

## Performance Comparison of New Arrayed Waveguide Grating with Comparative Models



### Overview

This study presents a comprehensive performance analysis and design optimization of AWG-based interleavers through systematic simulation and theoretical investigation. 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 compare the effect of output waveguide configurations on the performance of AWGs. The AWG with an output waveguide. Abstract: Arrayed Waveguide Gratings (AWGs) are essential components in modern Dense Wavelength Division Multiplexing (DWDM) systems, enabling high-density wavelength routing with precise spectral control.

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This leads to the first implementation of arrayed waveguide gratings on X-cut thin-film lithium niobate with various configurations and high-performances.



We calculate the effective and group indices of the waveguide and slab using the eigenmode solver (FDE). These results will be used as input parameters in the next steps for INTERCONNECT and ...



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We compare the performance of silicon-based arrayed waveguide gratings (AWGs) with star couplers of Rowland and Confocal configurations, respectively, for both TE and TM polarizations.



Abstract A high-performance silicon arrayed-waveguide grating (AWG) with 0.4-nm channel spacing for dense wavelength-division multiplexing systems is designed and realized ...



We present a 0.4-nm channel spacing silicon arrayed-waveguide grating with Euler-bend-assisted broadened arrayed waveguides and shallowly-etched transition regi



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 the...



There are several examples of custom AWG designs in the literature aiming for improved system performance. In this review, an overview of the available methods for improving the ...

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