

Feature	Benefit
Import .ZBD file	Save time and avoid errors by enabling fast and flawless conversion of lens design data into native CAD platform.
Update .ZBD file	In an assembly with both optics and mechanics, OpticsBuilder allows CAD users to easily import updated optical design files into an existing .ZBD file without needing to redo their prior work.
Export .ZBD file	Ensure that your design is complete when moving between products. By exporting a .ZBD file, users can access their optomechanical designs in both OpticStudio and OpticsBuilder.
Optomechanical Packaging Analysis (OPA)	Enables CAD users to simulate the difference in performance based on light propagation through optics alone compared to light propagation through optics and mechanics together. When the product is readying for manufacturing, the OPA provides helpful insights as to whether the mechanical components have had an effect on the optical performance. By analyzing how light interacts with the mechanical assembly surfaces, CAD users can detect optical errors early, reduce back-and-forth communication with Optical Engineers and avoid expensive prototyping.
Region of interest	Exclude mechanical components for faster simulations, enabling you to analyze specific components and determine the performance without specific components.
Boundary rays	Start designing your mechanical packaging faster by having accurate visual guidelines of the ray path.
Animate rays	Understand the impact of your packaging by watching rays go from the source through the optomechanical path then to the detectors. Easily make changes to the mechanical system in the order that issues arise.
Critical rays	Understand the system performance at a glance by seeing how the Critical Rays pass through the optomechanical system. Users can view the Chief and Marginal rays, XY Fan rays, and Chief and Ring rays.
Apply surface properties	View simulation results that more accurately represent a real-world model (physical prototype) by seeing an accurate representation of the reflective properties of the mechanical components.

Generate reference geometry	Make informed mechanical design decisions by accessing data such as clear apertures, centers of curvature, vertices, and optical axes.
Add mounting edge	Improve how you mount your optics by adding material within the CAD platform around a lens to use as mounting edge.
Add fold mirror	Enables CAD users to add a fold mirror in an existing optical train to accommodate space requirements. Adding a fold mirror within the CAD platform means the user doesn't have to go back and forth between optical and mechanical design to define the position of fold mirrors.
Editable optics	When enabled by the Optical Engineer, CAD users can edit optical designs within their native CAD platform. Editing capabilities include moving optics in space, changing non-sequential optical properties and altering lens geometries.
Results window	Novice to advanced CAD users can see the impact of their mechanical components on the fidelity of the optical design, directly in their CAD environment.
Generate lens drawings	OpticsBuilder enables CAD users to share ISO compliant optical drawings with a push of a button using an automatic drawing tool.
View detectors	Users can view more detailed information about the detectors like the peak irradiance, total power, and number of hits on each detector. Additionally they can view datasets beyond incoherent irradiance, meaning that they will be able to view data for more detectors within OpticsBuilder, including the polar detector. Users will also be able to save images in common picture file formats from the detector viewer for easy sharing.
System settings	Define precision settings, design settings from the .ZBD file, and advanced settings to enable more customization when assessing optical performance.
Optical geometry properties	Users will be able to see the mass reported in the Mass Properties section of the CAD platform.