

Performance Analysis of Vertical Cavity Surface Emitting Laser and Distributed Feedback Laser for Community Access Television

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Abstract : CATV transmission systems have altered from old cable based one-way analog video transmission to two ways hybrid fiber transmission. The use of optical fiber reduces the RF amplifiers in the transmission, high transmission power or lower fiber transmission losses are required to increase system capability. This paper evaluates and compares Distributed Feedback (DFB) laser and Vertical Cavity Surface Emitting Laser (VCSEL) for CATV transmission. The simulation results exhibit the better performer among both lasers taking into consideration the parameters chosen for evaluation.

Keywords : Distributed Feedback (DFB), Vertical Cavity Surface Emitting Laser (VCSEL), Community Access Television (CATV), Composite Second Order (CSO), Composite Triple Beat (CTB), RF

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