

Cost of a 1-to-5 beam splitter

Article Overview

A 1-to-5 beam splitter typically costs between \$500 and \$3,000, depending on type, material, and precision.

Price Factors

The cost of a 1-to-5 beam splitter depends on several factors:

- o Type of splitter: Fiber optic splitters (common for 1-to-N configurations) are generally more expensive than free-space cube or plate splitters due to precision manufacturing and fiber coupling requirements .
- o Material and coatings: High-quality glass with anti-reflective coatings or dielectric coatings for specific wavelengths increases cost .
- o Splitting ratio precision: Tight tolerances ($\pm 1\%$) for scientific or laser applications are more expensive than general-purpose splitters with $\pm 10\%$ tolerance .
- o Power handling: Splitters designed for high-power lasers or pulsed systems require specialized construction, which raises the price .
- o Wavelength range: Broadband splitters covering visible to infrared light are costlier than narrowband devices .

Typical Cost Ranges

- o Fiber optic 1-to-5 splitters: \$500-\$2,500 depending on insertion loss, polarization-maintaining capability, and connector type .
- o Free-space or cube-based splitters: \$300-\$1,500 for high-quality optical cubes or plates with multiple outputs, though 1-to-5 configurations may require custom assemblies .
- o Custom or high-power splitters: \$2,000-\$3,000 or more for precision, high-power, or wavelength-specific designs .

Purchasing Tips

- o Check suppliers like Thorlabs, Edmund Optics, RP Photonics, and FindLight for quotes and availability .
- o Specify the splitting ratio, wavelength, and power requirements to get accurate pricing.
- o Consider whether a fiber-based or free-space solution better fits your optical setup. In summary, a 1-to-5 beam splitter is a specialized optical component, and prices vary widely based on type, quality, and application. For most laboratory or fiber-optic applications, expect to pay \$500-\$3,000.

Cube Beamsplitters are a type of Beamsplitter used in many life science or laser applications. Cube

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Beamsplitters are used to split

Andover Corporation manufactures precision beamsplitters (standard, polarizing, non-polarizing, dichroic, cube, plate) for various

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

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Plate Beamsplitters designed for imaging, industrial, or life science applications are available at Edmund Optics. Explore our

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

Fiber optic beam splitters are used to divide light from one fiber into two or more fibers. Light from an input fiber is first collimated,

Splitting Light Reynard offers a wide range of custom optical beamsplitters in a cube or plate format with a variety of UV, VIS and IR

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

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