Creating Today's Innovative Solutions

TracePro

The ability to take an idea and create an outstanding design that is manufacturable. The program's simple, intuitive interface and short learning curve creates a user-friendly design environment for designers and engineers of all disciplines.

TracePro optical design software has enabled product innovation and research discovery across a breadth of markets:

- Medical Imaging & Endoscopy
- Flow Cytometry & Cell Imaging
- Medical Imaging
- Pulse Oximetry
- In-Vitro Diagnostics
- Biosensors
- Molecular Spectroscopy
- Microscopy
- In-Vivo Diagnostics
- Laser and LED Surgical Devices

TracePro is highly differentiated from other optical design software solution and ease of use.

Lambda Research Corporation

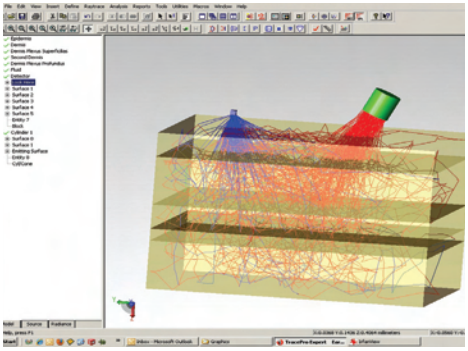
TracePro Software for the Design of Medical Devices

Optical Design for the Life Sciences

The inherently interdisciplinary nature of developing applications and instrumentation for the life sciences requires a high level of collaboration between scientists and engineers across the areas of optics, mechanics, materials, chemistry and biology. Designers also face increasingly shorter product development cycles and lower R&D budgets. To foster fundamental research and realize product innovation in the life sciences, Lambda Research Corporation offers tools that not only facilitate optical design but facilitate the application development process by communicating design elements and system performance across disciplines.

TracePro

TracePro is a comprehensive, versatile software tool for modeling the propagation of light in imaging and non-imaging opto-mechanical systems. Models are created by importing from a lens design program or a CAD program or by directly creating the solid geometry in TracePro. Source rays propagate through the model with portions of the flux of each ray allocated for absorption, specular reflection and transmission, fluorescence and scattering.



Free Trial Offer!

For a 30 Day Trial Offer Visit
www.lambdares.com/trials

From the model, analyze:

- Light distributions in illumination and imaging systems
- Stray light, scattered light and aperture diffraction
- Throughput, loss, or system transmittance
- Flux absorbed by surfaces and bulk media
- Light scattering in biological tissue
- Polarization effects
- Fluorescence effects
- Birefringence effects

NEW Optical Source Interface

Now you can define and manage spectral and angular data for each unique source and combine different sources in a single raytrace. After raytracing, a plethora of visualization and analysis capabilities are available to analyze light distribution and fluorescence effects at any point in the opto-mechanical system.

The built-in interactive optimizer reduces design time dramatically compared to standard trial and error prototyping methods.

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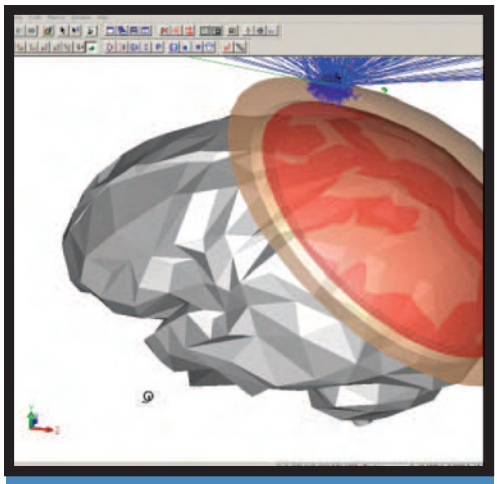
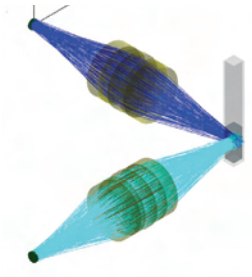


TracePro Software for the Design of Medical Devices

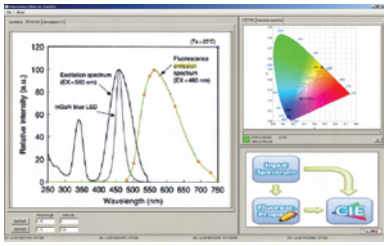
Fluorescence

Model fluorescence by importing absorption and emission curves, extinction coefficients and quantum efficiency values from stock fluorophore catalogs or from proprietary data. Enter concentration and wave band of interest. TracePro calculates excitation efficiency, path length, absorbance & absorption and propagates emission rays through the model. Analyze light distribution, scatter and fluorescence effects at any point in the opto-mechanical system.



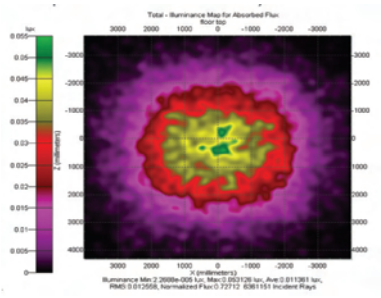
Fluorescent Dyes, Quantum Dots, Phosphors

Create TracePro material properties from actual measured excitation and emission spectra, extinction coefficients and quantum efficiencies or apply material properties from TracePro libraries of Invitrogen and Clontech fluorophores.



Light Scattering in Biological Tissue

Simulate light interaction with biological tissue using a choice of bulk scatter phase function. View energy propagation through tissue with the volume flux viewer. Slice a volume along any axis and analyze it for absorbed, incident or exiting radiation. Use TracePro's human tissue catalog or enter unique tissue characteristics including fluorescence properties.



Material Property and Component Libraries

Libraries of commercially available optical components, light sources, detectors, fluorophores and phosphors, biological tissue, mechanical surface properties are available.

Helpful Utilities

TracePro utilities assist in quickly and accurately creating and optimizing properties. Inputs include data from physical measurements, manufacturers' data and industry standards.

- Surface Source Property
- Fluorescence Property

TracePro Bridge

TracePro Bridge is an add-in to SolidWorks that allows you to apply and save optical properties directly to the SolidWorks model via the TracePro System Tree. To insure data integrity, a single model is used by both TracePro for ray tracing and optical analysis and by SolidWorks for mechanical design. With the Bridge, users significantly accelerate the iterative design process - all without sacrificing performance or functionality.

Maintenance & Support

Sustain the competitive advantage that TracePro delivers with an Annual Maintenance and Support Subscription. TracePro's ongoing innovations are provided throughout the year in software downloads that include a variety of updates and enhancements.

Training Classes

Training classes assist current and prospective users with their optical design and analysis challenges. Explore the power and versatility of TracePro, maximize the investment, and draw on the technical expertise and industry-specific knowledge of TracePro instructors.

Webinars & Videos

Lambda Research engineers are now posting webinars and videos on key topics to help you better use TracePro. Visit our webinar and videos section from our home page to view the latest presentations.

TracePro BRIDGE For SolidWorks®

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