

The beam splitter has played numerous roles in many aspects of optics. For example, in quantum information the beam splitter plays essential roles in teleportation, bell measurements, entanglement ...

In this paper, by combining the transform relation of the beam splitter operator and the technique of integration within the product of the operator, we present the coherent state ...

Matrices provide a practical and elegant tool for describing the transformation properties of beam splitters and waveguide couplers acting on single-mode optical fields.

A beam splitter or beamsplitter is an optical device that splits a beam of light into a transmitted and a reflected beam. It is a crucial part of many optical experimental and measurement systems, such as ...

A lossless beam-splitter has certain (complex-valued) probability amplitudes for sending an incoming photon into one of two possible directions. We use elementary laws of classical and quantum optics ...

Abstract Abstract: Optical beam splitter (BS) is one of the basic linear elements in quantum optics, which is widely used in the preparation of quantum states. Based on the matrix transformation...

Jones reflection and transmission matrices representation for beam splitters, investigating reversibility and action on incident light amplitude and/or phase

Schematic representation of an optical beam splitter showing the notation for the field operators in the two input and two output arms.

Based on the idea of transition from classical optics to quantum optics we deduce the natural expressions of optical beam splitter (BS) and 2-cascaded BS operators in coherent state ...

A general method is provided for constructing Jones's reflection and transmission matrices of any beam splitter. Derivations are presented for the various known configurations.

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