Abstracts

Low-Loss Ti: LiNbO/sub 3/ Waveguide Bends at Lambda = 1.3 µm

W.J. Minford, S.K. Korotky and R.C. Alferness. "Low-Loss Ti: LiNbO/sub 3/ Waveguide Bends at Lambda = 1.3 µm." 1982 Transactions on Microwave Theory and Techniques 30.10 (Oct. 1982 [T-MTT] (Special Issue on Optical Guided Wave Technology)): 1790-1794.

Low-loss waveguide bends are necessary for many proposed integrated optical circuits. The bend loss associated with an S-shaped transition connecting offset 6 µm wide titanium-indiffused lithium niobate strip waveguides has been measured as a function of transition length and initial Ti metal thickness for 1.3 µm wavelength. Losses as low as 0.2 ± 0.2 dB have been achieved for a transition between offset parallel waveguides with a 0.1 mm lateral and 3.25 mm longitudinal separation. The bend loss is shown to be strongly dependent on the mode confinement and less sensitive to the shape of the transition curve.

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