

Where to find the beam splitter port

Article Overview

A beam splitter typically has two input ports and two output ports, which can be identified by the direction of incident light and the paths of transmitted and reflected beams.

Identifying Input and Output Ports

Cube beam splitters usually have a cube shape with two faces designated as input ports and the other two as output ports. For a symmetric 50/50 cube beam splitter, the input ports are often located on the bottom and left sides, while the output ports are on the top and right sides. Light entering an input port is partially transmitted and partially reflected, emerging from the corresponding output ports. Plate beam splitters are flat and thin, with one side coated to partially reflect light. The input port is the side where the incident beam strikes, and the output ports are the transmitted beam (continuing straight) and the reflected beam (deflected at an angle, usually 90° from the incident path).

Practical Steps to Locate Ports

- **Visual Inspection:** Look for the coated surface (for plate splitters) or the interface between prisms (for cube splitters). The coated or interface side usually faces the incoming light.
- **Trace the Beam Path:** Shine a low-power laser or light source at one face. The transmitted beam continues straight, while the reflected beam exits at an angle. These define the output ports.
- **Labeling Convention:** In experiments, ports are often labeled as 1 and 2 for inputs, and 3 and 4 for outputs. For example, if a photon enters input port 1, it can exit thr...

Article Content

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What Are Optical Beam Splitters?

What Are Optical Beam Splitters? Key Takeaways Beam splitters, essential for applications such as teleprompters and holograms,

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Beam Splitter

A beam splitter is defined as an optical device that effects a linear transformation of fields presented at two input ports, producing

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Beam Splitters

While most beam splitters have only two output ports, there are also beam splitters with multiple outputs. They are fabricated using

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Beam Splitter

8.11.1 The Beam Splitter The beam splitter is an optical device of great importance, effecting a linear transformation of fields

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Beam Splitter

Beam splitter BS 2 is a 50/50 beam splitter for a photon entering either of its entrance ports. Beam splitter BS 1 has transmission and

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3.1 Beam-splitters: physics against logic | Introduction to

3.1 Beam-splitters: physics against logic A symmetric beam-splitter is a cube of glass which reflects half

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Beam Splitters – optical power splitter, beamsplitter, thin

Beam splitters are devices for splitting a laser beam into two or more beams. There are different types,

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Selecting the Right Beamsplitter

Selecting the Right Beamsplitter Beamsplitters are optical components that split light into two directions,

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probabilities add themselves up. In case of a symmetric beam splitter, we can visualise the possible paths that the two photons can

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Diffractive beam splitter

A diffractive beam splitter can generate either a 1-dimensional beam array (1xN) or a 2-dimensional beam matrix (MxN), depending

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The Buyer's Guide to Beam Splitters | Blue Ridge Optics

Matching the beam splitter's specifications to the characteristics of the light source ensures optimal performance. This

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Beam Splitter Selection Guide

Our beam splitters are made from high grade glass material with laser grade surface flatness & surface quality for tighter tolerance

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Optical Beamsplitters Explained | Cube & Polarizing Types

A beam splitter, or beamsplitter, is an optical component used to divide incident light into two separate beams based on wavelength,

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Your Go-to Guide to Optical Splitter

The optical splitter is an optical power distribution device that splits one optical signal into multiple optical fiber signals

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Photonics 101

As the name suggests, a beam splitter refers to an optical device which is used to split or divide a beam of light into

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Optical Beamsplitter

A beamsplitter is an optical component used to split a beam of incident light into two parts in a laser or illumination system. Cube

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How Beamsplitters Work: Types, Mechanisms, and Applications

This article explains the working principles of beamsplitters, detailing how they divide a beam of light into two separate

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Beam Splitter Input-Output Relations

The elements of the beam splitter transformation matrix B are determined using the assumption that the beamsplitter is lossless.

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Optical Beamsplitters | Beamsplitter Selection | Edmund Optics

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What Is an Optical Splitter?

What's an optical splitter? How does the fiber optic splitter work? How many fiber splitter types? How to choose the

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Browse Beam Splitters and Combiners for fiber-optic light transport. Compare specs, vendors, and request quotes directly on FindLight.

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How do microscope beam splitters work? —

Splitter ratios Beam splitters can come with a variety of light ratios and adjustable settings.

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How Does a Beam Splitter Work? Types, Principles & Applications

Learn how beam splitters work, compare cube and plate designs, and explore applications in lasers, microscopy, and interferometry.

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Beamsplitters | Optics | DigiKey

Beamsplitters Beamsplitters (Beam Splitters) are components that split light at a specified point. These are used in various optic

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Action of a beam splitter. (a) Beam splitter with input

Action of a beam splitter. (a) Beam splitter with input ports labelled a and b, and output ports labelled c and

Contact Us

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