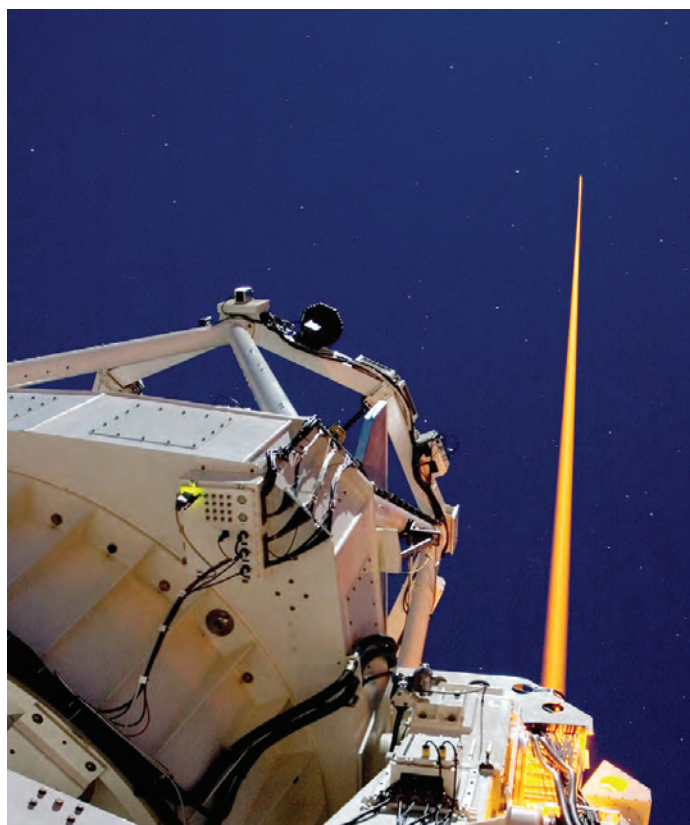
LEADERSHIP STATEMENT

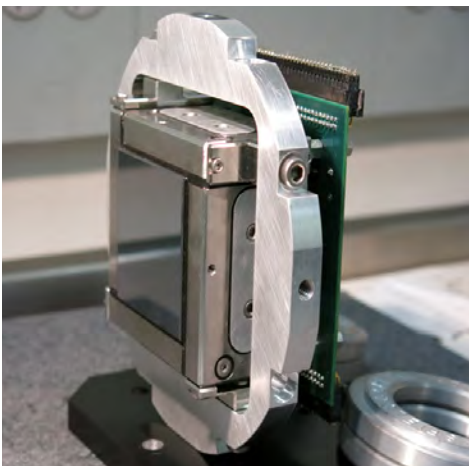
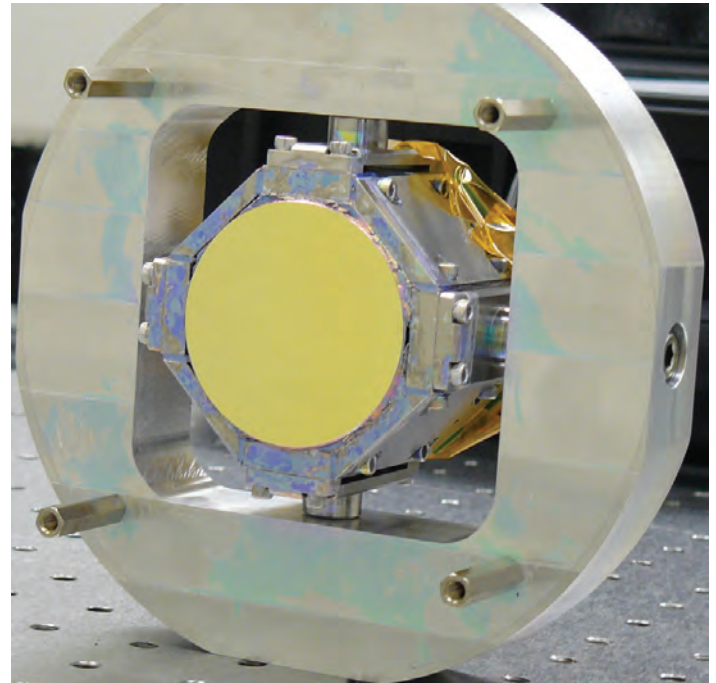
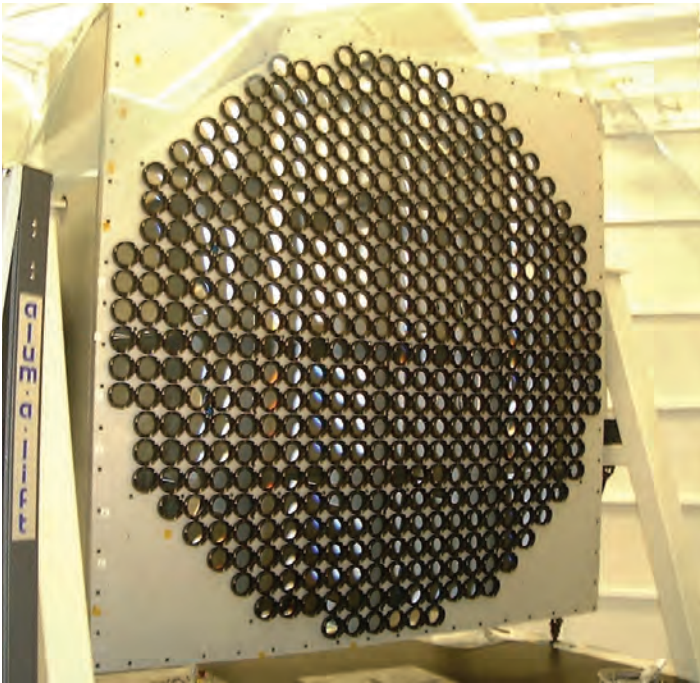
Our primary focus is on military relevant product lines relating to navigation, star trackers, adaptive optics, wavefront sensors, deformable mirrors, imaging, and high energy laser beam control systems. We have a successful track record of partnering with major aerospace and defense contractors to solve demanding optical challenges.

