

Ansys + Meopta

“The speed and accuracy provided by OpticStudio has made us more confident about the full performance of our optomechanical designs. We’ve used Zemax, an Ansys company, for over 15 years. We’re always pleased with the tools they present for helping optical engineers work together effectively.”

Milan Matela

Senior R&D Optical Designer / Meopta – optika, s.r.o.

Meopta Boosts Productivity with Seamless Ray Tracing in OpticStudio for Semiconductors and Other Markets

The systems Meopta specializes in combine precision optics with a high level of manipulation. As part of the product research and development services it provides, the company delivers a complete built-to-spec design package, including optomechanical design, measurement, and alignment methods, as well as environmental testing. Starting in 2006, the company has used Zemax (an Ansys company) for ray tracing and workflow customization for optical simulation and modeling activities.

/ Challenges

Meopta offers a full range of in-house optics and photonics services. Many of Meopta's customers are in the fast-moving semiconductor market, where precision is crucial. However, volume is also a key priority, as feasible mass production means keeping costs low and performance high. For the designs Meopta delivers to these customers, its engineers must find the most efficient methods for optimizing product features without impacting customer profitability.

/ Ansys Products Used

- Zemax OpticStudio

/ Engineering Solution

Meopta streamlines the efficiency of its optical design workflows by building Zemax OpticStudio into the company's end-to-end design development activities. By using OpticStudio, the Meopta team avoids unnecessary extra steps in the design process, such as having to create additional iterative prototypes and design updates or having cross-team conversations and email exchanges to clarify the latest changes.

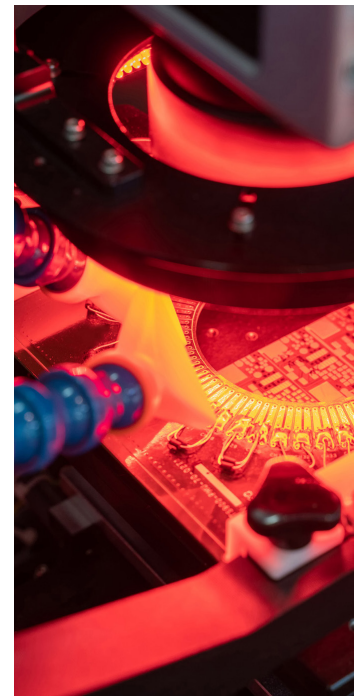
The overall effect of these reductions is an increase in productivity based on the interoperability between optical and mechanical methods for manipulating optics. By streamlining collaboration between their optical and mechanical design teams, the OpticStudio workflow helps Meopta save money and time.

/ Benefits

- OpticStudio is comprehensive with its analysis. It offers optical and mechanical design, alignment, and optical production all under one roof, leading to reliable results Meopta's customers can duplicate.
- Meopta benefits from the Zemax OpticStudio application programming interface (ZOS-API), which provides programmatic access to all OpticStudio modules, along with support and code samples for common programming languages.
- OpticStudio enabled Meopta to centralize diverse projects offered through both their practical and full-service optical design services to customers within a single master workflow.
- Incorporating OpticStudio into a comprehensive optical design workflow helped Meopta deliver realistic estimates of how optical system performance will be degraded under certain mechanical and thermal loads to customers.
- Loading Zernike polynomials into OpticStudio and running macros, Meopta can see the real influence of surface deformations indicated in support of better optical designs.

/ Company Description

Meopta is an optics and photonics manufacturer doing business as Meopta - optika, s.r.o in the Czech Republic and as Meopta USA in the U.S. The company's industrial, sports, and military optics solutions serve various applications and industries. Meopta has a long history dating back to the movie cameras and photographic equipment products it began developing in Czechoslovakia prior to World War II.



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