Abstract

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Dispersion Compensation Using Linearly Chirped Polymer Fiber Bragg Grating

A polymer fiber Bragg grating is modeled and investigated as a dispersion compensator using linearly chirped grating at different strain values. The obtained dispersion for the grating cancels the fiber dispersion, resulting in dispersion compensation in the fiber channel. The study includes the effect of the modulation depth on the grating reflectivity and the apodization profile effect on the maximum allowed length of the fiber Bragg grating.