

OITDA DM 01 (201x Ed. 1)

Measurement methods of dynamic crosstalk for $1 \times N$ fixed-grid wavelength selective switches

Summary

WSSs (Wavelength Selective Switches) having multi-functionality, such as optical port switching and channel attenuation have been deployed in various ROADMs (Reconfigurable Optical Add Drop Multiplexing) devices to support flexible optical transport networks.

Most of the ROADM performances, including the network capacity and the transmission distance are dominated by the WSS performance. In particular, dynamic crosstalks in the WSS have been reported on the affection on the optical cross-connect parts in the ROADM devices.

In this standardization, measurement methods for a different channel dynamic crosstalk on a de-multiplexing WSS and a same channel dynamic crosstalk on a multiplexing WSS are defined on a port configuration of $1 \times N$ WSS in the ITU-T (International Telecommunication Union Telecommunication Standardization Sector) fixed grid 50 GHz and 100 GHz channels. This standardization defines requirements on measurement apparatus, measurement procedure, measurement example of noise terms, calculation and reporting on the measurement results.