



Ansys Zemax OpticsBuilder

Optomechanical Design Software

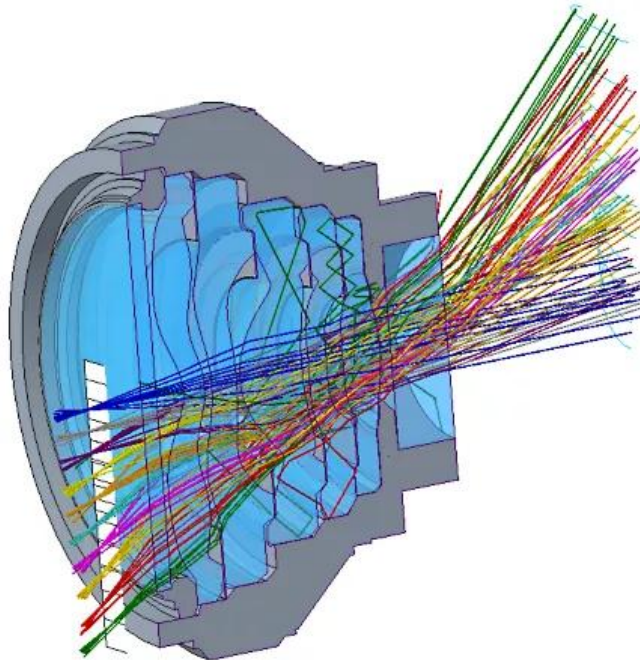
Empower optical and mechanical teams to work together efficiently. Design exceptional optical products with faster manufacturing and time to market.

FREE TRIAL ▶

Get optical products to market faster

Flawlessly convert lens design data into native CAD to build optical designs faster with fewer errors. Easily see mechanical impacts on optical performance and maintain design quality throughout the optomechanical design process. Create ISO-compliant optical drawings at the push of a button.

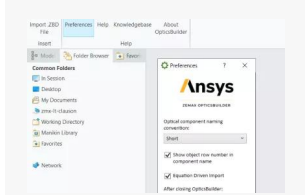
- ✓ Faster time-to-market
- ✓ Eliminate costly re-work
- ✓ Analyze mechanical impact
- ✓ Optimize for manufacturing





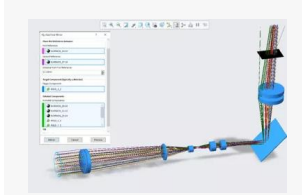
What's New

Ansys Zemax OpticsBuilder 2023 R1 adds a powerful new equation-driven import function and provides robust enhancements to the Fold Mirror tool.



Equation-driven import

Expose the equations that define the optical geometry and tie those equations to the part file of your optical design for storage in PDM systems. Design mechanical edges on your optics with better accuracy. Available for standard, even asphere, odd asphere, binary 2, binary 2a and off-axis mirror nonsequential component types.



Fold Mirror tool updates

Fold mirrors are often added to the optomechanical design to allow products to fit in tight space constraints. We've overhauled the legacy Fold Mirror simulation tool to position it for new and future functional requirements.

Quick Specs

Design exceptional products more efficiently and deliver them to manufacturing with confidence. Empower engineers to work together on a single, shared file across optical and mechanical teams. Analyze performance of optomechanical packaging and create optical drawings with a single click.

Quick, secure file sharing

Single file for entire optical design

Eq

Centralized workflow between engineers

Easy, fast, accurate import to CAD

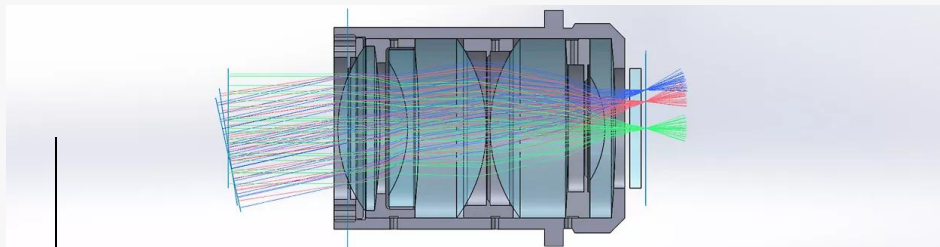
Pl

Built-in optomechanical packaging analysis

Intuitive, easy-to-use UI

Re

Read an OpticsBuilder Case Study



"Using an OpticsBuilder file (.ZBD) to manage design changes between our optical and mechanical engineers makes our prototype analysis 20 to 30 times faster and eliminates the possibility of redesign errors."

