Abstracts

Propagation Properties of Multilayer Thin-Film Polarization-Maintaining Optical 3-D Waveguide

H. Jui-Pang, T. Anada, S. Nakamura and T. Kobayashi. "Propagation Properties of Multilayer Thin-Film Polarization-Maintaining Optical 3-D Waveguide." 1991 MTT-S International Microwave Symposium Digest 91.2 (1991 Vol. II [MWSYM]): 615-618.

We propose a new single-mode and polarization-maintaining three-dimensional optical waveguide. The structure of the optical waveguide proposed here consists of lamination of very thin-films of two optical materials with different refractive indices and the rib-type waveguide for the confinement of the optical field in the vertical and horizontal direction respectively. The method of analysis is fundamentally based on the equivalent multi-mode transmission line model and the transverse resonance condition. By this method, the propagation properties of the guided wave for various structure parameters are investigated. Some new numerical and useful results are obtained.

❑ Return to main document.