Abstracts

Single-Mode Fiber Design for Minimum Dispersion (Short Papers)

P.S.M. Pires and D.A. Rogers. "Single-Mode Fiber Design for Minimum Dispersion (Short Papers)." 1983 Transactions on Microwave Theory and Techniques 31.11 (Nov. 1983 [T-MTT]): 959-962.

The value of the radius of the core of a single-mode step-index optical fiber for minimum dispersion is calculated with the normalized frequency in the range 1.0 <= V <= 2.5, using the approximation for the eigenvalue U proposed by Miyagi and Nishida. This calculation is made by solving the total dispersion equation for the core radius when the wavelength assigned is assumed to be that necessary for minimum total dispersion. The computational procedure presented is simple enough to be accomplished on a programmable calculator or microcomputer. This work makes possible the characterization, with reasonable precision, of the ideal fiber that should be used with the available optical source.

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