

Research on solutions to improve transmission quality of optical communication systems using combined WDM and EDFA

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Abstract: In the context of increasing demand for information transmission speed, this topic focuses on researching solutions to improve transmission quality in optical communication systems. The objective of the work is to build a system combining Wavelength Division Multiplexing (WDM) and Erbium-Doped Fiber Amplifier (EDFA) to optimize transmission performance. Through theoretical and experimental research, the topic is expected to provide specific recommendations on system design and application deployment methods to enhance the quality of optical information services.

Keywords: WDM, EDFA, Transmission optimization, Optical communication system, Experimental research