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| **Title:** | Investigating the Q-factor and BER of a WDM system in Optical Fiber Communication Network by using SOA. | | |
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| **Abstract:** |  |
| This paper represents the analysis of Quality-factor and Bit Error Rate of an Optical signal in WDM system of a Fiber Optic communication network by using SOA. Vertical Cavity Surface Emitting Laser (VCSEL) is used as a transmitter. It is observed that by varying the frequency of bandwidth up to 34GHz a low BER with a high Q-factor is obtained. At 34GHz bandwidth maximum Q-factor of 13.1248 and minimum BER of 1.16972e-039 is obtained for 100km optical fiber length. | |