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Analysis of reflectometric measurements losses of spliced single mode telecommunication fibers with significantly different parameters

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Keywords

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Abstract

In this paper there have been presented theoretical and basing on experiments analysis of one-way and two-way reflectometric measurements of spliced single mode telecommunication fibers with different refractive index profiles, received in various combinations of joints. In the analysis the dependence of one-way and two-way reflectometric measurements of splice loss on the mode field radii quotient and on the shift of axes of the spliced fibers as a function of measurement wavelength has been taken into account. On the basis of one-way reflectometric measurements a method explicitly proving the existence of a transient area in the spliced fibers has been presented.



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