LIEKKI^{TM} APPLICATION DESIGNER v3.3

LIEKKI^{TM} application designer (LAD) is a versatile design tool for fiber applications providing a strong platform for simulating and optimizing fiber amplifiers, amplify spontaneous emission (ASE) sources, and fiber laser systems. The software is based on precise algorithms that account for all the reflections in the system – especially crucial for accurate laser and ASE light source simulations. The simulation engine also accurately accounts for large mode area and highly doped fibers.

LAD v3.3 has an improved calculation algorithm that reduces the calculation time for systems having high reflectivity components, like fiber lasers. Other improvements include: better Monte Carlo analysis capability (very important when analyzing the manufacturability and tolerance sensitivity of a design), independent control of propagation modes in multimode analysis, and more keyboard shortcuts. LAD v3.3 is fully compatible with RSoft's OptSim software.

These comes in addition to the existing features: transient analysis, SBS and SRS threshold estimations, inversion level calculation, Monte Carlo simulation, user defined refractive index profile, bending effects, etc. that make the LIEKKI^{TM} Application Designer a very powerful tool for simulating high power continuous-wave (CW) and pulsed lasers.

LAD supports the full application design and analysis process from early research, prototype and pilot stage to full volume production. The user LAD could be product designer, optical engineer, research scientist or student.

Software environment

- Operating system: Windows XP/ 2000/NT/98
- User Interface: GUI
- Language: English

Recommended PC configuration

- Processor: Pentium 1 GHz or faster
- 256 MB of RAM or higher
- 100 MB free hard disk space

Functionality

- CW simulation
- Transient simulation
- SBS and SRS threshold calculation
- Active fibers radial core doping
- Inversion level calculation
- Iterations - automated multiple simulations
- Monte Carlo analysis
- RSoft's OptSim compatibility
- Distributed computing concurrent simulation on multiple computers over the local network for faster data processing
- User defined components - and interface for user defined active/passive simulation algorithms
- Multimode propagation
- User defined refractive index profile
- Bending effects

Available components

Active components

Erbium doped fiber

Double clad Erbium doped fiber

Ytterbium doped fiber

Double clad Ytterbium doped fiber

Passive components

Coupler

WDM

Isolator

Filter

Mirror

Fiber grating

Attenuator

Passive SM fibers

Passive DC fibers

Input and output interfaces for OptSim software

Sources

Pump

Pump DC

Signal

Fiber Junctions

Ideal connection

Splice

Connector

User-friendly graphic interface

- Graphical tools for layout design
- Various reporting tools
- Probe tool
- Customizable graphics
- Numerical data
- Export functions (ASCII, bitmap)