

Abstract

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AFBG for Dispersion Compensation in Transmission: Effect of Parameters of the Two Beam Interference Fringe Technique

In this paper, the dispersion compensation in transmission is modeled and investigated using apodized fiber Bragg grating (AFBG). The two-beam interferometer is used in AFBG manufacture. The effect of different interferometer parameters is studied for large bandwidth transmission at a zero eye closure penalty with linearly chirped gratings. The parameters under investigation for only one arm of the interferometer are d (arm length), the angle θ (beam angle) and λ (the writing wavelength). Eight different apodization profiles are studied including their effects on the performance of the compensator.