Nencho Uzunov
Optical Engineer / OPTIX JSC



[VIEW CASE STUDY ▶](#)

OPTIX JSC manufactures a full range of optical devices and systems for army and law enforcement officials. It's a shared goal within the optics manufacturing industry to reduce product and design development time while maintaining product integrity and quality. For OPTIX JSC, this meant taking a closer look at the collaboration among engineers, designers, and computer-aided design (CAD) users to incorporate a better system that would streamline product and design development more efficiently.

OPTIX JSC effectively integrated Zemax OpticsBuilder and Zemax OpticStudio to accelerate and optimize product and design scheme development.

- Easily convert and transfer optical designs, files, and workloads for more seamless collaboration among team members.
- Reduced product and design scheme development time and costs while improving efficiency with fewer late-stage redesign or errors.

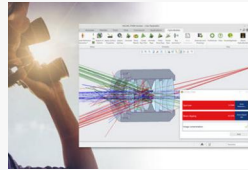
What can OpticsBuilder do for you?

Design mechanical structures around optical components in minutes using the exact optical component data through convert and build into native CAD. Avoid errors and costly rework by using dynamic ray tracing in CAD to analyze the impact of mechanical components on optical integrity. Save time by automatically filling optical manufacturing data into CAD drawings pulled directly from [Ansys Zemax OpticStudio](#).



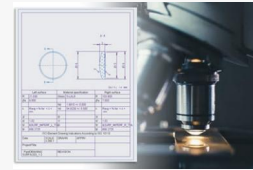
Convert and build into CAD

Save hours spent recreating optics in CAD. Enable CAD users to automatically convert and build lens design data from OpticStudio, including lens materials, positions, sources, wavelengths, and detectors into native CAD parts and assemblies.



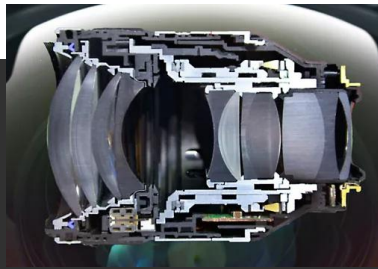
Analyze optomechanical packaging

Avoid surprises by catching and correcting errors during initial optomechanical product design. Design mechanical parts correctly the first time. Easily run ray tracing in CAD to analyze how mechanical packaging impacts the optical performance.



Automatically create optical drawings

Share ISO 10110 compliant optical drawings with a push of a button using an automatic optical drawing design export tool that even works with your own custom drawing templates.



Take exceptional designs to market faster

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Applications





Autonomous Sensor Development

Ansys provides a comprehensive autonomous vehicle sensor simulation capability that includes lidar, radar, and camera design and development.

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Aerospace

Ansys simulation solutions deliver the significant product lifecycle cost reductions that the aviation industry demands, while accelerating the technological innovation required for tomorrow's success.

[VIEW ▶](#)



Defense

Ansys simulation solutions help accelerate modernization and optimize sustainment of defense technology from the microchip to the mission. Delivering advanced capabilities more quickly enables defense leaders to stay ahead of the threat.

[VIEW ▶](#)



Ansys software is accessible

It's vital to Ansys that all users, including those with disabilities, can access our products. As such, we endeavor to follow accessibility requirements based on the US Access Board (Section 508), Web Content Accessibility Guidelines (WCAG), and the current format of the Voluntary Product Accessibility Template (VPAT).

[VIEW VPAT REPORTS ▶](#)

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