

| 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.  |
| Simulate light           | See the impact of your assembly on the optical performance. It detects any changes in the system, renders your mechanical geometry, runs a ray trace through the optics, runs a ray trace through the optomechanics, and then compares the two ray traces to generate outputs displaying the difference between the two. This tool also remembers previously rendered mechanical components and will detect which have changed and only re-render those altered components. This speeds up any subsequent simulations that are run after the first one. |
| 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.   |
| One-click analysis          | Users can see beam clipping and image contamination in the graphics area of their CAD platform.  |
| 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 for stray light.  |
| Optical geometry properties | Users will be able to see the mass reported in the Mass Properties section of the CAD platform.  |