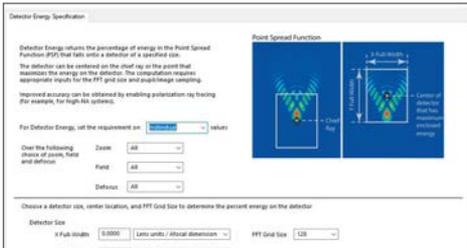


What's New in CODE V Version 11.2

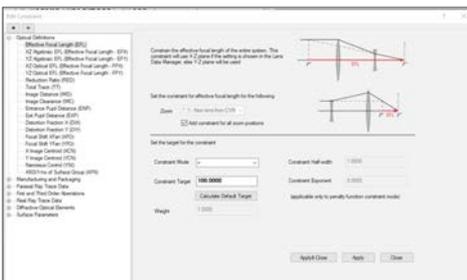
Design, Optimize, and Fabricate Superior Imaging Optics



SpecBuilder Improvements

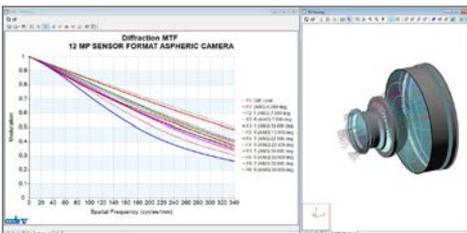
CODE V version 11.2 provides updates to the SpecBuilder™ feature that help designers easily track and communicate how well their optical system designs are meeting project specifications and goals. The expanded library of Synopsys' pre-built optical engineering specs include:

- Detector energy
- PSF-based encircled energy diameter and PSF-based Strehl ratio
- UI controls to quickly create a series of optical specifications, or to duplicate a selected specification across zoom positions, fields, and defocus positions.



Enhanced Optimization Constraints

CODE V's Automatic Design feature is strengthened with mechanical constraints that accept an optional overage scale factor and offset to define the physical edge with greater precision and control over lens system manufacturability. This is ideal for the design of compact objectives, as well as any application where the volume of the optical system needs to be minimized.

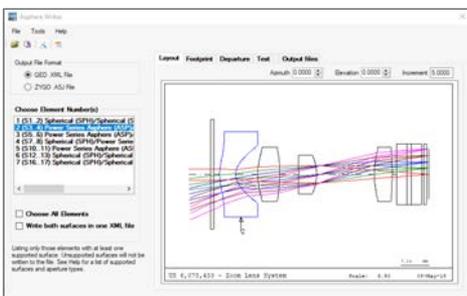


Encrypted Multilayer Coating Prescriptions

CODE V's encrypted coating file format allows vendors to share coating prescriptions with designers for accurate analysis, while keeping proprietary coating data secure.

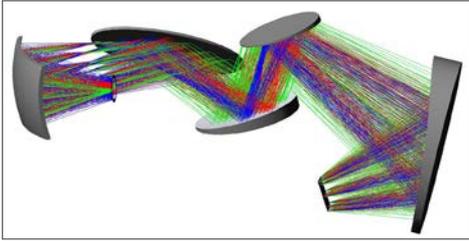
Asphere Writer Utility

The Asphere Writer utility in CODE V generates machine-readable files for aspheric surfaces that can be directly read by optical fabricators, including QED Technologies' optical grinding, polishing, and metrology equipment and Zygo Corporation's metrology equipment. The utility also has features for visualizing footprint plots, as well as plotting and listing sag departures.



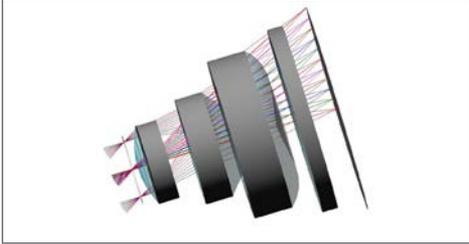
New Enclosed Energy Analyses

CODE V 11.2 now gives engineers the ability to evaluate the energy enclosed within circular, elliptical, square, or rectangular shape detectors as well as determine the size of various geometries that contain a specified percentage of energy. The metrics can be used for analysis, optimization, and tolerancing of optical systems, and are useful for the design of superior aerospace systems using pixelated sensors.



2D-Q Freeform Surface Formulation

The new 2D-Q freeform surface in CODE V, based on G.W. Forbes' formulation, has a best-fit conic base shape and a series of Q-freeform, or 2D-Q, polynomials. It is a powerful tool for designing lightweight and compact optical systems, such as head-mounted display devices for augmented and virtual reality.



Visualization Tool for Aperture Components

The View Apertures (VAP) tool allows designers to see individual aperture components or composite apertures on any surface and is useful for visualizing optical systems with complex aperture shapes. It can be used with the CODE V Beam Synthesis Propagation feature to define apertures in a way that minimizes computation time.

For more information or to start your free 30-day evaluation, please contact Synopsys' Optical Solutions Group at (626) 795-9101, visit synopsys.com/optical-solutions/codev, or send an e-mail to optics@synopsys.com.