

What are some indoor expandable beam splitters



AI Overview

Indoor expandable beam splitters are optical devices that divide a single light beam into two or more beams with adjustable intensity ratios, enabling precise control of light distribution for experiments, imaging, and measurement systems.

Basic Function

A beam splitter is an optical component that splits an incident light beam into transmitted and reflected beams. This allows simultaneous use of the light along two separate paths, which is essential in applications like interferometry, microscopy, laser systems, and optical sensors. The splitting ratio, which determines how much light is reflected versus transmitted, can be fixed or adjustable depending on the design.

Expandable or Variable Beam Splitters

Indoor expandable beam splitters, also called variable beam splitters, allow continuous adjustment of the splitting ratio. This is typically achieved through:

- Rotating disks with gradient coatings, where the reflectance changes with the angular position on the disk.
- Combination of a rotatable half-wave plate and a polarizing beam splitter, which adjusts the polarization of the input beam relative to the splitter axes, thereby tuning the power distribution according to Malus' law. These mechanisms make it possible...

Article Content

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What is a Beam Splitter: Types And Applications

A beam splitter is a device used to separate or combine light. It is widely used in guiding light in optical systems,

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What are Beamsplitters?

Options range from laser beam combiners designed for specific laser wavelengths to broadband hot and cold mirrors for splitting

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Beam Splitters | Polarizing | Dichroic | LightMachinery

Beam splitters take on many forms; cubes, plates, hexagons, pentagons, polarizing, non -polarizing (usually somewhere in between),

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OptoSigma

There are two main types of beamsplitters, plate beamsplitter and cube beamsplitter and each has their own advantages. Some

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Beam splitter | Description, Example & Application

Beam splitters are typically characterized by their splitting ratio. The splitting ratio refers to the proportion of light that

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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 Splitters – Buyer's Guide & Supplier List | RP Photonics

This buyer's guide for beam splitters provides technical background, comparison of major types, selection criteria, and an overview of

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Beam splitter

A beam splitter or beamsplitter is an optical device that splits a beam of light into a transmitted and a

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How to Select a Beamsplitter

What is a Beamsplitter? A beamsplitter is an optical device that divides an incident beam of light into two parts: one part is

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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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Beam Splitters – optical power splitter, beamsplitter, thin-film ...

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

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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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What is a Beamsplitter?

A simple beam splitter consists of a square or rectangular glass sheet that is coated with a reflective material, while a

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Beam Splitters

When working with lasers, it is often necessary to split a laser beam into two or more defined partial beams. There are a variety of

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All You Need to Know About Beam Splitters

Explore the types, workings, and uses of beam splitters in high-tech devices.

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How Beam Splitters Work

A beam splitter is capable of introducing phase shifts and quantum superpositions, making them a core component of Quantum Key

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Selecting the Right Beamsplitter

For example, they are typically used in interferometers in order for a single beam to interfere with itself.

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Beam Splitter Selection Guide

Newport offers a wide variety of Beamsplitters in various shapes. Circular beamsplitters, plate beamsplitters and cube beamsplitters

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How does a beam splitter work? Common types and use cases

Understanding Beam Splitters Beam splitters are essential optical components used to divide a beam of light into two

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beamsplitters selection guide

Beamsplitters Selection Guide Beamsplitters selection Guide A beamsplitter is an optic that splits light into 2 directions. The split ratio

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Beam expander

Beam expanders are optical devices that take a collimated beam of light and expand its width (or, used in reverse, reduce its width).

Aug 26, 2025

Optical Beamsplitters | Beamsplitter Selection | Edmund Optics

Dichroic Beamsplitters, which split light by wavelength, are often used as laser beam combiners or as broadband hot or cold mirrors.

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Beam Expander Selection Guide

Not sure which beam expander will work best in your application? Check out EO's Beam Expander Selection Guide to easily

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Covering the Basics of Beamsplitters — Firebird Optics

Beam splitters are integral to most optical systems and are also used in interferometers, fiber

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Beam Splitters: Types and Applications

Beam splitters find their application in a diverse array of fields, from teleprompters to robotics, impacting various technologies we rely

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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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Thorlabs · Optical Beamsplitters

Pellicle beamsplitters provide excellent wavefront transmission properties while eliminating beam offset

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Optical Beam Splitter Guide: Cube, Plate & Polarizing Types

Beam splitter technologies can be categorized according to their construction and optical behavior, including cube beamsplitters,

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What are Beamsplitters?

Optical components that create two beams by splitting incident light are beamsplitters. Read more about the different types of

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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

To reduce loss of light due to absorption by the reflective coating, so-called "Swiss-cheese" beam-splitter

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Exploring Beam Splitters: Types and Applications

What Is a Beam Splitter? Working Principles, Types, and Applications Beam splitters play a critical role in

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All You Need to Know About Beam Splitters

This article explains how beam splitters work, their types, and their applications. Understanding the Beam Splitter

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A Brief Guide to Beamsplitters

What Is a Beamsplitter? Beamsplitters—also referred to as beam splitters or power splitters—are optical devices designed to split

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Beam expanders

Beam expanders are optical systems for increasing or decreasing the diameter of a laser beam. A beam expander can enlarge an

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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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Beam Splitters: Explained

The range of applications of diffractive beam splitters is very wide. Some typical areas include: Laser scribing and

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