Beamsplitters

- **Laser and Broadband Plate Beamsplitters** (with multilayer dielectric coatings)
- **Non-polarizing Laser Cube Beamsplitters** (with special all-dielectric coatings)
- **Polarizing Cube Beamsplitters** (with dielectric coatings)
- **Broadband Cube Beamsplitters** (with dielectric coatings)
- **Low-polarizing Cube Beamsplitters** (with hybrid coatings)
- **Metallized Plate Beamsplitters** (with inexpensive metallic coatings)
- **Metallized Cube Beamsplitters** (with internal metal film coatings)
- **Beam Samplers** (provide a 4% reflected beam for sampling)
- **Harmonic Separators** (for separating YAG laser harmonics)
- **Pellicle Beamsplitters** (coated for a range of intensity splits)

Beamsplitters are one of the most versatile and useful optical tools available. With them you can separate light into two completely independent beams. Separation can be by either amplitude (intensity) or by wavelength. In either case the two beams retain all of the attributes (such as intensity/wavelength distribution, wavefront shape, and spatial/temporal distributions) that the original beam exhibited.

There are three basic forms of optical beamsplitter: parallel plates, cubes and pellicles. The simplest, the **parallel plate**, consists of a carefully generated transparent substrate with a partially reflective coating on one side and an Anti-Reflection coating on the second surface. These are usually designed to be used at an angle of 45 degrees. By making the second surface at a wedged angle to the first surface any residual ghost image can be made to fall outside of field of view of the following system.

Cube beamsplitters are simply two right angle prisms cemented together with a partially reflecting surface on the internal (protected) face. The beamsplitting film is deposited on the hypotenuse face of a precision BK7 prism whose faces are $\lambda/4$ and the prism is cemented to an identical prism to form a cube which is parallel sided within 5arcmin. The four outer faces are all Anti-Reflection (AR) coated.

Pellicles are essentially single surfaced beamsplitters. In this case one face carries the partially reflecting film and the second, uncoated, surface will produce a roughly 4% ghost image. But the ghost image will be displaced only ~2 microns laterally from the primary image and may usually be ignored.

ORDERING
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