

POLARIZATION MODE DISPERSION COMPENSATION IN WDM SYSTEM USING FIBER BRAGG GRATING

AMANDEEP KAUR & NEETU GUPTA

Assistant Professor, Department of ECE, GIMET, Amritsar, Punjab, India

ABSTRACT

In this paper, the polarization mode dispersion in eight channel WDM system is evaluated by considering one even channel and one odd channel performance parameters like BER and Q-factor. As PMD effects transmission at high bit rates so it is compensated with the help of fiber bragg gratings at different distances by controlling the polarising angle with the help of polarization controller at ellipticity $=+45/-45$, azimuth $=0$ corresponding to right hand/left hand circular polarization technique and analyse BER, Q-factor and eye diagram of WDM system. The overall results shows improvements in performance of WDM system.

KEYWORDS: Bit Error Rate (BER), Eye Diagram, Polarization Controller, Polarization Mode Dispersion (PMD), Polarization Schemes, Wavelength Division Multiplexing (WDM), Fiber Bragg Grating (FBG)