Tapered design of wavelength division multiplexing devices

This article introduces topology optimization theory into the design of topological photonic crystals, aiming to achieve the inverse design of microwave wavelength division multiplexers.

In conclusion, group velocity effects in thin-film filters can be utilized to obtain compact, cost-effective wavelength multiplexing and demultiplexing devices that use a single multilayer structure to separate ...

igned WDM device has two channels at the wavelength regions of 1470-1523 nm and 1548- 609 nm, respectively. The transmittance contrast of the two channels can be as high as 22.4 dB and 24.9 dB. ...

The authors demonstrate a cutting-edge THz signal processing on-chip active wavelength division multiplexer (WDM) system operating at THz frequencies.

Herein, we demonstrate a breakthrough in an ultradensely integrated hybrid wavelength/mode/polarization-division-multiplexing photonic circuit based on an inverse-designed ...

An interferometric device uses 2 interfering paths of different lengths to resolve wavelengths Typical configuration: 2 3-dB directional couplers connected with 2 paths having different lengths ...

In this work, we propose an on-chip multi-dimensional (de)multiplexer for mode and wavelength channels via designing tapered adiabatic micro-ring resonators (TAMR), and perform a 4 ...

We demonstrate a multi-channel silicon photonic transmitter based on wavelength division multiplexing (WDM) and mode division multiplexing (MDM). The light source is realized by a silicon...

In this paper we demonstrate an on-chip two-mode division multiplexing circuit using a tapered DC-based TE0& TE1 multiplexer and demultiplexer. The device can furthermore be fabricated by a simple ...

The rapid growth in demand for high-capacity telecommunication links, and the speed limitation of single-wavelength links, has resulted in an extraordinary incr

Web: https://maxtools.co.za