

Customization Process for Low-Loss AWG Wavelength Division Multiplexers for Surveillance Use



Overview

We describe the progress in integrated wavelength-division multiplexing (WDM) photoreceivers that feature low-loss arrayed waveguide gratings (AWGs) for high-speed throughput of up to 100 Gbit/s and beyond. A super-compact arrayed waveguide grating (AWG) wavelength division multiplexer based on a sub-wavelength grating is provided and includes an input waveguide, a first planar waveguide, an arrayed waveguide, a second planar waveguide, and the output waveguide that are sequentially connected. An INTERCONNECT compact model is initially used for quick analysis.

Customization Process for Low-Loss AWG Wavelength Division Multiplexers



We successfully fabricated the proposed AWG devices which have the characteristics of small size, low insertion loss, and stable performance, and the discrepancies in the fabrication and ...



In this work, we demonstrated a low-loss AWG with 100 output channels and a channel spacing of 50 pm based on a z-cut thin-film lithium niobate platform. The length increment of adjacent arrayed ...



In this study, two SiN-based Arrayed Waveguide Gratings (AWGs) were designed and fabricated: one serving as a wavelength multiplexer (MUX) and the other as a demultiplexer ...



This document summarizes key aspects in the design and operation of Arrayed Waveguide Gratings (AWGs) which are essential components for Dense ...



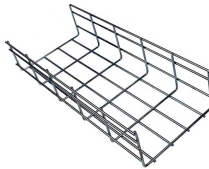
In this work, a 4-channel polarization-independent arrayed waveguide grating (AWG) was designed for CWDM systems, which was realized by ridge waveguides on the SOI platform with 3 ...



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In this review, an overview of the available methods for improving the bandwidth, spectral resolution, and transmission function shape of AWGs is provided. The working principle as well as ...



Array waveguide gratings (AWGs) have been widely used in multi-purpose and multi-functional integrated photonic devices for Microwave photonics (MWP) systems. In this paper, we ...



This document summarizes key aspects in the design and operation of Arrayed Waveguide Gratings (AWGs) which are essential components for Dense Wavelength Division Multiplexing (DWDM) and ...



We start with the eigenmode solver to calculate the modal properties of a single waveguide and a slab. This is followed by the varFDTD simulation to further characterize the properties of beam that gets ...

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