

Abstract

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Dispersion Compensation Using Far off Resonance Chirped AFBG: Comparison between Two Chirping Techniques

A dispersion compensator is designed using far off resonance a chirped apodized fiber Bragg grating (AFBG) in transmission. A comparison for the results obtained by two chirping techniques has been accomplished using different apodization profiles at linearly chirped apodized far off resonance fiber Bragg gratings (FBGs). Chirping is made using the two beam interference fringe spacing and the ultraviolet (UV) phase mask techniques. Better results (higher bandwidths) are obtained by the UV phase mask technique, especially at the positive hyperbolic tangent apodization profile.