Abstracts

Pulse Broadening in Multimode Optical Fibers with Large Delta n/n. Numerical Results

J.A. Arnaud. "Pulse Broadening in Multimode Optical Fibers with Large Delta n/n. Numerical Results." 1976 MTT-S International Microwave Symposium Digest of Technical Papers 76.1 (1976 [MWSYM]): 368-370.

The rms impulse response width of germania doped fibers having power-law profiles at the carrier wavelength is evaluated with the help of a numerical method. For Delta n/n x 0.02, the numerical result exceeds by more than one order of magnitude that obtained from an analytical formula based on the assumption that dn^2 / d lambda varies linearly with n^2. Our numerical technique is based on scalar ray optics. It is applicable to any fiber having a large V-number and a smooth profile.

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