

Design and evaluation of optical fiber communication link based on power budget and rise time

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Abstract: This topic focuses on the design and evaluation of the effectiveness of an information transmission system using optical fiber. The context for proposing the topic is based on the rapid development of modern data transmission technology, which requires a solution to optimize power usage over time. The objective is to build and test an optical fiber information conversion system aimed at enhancing the performance of communication network utilization. The research method combines theory and experimentation to verify the applicability of the proposed solution. Expected results will demonstrate the superiority of this approach in improving the quality of information transmission services, while contributing to the development of modern data transmission technology.

Keywords: Optical fiber, Power consumption, Rise time, Information transmission, Experimental research