Abstracts

Crosstalk Characteristics of Ti-LiNbO/sub 3/ Intersecting Waveguides and Their Application as TE/TM Mode Splitters

H. Nakajima, T. Horimatsu, M. Seino and I. Sawaki. "Crosstalk Characteristics of Ti-LiNbO/sub 3/ Intersecting Waveguides and Their Application as TE/TM Mode Splitters." 1982 Transactions on Microwave Theory and Techniques 30.4 (Apr. 1982 [T-MTT] (Joint Special Issue on Optical Guided Wave Technology)): 617-622.

Crosstalk characteristics of an intersecting waveguide are presented. Two straight channel waveguides which intersect at an angle of a few degrees on y-cut LiNbO/sub 3/ were fabricated by in-diffusion of Ti. Experimental results show that the crosstalk characteristics are determined by the refractive index change profile and the geometry of intersection associated with guided wave modes. In a special case, a TE/TM mode splitter was obtained by using the intersecting waveguide which provides adequate anisotropy by the change in refractive indices. Splitting ratio was 17 and 14 dB for the TE and TM modes, respectively.

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