

The Distortion of Square-Shaped Pulses by Dispersive Optical Fibres

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Abstract

There have been numerous reports on the distortions suffered by gaussian-shaped pulses transmitted through dispersive optical fibres. Such distortions are in the form of pulse broadening due to second-order fibre dispersion and the breakdown of the transmitted pulses into multiple pulses due to third-order dispersion. In this paper, the distortions suffered by square-shaped pulses transmitted through dispersive optical fibres are investigated. It is shown that square-shaped pulses suffer the same kinds of distortions as gaussian-shaped pulses.