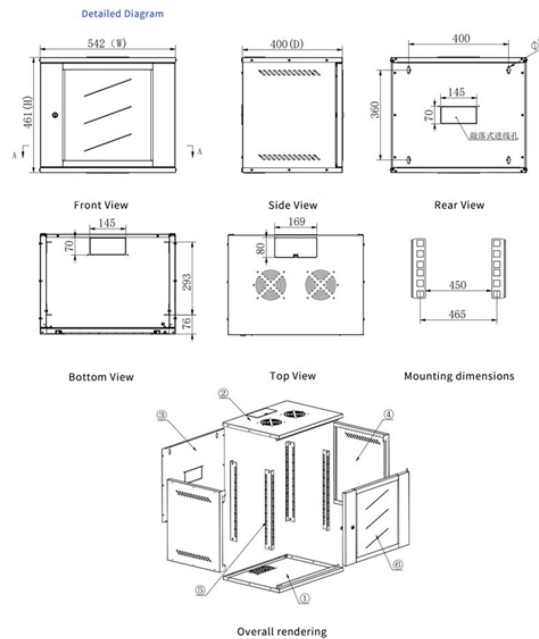


# Wavelength Division Multiplexer Chip-Level



## Overview

This work experimentally demonstrates gate-tuning on-chip WDM filters for the first time with large wavelength coverage for the entire channel spacing using a Si-MRR array driven by high mobility titanium-doped indium oxide (ITiO) gates. In fiber-optic communications, wavelength-division multiplexing (WDM) is a technology which multiplexes a number of optical carrier signals onto a single optical fiber by using different wavelengths (i. This technique enables bidirectional communications over a. Wavelength division multiplexers are fundamental to the functioning and performance of integrated photonic circuits, with applications ranging from optical interconnects to sensing and quantum technologies. However, the resonant wavelength of Si-MRRs is very sensitive to temperature fluctuations and fabrication process.

## Wavelength Division Multiplexer Chip-Level



Overview Systems Coarse WDM Dense WDM Enhanced WDM Shortwave WDM Transceivers versus transponders See also



In this work, a low-loss two-channel wavelength division multiplexer (WDM) at the resonant pumping and emission wavelengths ( $\sim 1480$  nm and 1530–1560 nm) of erbium ions based on angled multimode ...



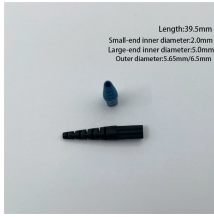
Herein, wavelength (de)multiplexers are experimentally demonstrated in the subwavelength-structured metamaterials regime with highly compact footprints.



We present a novel multi-channel wavelength division (de)multiplexer (WDM) with unprecedented compactness and efficiency. To be more precise, our WDMs with four, five, and six ...



Here we propose a scalable on-chip parallel IM-DD data transmission system enabled by a single-soliton Kerr microcomb and a reconfigurable microring resonator-based CD compensator. ...



We present a novel multi-channel wavelength division (de)multiplexer (WDM) with unprecedented compactness and efficiency. To be more precise, our WDMs with four, five, and six ...



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



To address the grand challenge faced by future large-scale optical interconnect systems, we demonstrate in this article the first gate-tuning on-chip WDM filters showing a large wavelength ...



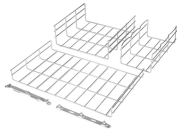
An on-chip 64-channel hybrid (de)multiplexer for wavelength-division multiplexing (WDM) and mode-division multiplexing (MDM) is designed and demonstrated on a 220 nm SOI platform for ...



Normal WDM (sometimes called BWDM) uses the two normal wavelengths 1310 and 1550 nm on one fiber. Coarse WDM provides up to 16 channels across multiple transmission windows of silica fibers. ...



Here, an on-chip approach to differentiate wavelength components is proposed in the visible regime for wavelength division multiplexing (WDM).



Here, we develop a novel design approach that co-optimizes inverse-designed wavelength division multiplexers and distributed Bragg gratings to achieve ultra-low crosstalk without compromising ...

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