Synopsys' Optical Solutions Group (OSG) products provide highly accurate, end-to-end analysis of diffraction-related characteristics and effects in an optical system.

CODE V®'s Beam Synthesis Propagation and the RSoft™ BeamPROP™ and FullWAVE™ products support a common interchange format to share complex optical field information. This allows the tools to easily communicate with each other and makes it easier for users to perform a full system diffraction analysis when multiple tools are required.

The interface supports scalar and vector fields and square and rectangular data grids. It can be used to provide beam input information and output results for all products. Its ASCII format allows interfaces to be easily developed with customer in-house software.

CODE V's Beam Synthesis Propagation (BSP) sets an industry standard for accurate, efficient, and easy-to-use beam propagation of optical systems, and free-space telecom devices. BSP's beamlet-based wave propagation algorithm includes proprietary enhancements designed to deliver extremely accurate and efficient modeling of diffracted wavefronts propagating through an optical system.

BSP represents the optical field as a collection of individual beamlets. A beamlet consists of a base ray and a field that is initially localized about the base ray. The base ray defines the reference location and direction for each beamlet. Based on the fact that the wave equation is linear, these beamlets are propagated independently and can be summed anywhere downstream to get the propagated optical field. This method can propagate beams through anything that can be ray traced.

Determining appropriate inputs for any beam propagation algorithm can be challenging. BPS's groundbreaking Pre-Analysis feature automatically recommends analysis settings based on your lens system and delivers an accurate answer in the shortest time possible.