

CUSTOMER SUCCESS STORY

AT A GLANCE

Client



www.optixco.com

Industry

Design and manufacturing of optical, optomechanical, and optoelectronic assemblies and devices for law enforcement and other security industry applications

Zemax products used

- OpticsBuilder
- OpticStudio Premium Network

Key capabilities

- Centralized design workflow management within a single file
- Efficiency gains across teams when configuring optical circuits
- Elimination of errors requiring redesign or manual model changes

Results

- 20-30x improvement in time needed for managing design changes across teams
- 10x reduction in time required for editing optical circuits and elements
- Easy integration of OpticsBuilder capabilities into OpticStudio workflows



OPTIX JSC accelerates time-to-build and streamlines design scheme development with OpticsBuilder and OpticStudio

Built-in optimization features help reduce errors and boost productivity

Across the optics manufacturing industry, pressure is mounting to shorten development cycles without sacrificing quality. Much of this effort comes down to removing barriers to collaboration among engineers, designers, and CAD users. Competitive pressure in a rapidly expanding marketplace forces companies to reexamine their production methods and find ways to improve collaboration that decreases time-to-build while maintaining or improving product quality.

Recently OPTIX JSC found itself in just this position. Founded in 1998 in Panagyurishte, Bulgaria, the company designs, builds, and distributes optical assemblies and integrated optical solutions for various markets. Its current lens offerings for observational daylight cameras are based on a 50+-year-old optical design US patent that applies to products like the 1/2.8-inch chip in the Sony IMX290/291 LQR square pixel array color-complementary metal-oxide-semiconductor image sensor.

“Using a ZBD file 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.”

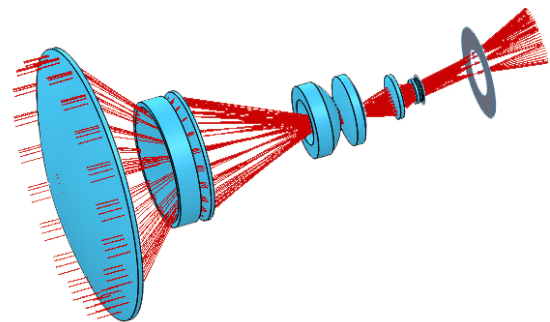
Nencho Uzunov, Optical Engineer
OPTIX JSC

Optical designers and optomechanical engineers at OPTIX JSC combined their skills to create excellent results, but their process of working together needed improvement. To stay competitive and keep pace with the industry trends toward shorter production cycles, the company looked for ways to invest in technology that would help them safely and intuitively streamline their design and development workflows.

Evaluating and selecting OpticsBuilder as the key to improving workflows

OPTIX JSC has been a Zemax customer since the early days of its business in 2000. In 2014, it adopted OpticStudio as its end-to-end optical systems design solution of record, integrating it with their CAD platform implementation used for mechanical design. In 2018, the company invested in Zemax OpticsBuilder to fully integrate with their CAD Platform across the OPTIX JSC design-build environment.

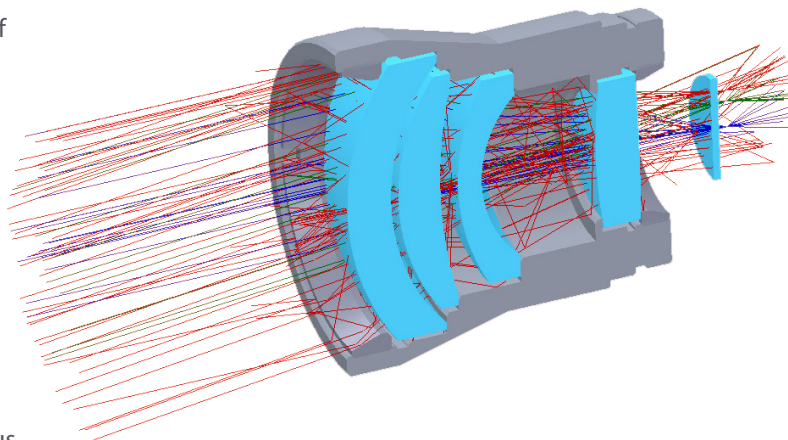
The implementation team chose OpticsBuilder by evaluating its capacity to improve the company’s workflow efficiencies, and easily provided cost justification to executive management based on projected savings in time and expense. The Zemax customer success team worked alongside the OPTIX JSC team to provide full methodological and technical support for the solution design, configuration, and roll-out.



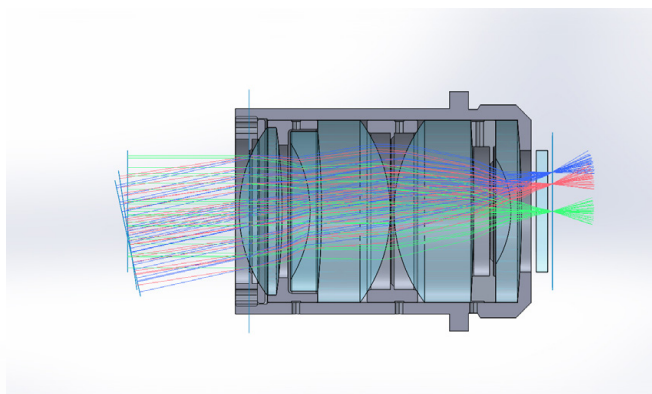
“For now, we are using OpticsBuilder in a research capacity for prototyping and analyzing simple optical circuits,” said Nencho Uzunov, Optical Engineer at OPTIX JSC. “I’ve observed the product to be very useful and effective. We look forward to expanding its use in our organization.”

Achieving the benefits of integrated collaboration using a single file for all details

OpticsBuilder helped OPTIX JSC overcome many of the traditional barriers to workflow acceleration in optics system development—namely, the ongoing back-and-forth file sharing between engineers and designers throughout the many editing stages of system design and production, and delays related to the need for addressing the errors resulting from these inefficiencies. By using OpticsBuilder to quickly and securely share design details within a single file, OPTIX JSC created an integrated, error-free workflow between the various engineers involved with product development and design.



Designers can now import and share CAD drawings in a single location, rather than forcing production teams to recreate the drawings for their own use. Optomechanical engineers can validate performance confidently instead of requiring multiple additional steps for checking their work. Proprietary manufacturing specifications and inspection data in the file are delivered at once to all production stakeholders, eliminating the opportunity for conflicting instructions or version history errors.



This centralization of effort and clarity of purpose has yielded superior results: Engineers and designers spend less time repeating processes and accounting for communication gaps, allowing more time to make the product as good as it can be. “We’re pleased with the results we have seen,” said Uzunov. “Editing the optical circuits and elements takes about one-tenth of the time it took before—the mechanical engineer only needs to update the resulting new ZBD file for a project, rather than manually change the models.”

About Zemax

Zemax’s industry-leading optical product design and simulation software, OpticStudio®, OpticStudio® STAR Module, OpticsBuilder™, and OpticsViewer™, helps optical, mechanical, and manufacturing engineering teams turn their ideas into reality. Standardizing on Zemax software reduces design iterations and repeated prototypes, speeding time to market and reducing development costs. Zemax is headquartered in Kirkland, Washington, USA and has offices in the United Kingdom, Germany, Japan, Taiwan, and China. For more information: www.zemax.com.