Polarized Chirped Soliton Oscillations in a Lossy Elliptically Low Birefringent Optical Fiber

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Using a variational method, a new model of the nonlinear propagation of optical solitons generated from semiconductor lasers through a lossy elliptically low birefringent fiber, is presented within the framework of a system of coupled nonlinear Schroedinger (CNLS) equations. This model demonstrates polarized soliton oscillations in a lossy elliptically low birefringent fiber.

Key words: Solitons; Birefringence; Polarization; Optical Fiber.