CORE COMPETENCIES

OPC has core competencies in the design and manufacture of advanced optical components and systems for imaging, target tracking, beam control and optical filtering. We are experts in E-O sensor systems covering visible to MWIR bands, lasers, propagation of laser light through various media, and atmospheric turbulence. Our capabilities span across a broad range, starting with analysis, simulation, trade studies, hardware and algorithm design and extending to prototype assembly, test and demonstration. We also provide system integration, development and operational test and evaluation support to partner prime contractors for transitioning new product lines to deployment.

In 2010, OPC added on manufacturing facilities for low volume production of high end high value adaptive optics components, in particular deformable mirrors for high energy laser (HEL) applications. OPC is now starting low rate initial production (LRIP) of its line of multiple star tracker products for aircraft navigation and for spacecraft attitude control.





PRODUCTS

STAR TRACKERS (PROTOTYPES BUILT AND TESTED)

- ▶ Visible band package for spacecraft GN&C
- ▶ SWIR band package for stellar navigation
- ▶ High accuracy with wide field of view (up to $20^\circ \times 20^\circ$)
- ▶ Capable of tracking space objects as well as stars

DEFORMABLE MIRRORS

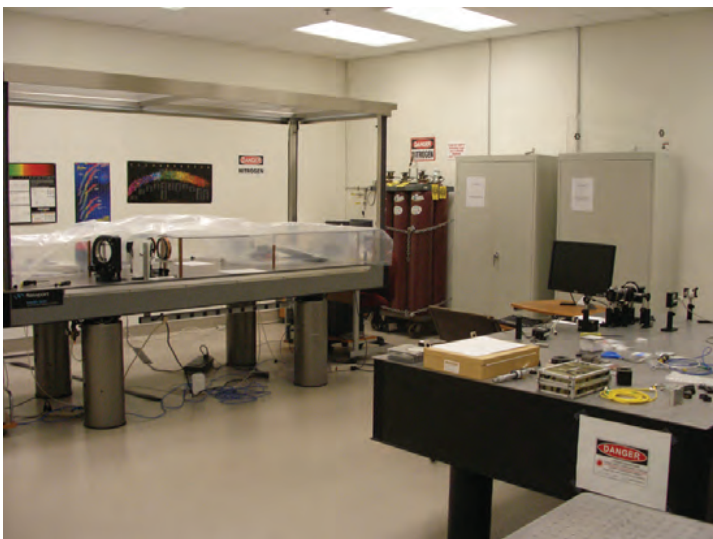
- ▶ Suitable for long high energy laser engagements and intra-cavity use
- ▶ Immune to thermal surface ripple
- ▶ High bandwidth operation
- ▶ Can assume primary mirror and fast steering mirror functions

WAVEFRONT SENSORS

- ▶ Scalable designs with apertures from meters to centimeters
- ▶ High tilt accuracy measured in nanoradians
- ▶ High phasing accuracy measured in picometers
- ▶ High bandwidth operation

SPECTRAL FILTERS

- ▶ Narrow linewidth highly selective spectral transmission or rejection
- ▶ Used in hyperspectral sensors for remote sensing applications

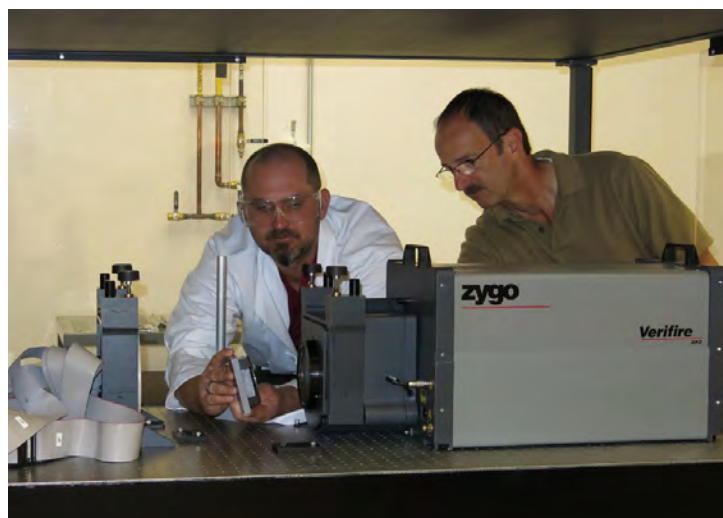


FACILITIES

AS9100C COMPLIANT MANUFACTURING CAPABILITY

- ▶ 16,000 sq. ft. of office, laboratory and manufacturing space in Calabasas, CA, including 9,000 sq. ft. laboratory and manufacturing space for design, test, and assembly of prototypes and products with:
 - ▶ Ten optical labs
 - ▶ A mensuration lab
 - ▶ A sophisticated machine shop for making small parts
 - ▶ A cleaning area with an assembly bench, a laminar flow bench, thermo-vac unit and a shaker table
 - ▶ Class 10,000 cleanroom with a Class 1,000 acrylic cleanroom within it
- ▶ Electronic assembly benches for quick assembly of prototype electronics

OPC's highly skilled staff has extensive experience and expertise in using optical and mechanical design software tools such as ZEMAX, SolidWorks, and LabVIEW, as well as general numerical computing and data visualization tools, such as MathCad and MATLAB.



CONTACT

4133 Guardian Street
 Simi Valley, CA 93063
 Phone: 818-880-2907
 Email: info@opci.com
www.opci.com