

Miniature Solid State Lasers for Microwave Photonics

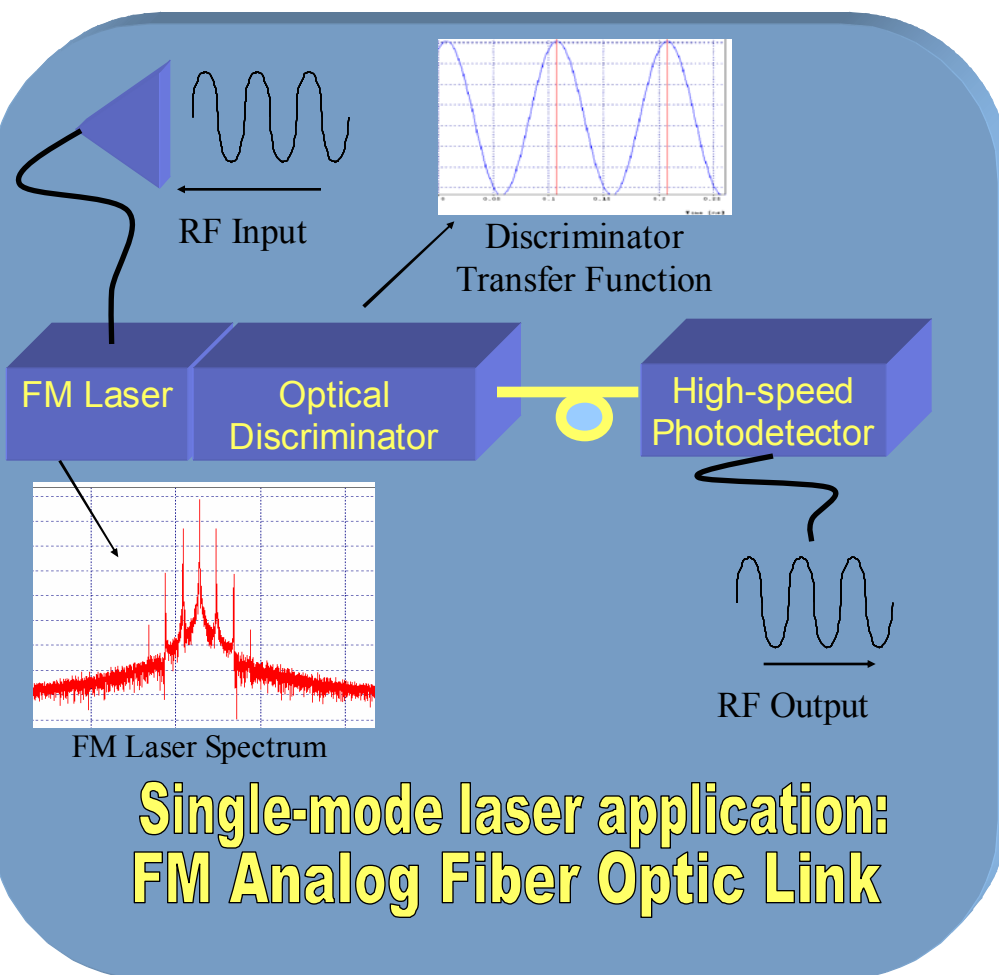
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Objective: Develop miniature solid-state lasers for microwave/millimeter wave signal generation and signal transmission applications.

Advantages: Optically pumped; low noise, narrow linewidth; high-power; simple construction

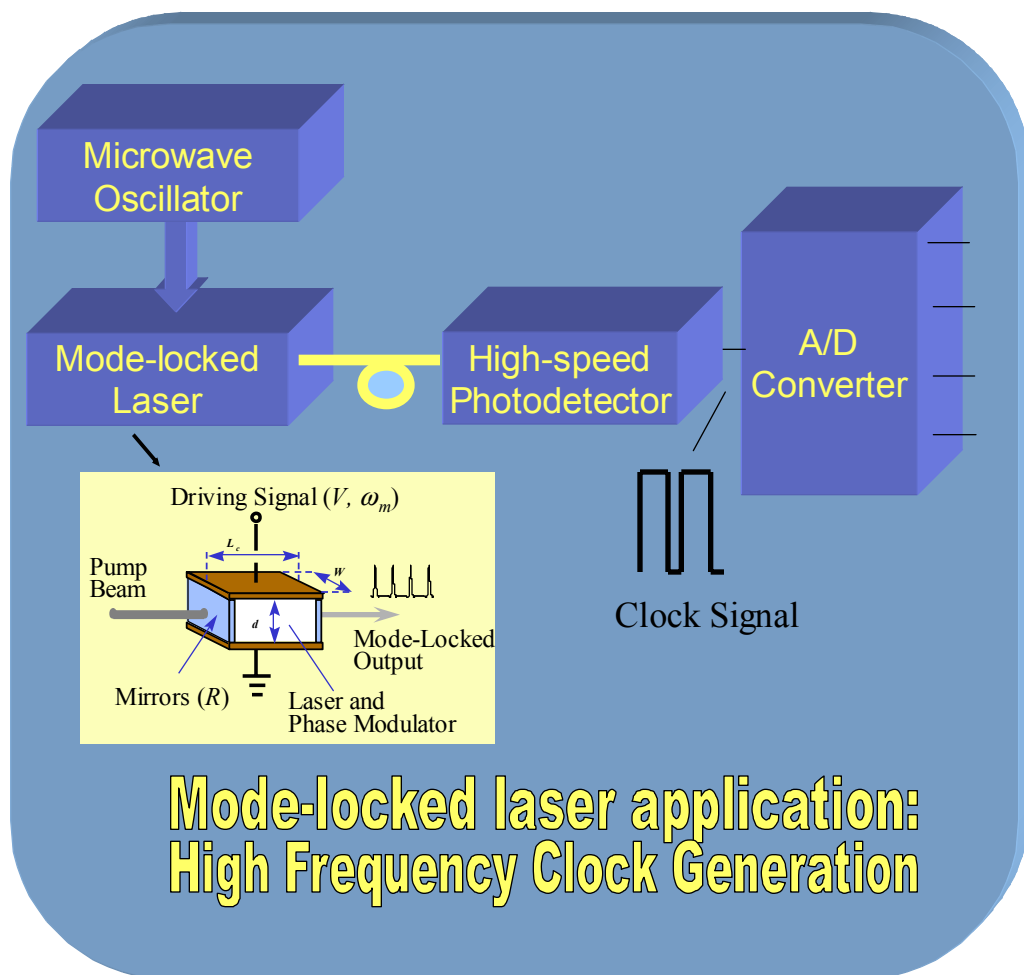
Single Mode Lasers

Applications: Coherent FM optical communications
FM analog fiber optic links



Mode-Locked Lasers

Applications: Fiber Radio,
A/D Clock generation
Optoelectronic Oscillators



Design Approach:

- Optical CAD (RSOFT) to support laser design
- Microwave 3D EM CAD (HFSS) for microwave design
- State-of-the art packaging
- Incorporation of new electro-optic materials
- Work towards higher levels of integration

