OPTIS

Electronics Solutions

Illuminating the Electronics Industry

Integrated solutions for light modeling and visual ergonomic design of opto-electronic systems

The OPTIS suite of software products allow designers, engineers and ergonomists to quantify and visualize optical, lighting and display systems for the electronics industry in one software solution.

Our high-performance simulation algorithms combined with complete integration in industry-leading CAD platforms enable significant reduction in design cycles; virtually prototype your product and reduce your time to market.

Our unique human eye model, combined with physics-based visual ergonomics and light modeling guarantee that you will see exactly what your customer sees, in any environment, day or night.

Optimize the readability of displays and illuminated controls, whilst minimizing energy consumption and maximizing source efficiency.

Perform quick and straight-forward reviews of requirements and design modifications throughout your process; from concept demonstration and validation, to production and deployment.
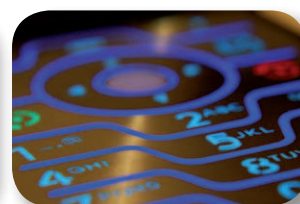
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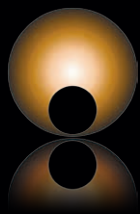
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CONSUMER ELECTRONICS

Large screen display panels • Cell phone displays & keypads • Illuminated keyboards • Light sources (LEDs, Oleds) • Printers • Scanners • GPS devices • LCD and LED display panels • DLP Projectors • Digital cameras • Car audio • Membrane switches

COMPUTING/INDUSTRIAL ELECTRONICS

Light guide systems • Optical data storage • Backlit micro-textures • Sensors for Security, Aerospace, Marine, Chemicals • Switches • Optical Inspection systems • Free space optics • Material & surface quality design • Optical filters


Analyze and validate initial photometric performance; optimize the opto-electronic design, and visualize the lit appearance.

Optimize your source selection, material behavior and surface finish quality; enhance opto-electronic integration, optical performance, uniformity of color and luminance performance.

Ensure functional and aesthetic integration within your design; validate compliance to specifications.
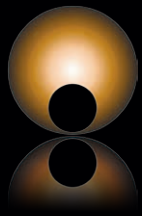
SPEOS COLOR LCD MODELER

This unique application uses the exact optical properties of an LCD display to simulate the global performance of any system.

Taking into consideration both the illumination system and the LCD screen itself, this new solution accurately evaluates the display's performance by handling the optical coupling existing between the back lighting unit (BLU) and the LCD.

Enhance contrast and reduce color shift by accurately capturing the physical properties of the LCD, maximizing the visibility and legibility of the display.

Design and optimize the color pixel arrangement and filters.

Correct brightness and non-uniformity; Perform backlight studies.

All relevant optical properties are characterized, including polarization effects of the BLU, absorption spectrum of filters, transmittance, reflectance and contrast ratios.

Also model front lit units, as well as any external source illuminating the display itself.
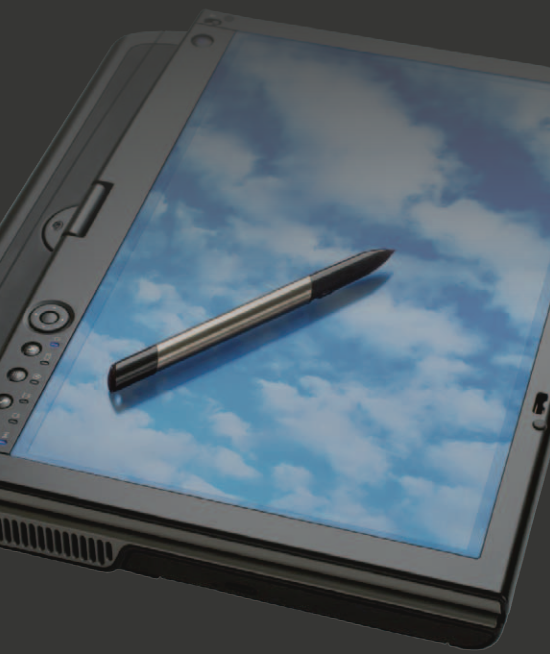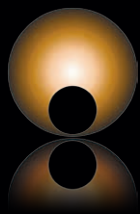
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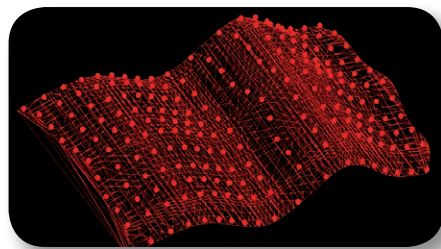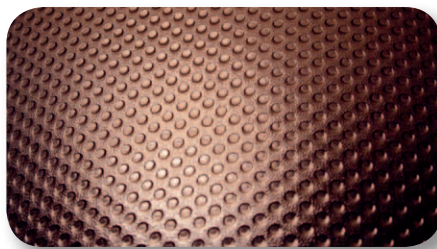
Illuminating the Electronics Industry

SPEOS 3D TEXTURES

Developed for specialists designing lighting and backlit systems - delivering a high level of irradiance and luminance uniformity, whilst reducing modeling time of complex opto-mechanical designs.

Easily create and optimize hundreds of millions of micro-optics in a lightweight format on any shape of optical surface.

- Optimize the distribution of light <u>AND</u> reduce the number of light sources
- Model micro-optics of diverse materials, including tinted and diffusing materials
- Apply coatings to the micro-optics to improve performance
- Apply any shape of micro-optics - even the most complex - to any free-form compound surface

- Rapid loading time (2 seconds for 1 million patterns)
- Low memory usage (150MB for 1 million patterns)
- Fast simulation time (16 minutes for 4 million patterns)

www.optis-world.com

Europe +33 494086690   Japan +81 3 3274 1160
Americas +1 248 524 0373   China + 86 21 61498468

OPTIS

OPTIS - Headquarters

ZE La Farlede, BP 275
83078 Toulon cedex 9
France
• Phone : +33 494 086 690
• Fax : +33 494 086 694