Gratings and Arrayed Waveguides

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.

Arrayed waveguide gratings (AWG) are commonly used as optical (de)multiplexers in wavelength division multiplexed (WDM) systems. These devices are capable of multiplexing many wavelengths ...

Another highly effective method to reduce the insertion loss of an AWG, which is based on the same idea of tapering, has been patented by Lucent: A segmented transition region is inserted between ...

Explore the fundamentals of Arrayed Waveguide Gratings (AWGs) in optical fiber communication, their operation as optical MUX/DEMUX devices, characteristics, and applications in DWDM and FTTx ...

Arrayed waveguide gratings are optical filter or multiplexer devices based on arrays of waveguides.

Spectral resolution in AWGs can be enhanced by increasing the interference order of the grating or the number of arrayed waveguides, enabling applications in various optical systems.

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 ...

A promising photonic technology to achieve these requirements is Arrayed Waveguide Gratings (AWGs). We have developed our first generation of AWG devices using a silica-on-silicon substrate ...

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 advantages ...

These design of these devices are based on an array of and demultiplexers in a Wavelength Division Multiplexed (WDM) waveguides with both imaging and dispersive properties.

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