

Impact of Hybrid Optical Amplifiers on 16 Channel Wavelength Division Multiplexed System

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Abstract : This paper addresses the different configurations used of optical amplifiers with 16 channels in Wavelength Division Multiplexed system. The systems with 16 channels have been simulated for evaluation of various parameters; Bit Error Rate, Quality Factor, for threshold values for a range of wavelength from 1471 nm to 1611 nm. Comparison of various combination of configurations have been analyzed with EDFA and FRA but EDFA-FRA configuration performance has been found satisfactory in terms of performance indices and stable region. The paper also compared various parameters quantized with different configurations individually. It has been found that Q factor has high value with less value of BER and high resolution for EDFA-FRA configuration.

Keywords : EDFA, FRA, WDM, Q factor, BER

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