Optoelectronic integrated beam splitter

Therefore, the applications of on-chip beam splitters are discussed from three aspects: related integrated optical devices, large-scale quantum chips and optoelectronic hybrid integrated chips.

Abstract: In this study, we propose a hybrid polymer-based phase-tunable beam splitter designed to offer dynamic control over on-chip light distribution. Utilizing the transfer matrix method on this ...

Our devices, consisting of two coupled ring-resonators, provide frequency shifts as high as 28 gigahertz with an on-chip conversion efficiency of approximately 90 per cent. Importantly, the ...

In this paper, we propose a compact structure consisting of silicon nanoantennas and waveguides for controlling the conversion of linearly polarized light in free space into guided waves ...

In this paper we fabricate a robust and simple broadband integrated beam splitter based on lithium niobate with a splitting ratio achromatic over more than 130 nm.

Beamsplitters are optical components used to split input light into two separate parts. Beamsplitters are common components in laser or illumination systems. ...

We design and investigate these beam splitters by using the beam propagation method (BPM) and the RSoft CAD BeamPROP solver is used for model design and characterization.

We present an extensive study of an ultra-compact grating-based beam splitter suitable for photonic integrated circuits (PICs) which have stringent density requirements.

Design and simulation process for a multimode interference (MMI) device based on a silicon nitride platform presented. The objective is to achieve a low-loss MMI model as a beam ...

This on-chip integration of power beam splitter is believed has promising potential to drive the development of new compact optical systems and advance integrated photonic applications.

The SPIE Digital Library offers a wide range of resources on beam splitters, focusing on their design, applications, and performance across various optical systems.

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