Preliminary on dielectric planar wave guide

Andi Djalal Latief, author

Abstrak

ABSTRAK
Specific performance of an optical waveguide can be achieved by solving the eigen value equation of the respective waveguide. A numerical method to obtain dispersion characteristics of a planar waveguide has been executed on a computer program which run on IBM PC or its compatible with 640 KB memory. Coupler prism method was used to measure the waveguide parameters. A focused beam of TE or TM polarized mode of

He-Ne laser light is fed into the prism and enters the film of the waveguide. At coupling spot, where the beam strikes the prism base, the thickness C d7 and the refractive index (η2) of the waveguide was measured. Using the developed numerical method in this study, the dispersion characteristics of a three-layer and a four-layer waveguides with n1 = 1, n2 = 1.54, n3 = 1.447 and n1 = 1, n2 = 1. 5, n3 = 1.6 n4 = 1.447. respectively, have been obtained.

