Abstracts

A Simple Coupled-Mode Analysis Method for Multiple-Core Optical Fiber and Coupled Dielectric Waveguide Structures (Dec. 1988 [T-MTT])

A simple method is proposed for the coupled-mode analysis of multiple-core optical fiber structures and coupled dielectric waveguide structures. The coupling coefficients between two adjacent cores are first estimated based on the point matching of boundary conditions on the surface of the two cores. The coupled-mode fields of the multiple-core structures are then approximated by using the fields of the two adjacent cores. Parameters calculated with this procedure are compared with those obtained from a more rigorous analysis.

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