



RSoft Design Group's GratingMOD Enables Simulation Of Photonic Gratings With Complex Profiles

Users Can Simulate, Tune, And Test Complex Grating-Assisted Photonic Devices And Circuits Before Fabrication

March 24, 2003 — Atlanta, GA — RSoft Design Group, Inc.

(<http://www.rsoftdesign.com>) today announced the immediate availability of *GratingMOD*[™] 1.0. *GratingMOD* is a general design tool for complicated fiber and integrated waveguide grating devices, and it is capable of analyzing known grating structures and synthesizing the grating structures from desired or measured spectra. *GratingMOD* is well-suited to a variety of photonic applications including grating-based WDM components such as dispersion compensators, (de)multiplexers, add/drop filters, amplifier gain equalizer and wavelength converters, and grating-based sensors for medical and security applications.

GratingMOD's analysis abilities are based on coupled mode theory. It can accommodate any type of waveguide or fiber transverse profile, since it incorporates the user-friendly and versatile CAD interface of *BeamPROP*[™], a premier design package for integrated and fiber-optic waveguide devices and circuits also from RSoft. *GratingMOD* includes a complete, fully functional mode solver, which can handle slab and fiber structures in addition to waveguides with arbitrary cross-sections. Other advanced analysis features include predefined and user-defined chirp and apodization for longitudinal grating structure, and extensive post-processing for spectrum analysis.

For synthesizing grating structures, *GratingMOD* uses an augmented Layer-Peeling technique. Sophisticated preconditioning features allow for the modification of the input spectrum in order to create a realizable spectrum. The results of synthesis simulation can be used to create the physical grating structure in the *BeamPROP* CAD interface for further analysis and mask layout purposes.

Because it shares the same CAD interface and utilizes efficient and specific coupled-mode methods, *GratingMOD* is a synergistic addition to RSoft's component-level design suite (which also includes *BeamPROP*, *FullWAVE*[™], *BandSOLVE*[™], and *LaserMOD*[™]). Once designers create and analyze the grating structure in *GratingMOD*, the same design layout can be directly simulated in *BeamPROP* and *FullWAVE* for other aspects of the same structure — such as coupling loss and time-domain response with beam propagation or finite-difference time domain methods. *GratingMOD* can also be easily used with *BeamPROP* and *FullWAVE* for hybrid simulation of a multiple component module.

GratingMOD 1.0 is available now and is being demonstrated at OFC 2003 in RSoft's booth, #2862. RSoft also invites OFC attendees to a demonstration and question and answer session on *GratingMOD* on Wednesday, March 26 at 1 PM in meeting room B315.

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About RSoft Design Group, Inc.

Offering a comprehensive suite of design and business analysis software solutions to the telecommunications and photonics industries, RSoft Design Group is the only company that provides a full range of simulation and planning software and services across the entire component to network-level hierarchy. The company's award-winning products are used by researchers, manufacturers, systems integrators, and service providers to address design challenges ranging from the physics of component design to the business implications of planning wired and wireless networks. RSoft Design Group, Inc. is a privately held corporation with software development offices in New York, New Jersey, Illinois and Silicon Valley, and global marketing operations in the Pacific Rim, Europe, and the Middle East. For more information, visit www.rsoftdesign.com.

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