Synopsys Announces Release 11.1 of CODE V Optical Design Software

Latest Release Offers Enhanced MTF Optimization and Visualization of Compact Optical Devices

MOUNTAIN VIEW, Calif., Sept. 5, 2017 /PRNewswire/ --Synopsys, Inc. (Nasdaq: SNPS) today announced version 11.1 of its CODE V® optical design software, which includes enhancements to the software's industry-leading capabilities for the design, analysis and optimization of superior imaging optics.

CODE V version 11.1 includes faster modulation transfer function (MTF) optimization, better design visualization and enhanced materials databases:

- **Enhanced MTF system optimization.** Optical designers can now directly access through-focus MTF during lens system optimization, which facilitates fast, accurate improvements to MTF symmetry over focus without the need to manually adjust lens system parameters. This feature can be particularly useful for determining the optimal location of sensors relative to compact camera modules to improve manufacturability.
- **Improved visualization of small lenses.** Visualization tools for optimization and analysis are improved for rendering small, highly aspheric lenses, such as those found in smartphones.
- **Expanded and improved materials databases.** CODE V offers an updated and expanded set of glass catalogs, including the Nikon UV material catalog. In addition, the interface for finding and selecting off-the-shelf lens components is improved, the asphericon component catalog is added, and fabrication vendor test plate lists, used to reduce metrology costs associated with spherical optics, are updated.

"With each release, CODE V builds on its core capabilities of superior optimization and tolerancing, including its ability to optimize tolerance-insensitive design forms," said George Bayz, vice president and general manager of Synopsys' Optical Solutions Group. "The improvements in version 11.1 give designers of small camera modules greater control over through-focus performance, enabling improved production yields with fewer rejected parts."

About CODE V

CODE V software is an optical engineering and design solution that supports the optimization, analysis and tolerancing of image-forming optical systems and free-space photonic devices. For more information, visit https://www.synopsys.com/optical-solutions/codev.html.

About Synopsys

Synopsys, Inc. (Nasdaq: SNPS) is the Silicon to Software™ partner for innovative companies developing the electronic products and software applications we rely on every day. As the world's 15th largest software company, Synopsys has a long history of being a global leader in electronic design automation (EDA) and semiconductor IP and is also growing its leadership in software security and quality solutions. Whether you're a system-on-chip (SoC) designer creating advanced semiconductors, or a software developer writing applications that require the highest security and quality, Synopsys has the solutions needed to deliver innovative, high-quality, secure products. Learn more at www.synopsys.com.

Editorial Contacts:

Carole Murchison
Synopsys, Inc.
650-584-4632
carolem@synopsys.com

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