

# Synopsys' New LightTools Enhances Lighting Design Capabilities for the Development of Luminaires

Available from Synopsys as Part of its Acquisition of Optical Research Associates, LightTools Version 7.1 is Now Generally Available

Highlights:

- Additional photometry type support for far-field and surface receivers
- Standard photometric report generation
- Illuminance data display in the 3D model for fast visualization of results
- CIE color difference analysis for calculating and optimizing system color performance
- New user interface that maximizes working area and flexibility

MOUNTAIN VIEW, Calif., Nov. 18, 2010 [PRNewswire/](#) -- Synopsys, Inc. (Nasdaq: SNPS), a world leader in software and IP for semiconductor design, verification and manufacturing, today announced the availability of enhancements to its LightTools® illumination design and analysis software. LightTools version 7.1 delivers new analytical capabilities that speed the development of luminaires, particularly for general lighting and automotive applications. In addition, new user interface features maximize working area and flexibility to help boost designers' productivity throughout the design and verification process.

"With version 7.1, LightTools continues to deliver significant new enhancements to assist designers in visualizing and optimizing luminaire performance," said George Bayz, vice president and general manager of the Optical Solutions Group at Synopsys. "Powerful new analysis features, combined with a more flexible user interface, will help accelerate the process of validating a system's color quality, light distribution and other key performance metrics."

## Support for IES Photometry Types A and B and Standard Photometric Reports

LightTools 7.1 adds support for IES photometry types A and B for orienting intensity data for both far-field and surface receivers. This simplifies the analysis of sources with non-rotationally symmetric output, such as automotive headlamps, tail lamps and interior lighting. In addition, LightTools 7.1 contains a utility for automatically generating photometric reports in the standardized IES format; IES Indoor, Flood and Road Report types are all supported.

## Illuminance Display in the 3D Model

A new analysis feature in LightTools 7.1 lets users superimpose illuminance data on any user-defined plane in the 3D model, helping them quickly understand the shape and orientation of the distribution across a receiver relative to the model geometry.

## CIE Color Difference Analysis

A new CIE color difference capability provides a mechanism for calculating and optimizing spatial or angular color differences in a system. This analysis is useful for designers whose goal is to produce an even color distribution across an entire display, for applications ranging from flat panel displays and projectors to display backlights and LED-based luminaires.

## User Interface Improvements

Improvements to the user interface in LightTools 7.1 provide new ways to organize and maximize desktop workspace. Specifically, 3D design views and analysis charts are now presented in tabbed or floating windows. This gives users the flexibility to make a 3D view as large as desired while still having rapid access to other windows via tabs. Dialog boxes, such as Properties and Preferences, can be moved outside the LightTools window to a second monitor, if available.

## Availability

The LightTools 7.1 release is available now and can be obtained by emailing [info@opticalres.com](mailto:info@opticalres.com).

## About LightTools

Formerly an Optical Research Associates (ORA®) product, LightTools is a 3D optical engineering and design software product that supports virtual prototyping, simulation, optimization, and photorealistic renderings of illumination applications. ORA is now

part of Synopsys, Inc. For more information visit <http://www.opticalres.com>

## **About Synopsys**

Synopsys, Inc. (Nasdaq:SNPS) is a world leader in electronic design automation (EDA), supplying the global electronics market with the software, intellectual property (IP) and services used in semiconductor design, verification and manufacturing. Synopsys' comprehensive, integrated portfolio of implementation, verification, IP, manufacturing and field-programmable gate array (FPGA) solutions helps address the key challenges designers and manufacturers face today, such as power and yield management, system-to-silicon verification and time-to-results. These technology-leading solutions help give Synopsys customers a competitive edge in bringing the best products to market quickly while reducing costs and schedule risk. Synopsys is headquartered in Mountain View, California, and has approximately 70 offices located throughout North America, Europe, Japan, Asia and India. Visit Synopsys online at <http://www.synopsys.com/>.

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