

Abstracts

Effect of Lossy Cladding on Modal Dispersion Characteristics of Parabolic-Index Fiber

Y. Masaki, M. Matsuura and N. Kumagai. "Effect of Lossy Cladding on Modal Dispersion Characteristics of Parabolic-Index Fiber." 1978 Transactions on Microwave Theory and Techniques 26.11 (Nov. 1978 [T-MTT]): 852-855.

The influence of the cladding on the modal dispersion characteristics of a multimode fiber has been studied for the special case of a lossless fiber. In this paper, we consider a multimode fiber with a lossy cladding and explain the influence of the cladding loss on the modal dispersion characteristics of the fiber. We adopt a standard deviation of group delay of guided modes to estimate the modal dispersion behavior of the fiber. We conclude that a lossy cladding improves the modal dispersion characteristics in the case of the parabolic-index fiber.

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