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How to solve the mutual interference of beam splitters

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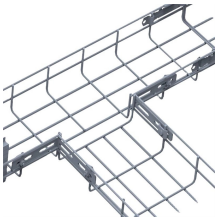
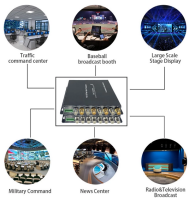


We aim to find design rules that can be reliably used for on-chip efficient beam splitters without the need for time-consuming and computationally expensive simulations for each individual component.

Classically, a 50/50 beamsplitter splits the intensity of an incoming beam in two. Quantum-mechanically, it will not split each photon in two, but it will transmit or reflect each photon with 50% probability (see ...



eam splitters. In this article, we analyze the most general two-port beam splitter which can be lossy, asymmetric and unbalanced, and find the non-trivial constraints on the m

In this paper, we theoretically propose and demonstrate a non-unitary beam-splitter (BS) by introducing coupling losses at the interface of the plasmonic waveguide and multimode dielectric ...

The presence of quantum Rayleigh scattering, or spontaneous emission, inside a dielectric medium such as a beam splitter or an interferometric filter prevents a single photon from propagating in a ...

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We presented results demonstrating fourth-order interference of mutually incoherent classical laser pulses in a multi-port beam splitter device, embedded within a multi-core optical fiber.

We give a classical argument based on a Mach-Zehnder interferometer, shown in the figure below, that there is a 90 phase shift between the reflected and transmitted beams in a lossless, symmetric beam ...

For example, in the classic double-slit experiment, photons that pass through two slits interfere with each other and form an interference pattern on a screen. The interference pattern ...

Abstract: We present experimental evidence for two-photon interference (TPI) in a variation of the Hong-Ou-Mandel experiment in which photons with different polarizations enter only one of the beam ...

In this article, multi-photon interference using the original HOM interferometer setup is analyzed. More specifically, for any photon number state with Gaussian spectral distribution entering ...

In this paper, we demonstrate a single stage optical beam splitter with large number of outputs that avoids multiple insertion loss by using a 1x12 MMI on SOI with a rib waveguide structure.

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