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Test methods for gain transient parameters – Single channel optical amplifiers in gain control

Summary

Recently, optical transmission capacity is developed by increasing channels of Wavelength Division Multiplexing (WDM), and by introducing distributed Raman amplification technology, etc. Optical amplifiers are used variously in backbone/metro and access network where a clad pump type high-power optical amplifiers for Cable Television (CATV) are introduced commercially.

In access network, single channel optical amplifiers controlled output constant are often used because of the smaller transmission capacity, and standardization of test method for transient parameter for those amplifiers was established in IEC. On the other hand, test methods for transient parameter for single channel optical amplifiers controlled gain constant have not been standardized yet.

In this standardization, test methods for gain transient parameters of single channel optical amplifiers in gain control are defined. This standardization defines requirements on test apparatus performance, test procedure, data analysis of transient response test results, and reporting conditions and data of the test results.