Optical Beamsplitter Selection Guide

An Optical Beamsplitter is an optic or optical device that is used to split a beam of light in two. Newport offers a wide variety of **Beamsplitters** in various shapes. Circular beamsplitters, plate beamsplitters and cube beamsplitters can be purchased for polarizing or non polarizing beamsplitting applications. Newport offers both broadband and laser line cube beamsplitters. These beamsplitters are made from high grade glass materials with laser grade surface flatness and surface quality and have a tighter tolerance on the splitting ratio. High damage threshold coating and quality substrate material allow them to withhold high laser pulse energy.

Selecting an Optical Beamsplitter

Click **Optical Beamsplitters** to shop or browse all of our standard models, or select a product series below for more information on our products and capabilities.

Cube Beamsplitters		Features
	Broadband Non-Polarizing Cube Beamsplitters	• Metal-dielectric hybrid coating • Even split of laser power • Broadband and chromatically neutral • Insensitive to polarization
	Broadband Polarizing Cube Beamsplitters	• Superior broadband performance • Extinction ratio >500:1, 1000:1 average • Low wavefront distortion
	Laser Line Polarizing Cube Beamsplitters	• Optimized for higher-power lasers • Extinction Ratio >1000:1 for laser line polarizing cube beamsplitters • Extinction Ratio > 100:1 for UV laser line polarizing cube beamsplitters • Low wavefront distortion
	Laser Line Non-Polarizing Cube Beamsplitters	• Virtually zero absorption for true 50/50 beamsplitting • Low wavefront distortion • Insensitive to polarization
	High-Energy Nd:YAG Laser Polarizing Cube Beamsplitters	• Damage threshold up to 10 J/cm^2 • No cement, optically contacted • Extinction ratio >200:1 • Low wavefront distortion
Beamsplitter Optics		Features
	Broadband Dielectric Beamsplitters	• S-polarized beams split R/T = 50/50 • P-polarized beams split R/T = 30/70 • AR coated back surface eliminates ghosting • Slight wedge virtually eliminates internal fringes • BK 7 or UV fused silica substrates
	Beamsplitters for Ultrashort Pulses	• Minimum pulse dispersion • Maximum bandwidth, 700–950 nm • Low wavefront distortion
	Pellicle Beamsplitters	• Ultra-thin beamsplitter • Extremely lightweight • Uncoated for beam sampling • Coated for beamsplitting • Minimizes disperson and eliminates ghosting
	High-Energy Nd:YAG Laser 50/50 Beamsplitters	• High damage threshold • Fused silica substrates • Low wavefront distortion • AR coated on back side

	High-Energy Nd:YAG Laser Harmonic Beamsplitters	• High damage threshold • Select fused silica • Low wavefront distortion • Hard refractory coatings
	Plate Beamsplitters	• Virtually zero absorption for true 50/50 beamsplitters • Designed for 45° angle of incidence with random polarization • AR coated back surface eliminates ghosting • Slight wedge to eliminate internal fringes • Available in CaF2, ZnSe, UV Fused Silica, and BK7
Beamsamplers		Features
	Broadband Beam Samplers	• Uncoated front surface for beam sampling • Fresnel reflectance from 1–10% at 45° • AR coated back surface eliminates ghosting • Slight wedge virtually eliminates internal fringes • BK 7 or UV fused silica substrates
	Beam Sampler for Ultrashort Pulses	• 3 mm thickness minimizes pulse dispersion • Fresnel Reflectance from 1-10% at 45° • Uncoated front surface for beam sampling, AR coated back surface
Other Beamsplitters		Features
	Polka Dot Beamsplitters	• 50% reflectance, 50% transmission from 250 to 2500 nm • Insensitive to angle of incidence changes • 1" diameter round or 2" square sizes • Ideal for white light illumination applications
	Variable Attenuator/Beamsplitters	• Preserves beam characteristics • Minimum angular deviation • Wide dynamic range • Low insertion loss • High damage threshold