

DISPERSION COMPENSATION IN OPTICAL COMMUNICATION USING LINEAR CHIRPED FIBER BRAGG GRATING

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Abstract

As we know, the telecommunications is becoming more important for human life. It is developing and becoming very an important industry for the development of the country. Along with the development of industry telecommunication, optical transmission network was born to satisfy the higher demands of people as greater bandwidth, higher speeds and higher reliability. Simultaneously there are many factors affect the quality of the optical network as attenuation, dispersion and nonlinear effects.

Dispersion in single-mode optical fiber makes increase the bit error rate, limit speed and transmission distance of network. This is a very important problem need to be solved.

In my thesis, I have presented a method to compensate the dispersion in an optical transmission system using linear Chirped Fiber Bragg grating (FBG). Today, This method is widely used and bring highly effective.

Keywords : Dispersion compensation, linear chirped FBG.