

Title (en)

FREE-SPACE OPTICAL SYSTEMS FOR WAVELENGTH SWITCHING AND SPECTRAL MONITORING APPLICATIONS

Title (de)

OPTISCHE FREIRAUMSYSTEME FÜR WELLENLÄNGENVERMITTLUNGS- UND SPEKTRALE ÜBERWACHUNGSANWENDUNGEN

Title (fr)

SYSTEMES OPTIQUES DANS L'ESPACE LIBRE POUR COMMUTATION LAMBDA ET APPLICATIONS DE SURVEILLANCE DU SPECTRE

Publication

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Application

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Abstract (en)

[origin: WO03025630A2] This invention provides a novel method and apparatus which use a wavelength-dispersing means such as a diffraction grating to spatially separate a multi-wavelength optical signal along with a reference signal by wavelength into multiple spectral channels and a reference spectral component in a spectral array with a predetermined relative alignment. By aligning the reference spectral component at a predetermined location, the spectral channels simultaneously impinge onto designated locations, e.g., on an array of beam-receiving elements positioned in accordance with the spectral array. The reference spectral component may be further maintained at the predetermined location by way of servo-control, thereby ensuring that the spectral channels stay aligned at the designated locations. The present invention can be used to construct a new line of servo-based optical systems, including spectral power monitors and optical multiplexers/demultiplexers, for WDM optical networking applications.

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