

Various models of beam splitters



Summary of Content

Beam splitters come in various models including cube, plate, pellicle, crystal, Brewster, and displacement types, each designed for specific optical applications.

Cube Beam Splitters

Cube beam splitters are constructed from two right-angle prisms cemented together, with one hypotenuse surface coated to partially reflect light. They are widely used in interferometers and optical experiments due to their compact cubic shape and ability to split light with minimal beam displacement. Cube splitters can be polarizing or non-polarizing, depending on the coating and material used, and are often preferred for high-precision applications where alignment stability is critical .

Plate Beam Splitters

Plate beam splitters consist of a thin, flat glass plate coated on one surface to reflect a portion of the incident light while transmitting the rest. They are typically placed at a 45° angle of incidence and are available in polarizing and non-polarizing versions. Plate splitters are lightweight and suitable for space-constrained setups, but they can produce ghost reflections, which are mitigated using anti-reflective coatings or wedged substrates .

Pellicle Beam Splitters

Pellicle beam splitters use a thin membrane stretched across a frame to split light. They are extremely lightweight and introduce minimal optical path difference, making them ideal for high-speed or high-precision laser applications. Pellicles are particularly useful when avoiding multiple reflections or interference effects is important .

Article Content

Beam Splitter Selection Guide

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

Thorlabs · Beamsplitter Guide

For beamsplitters that separate beams by wavelength, see our selection of dichroic mirror / beamsplitters

Beam Splitter

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

What is a Beam Splitter?

A beam splitter or power splitter is an optical device that can split an incident light beam e.g. a laser beam into two or

Beam splitter

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

How Beam Splitters Work

The theory behind how a beam splitter works can be used to model quantum frequency transduction, even when the transduction

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,

Optical Beamsplitters Explained | Cube & Polarizing Types

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

Optical Beam Splitter Guide: Cube, Plate & Polarizing Types

Compare cube, plate, polarizing, and dichroic beam splitters for laser, imaging, spectroscopy, and photonics applications.

Covering the Basics of Beamsplitters — Firebird Optics

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

Beamsplitters Product Overview

To illustrate the effect of a non-planar beam splitter, we consider the reflection of a laser from a curved (A)

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

Beam splitter cubes can be used not only for simple light beams, but also for beams carrying images, e.g. in various types of

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

Beamsplitters Selection Guide

Beamsplitters Selection Guide: Types, Applications, and Key Criteria Beamsplitters are vital optical components in countless

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

Beam Splitters: Types, Applications, and Selection

Beam splitters are an essential component in modern optics. They play a critical role in

All You Need to Know About Beam Splitters

These seemingly simple devices are essential for the operation of various high-tech gadgets. This article explains

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.

Exploring Beam Splitters: Types and Applications

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

Beam Splitter Selection Guide

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

Understanding Beamsplitters: Types, Principles, and Applications

This article explores the fundamental principles and diverse applications of beamsplitters, detailing their different types

Thorlabs · Optical Beamsplitters

Our cube beamsplitters are available in polarizing or non-polarizing models. The pellicle and cube

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

beamsplitters selection guide

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

What Are Optical Beam Splitters?

Various types of beam splitters manipulate the path of a light beam, serving diverse applications in technology. Discover the different

Beam Splitters — Abridged Guide

Quick-reference guide for beam splitters — key equations, type comparison tables, Fresnel reflectance, polarizing designs, and a

Optical Beamsplitters

Optical beamsplitters are available in various designs such as plates, cubes and pentaprisms. Our

Understanding Beamsplitters: A Comprehensive Guide

Beamsplitters are primarily categorized into two types, polarizing and non-polarizing, each with its own

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

Beam Splitters

Understanding Beam Splitters: A Comprehensive Guide Beam splitters are essential optical devices used in various applications to

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://madibabayelectrical.co.za>

Email: sales@madibabayelectrical.co.za

Phone: +27 63 947 2185

Address: 15 Fredman Drive, Sandton, Johannesburg, 2196, South Africa

This document is for informational purposes only. Specifications subject to change without notice.

