

Abstracts

Propagation of Cladded Inhomogeneous Dielectric Waveguides

M. Hashimoto. "Propagation of Cladded Inhomogeneous Dielectric Waveguides." 1976 Transactions on Microwave Theory and Techniques 24.7 (Jul. 1976 [T-MTT]): 404-409.

An approximate theory on the propagation of modes in an arbitrarily inhomogeneous optical waveguide embedded in a homogeneous medium is presented. Simple formulas are given, whereby the propagation constants can be determined assuming that the analytic solution is known in the absence of cladding. The results obtained applying the theory to a truncated parabolic-index profile are shown to be in good agreement with those obtained by the rigorous analysis. The theory is also applied to the propagation of TE and TM waves in truncated near-parabolic-index media.

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