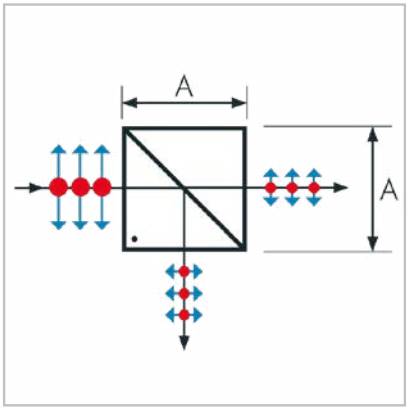
Beam Splitter Cubes

Beam splitters are used to split a beam into two parts; they can be of differing intensities if necessary.

In general, there are polarization dependent and non-polarizing beam splitters.

Dot indicates prism with coating on the hypothenuse. For best performance the beam has to enter through this side.



Standard Beam Splitter Cubes

Standard beam splitter cubes are designed for exactly one wavelength and are available with polarization dependent reflection rates from 10% to 90%. For this reason, in addition to the desired degree of reflection, the polarization of the beam to be split must be specified.

The cubes are cemented. They can therefore be used for lasers with up to medium power levels.

The mentioned LDT values can not be guaranteed for cemented cubes, these are expected values.

Nomenclature

PCB	-1064	-75	-050	-U
Product code (**P**rism **C**ube **B**eam Splitter)	Wavelength in nm	Reflectivity in %	Dimension in inches x 100	Polarisation state: P: p-pol S: s-pol U: u-pol

Germany & Other Countries
Laser Components GmbH
Tel: +49 8142 2864 – 0
Fax: +49 8142 2864 – 11
info@lasercomponents.com
www.lasercomponents.com

France
Laser Components S.A.S.
Tel: +33 1 39 59 52 25
Fax: +33 1 39 59 53 50
info@lasercomponents.fr
www.lasercomponents.fr

United Kingdom
Laser Components (UK) Ltd.
Tel: +44 1245 491 499
Fax: +44 1245 491 801
info@lasercomponents.co.uk
www.lasercomponents.co.uk

Specifications:

- **Material:** BK7
- **Dimension tolerance:** ± 0.25 mm
- **Beam deviation:** < 3 arcmin
- **Surface figure:** 3/0.25 according to ISO 10110
  λ/8 according to MIL-O-1380A
- **Surface quality:** 5/4 x 0.063 for 1.0" substrates according to ISO 10110
  20-10 according to MIL-O-1380A
- **Clear aperture:** 85% of the dimensions
- **Damage threshold:** ca. 100 W/cm² (cw)
  ca. 0.5 J/cm² (10 ns)
- **Wavelength:** For single wavelengths in the range of 440 nm – 1550 nm
- **Dimensions [mm]:** 10.0; 12.7; 25.4; 38.1; 50.8

Non-polarizing Beam Splitter Cubes

Non-polarizing beam splitter cubes are designed for exactly one wavelength and do not have any effect on the polarization of the beam to be split. These cubes are available exclusively with a degree of reflection and transmission of 50 %.

The cubes are cemented. They can therefore be used for lasers with up to medium power levels.

The mentioned LDT values can not be guaranteed for cemented cubes, these are expected values.

Nomenclature

NCBS	-1064	-050
Product code (Non-polarizing Cube Beam Splitter)	Wavelength in nm	Dimension in inches x 100

Specifications:

- **Material:** BK7
- **Dimension tolerance:** ± 0.25 mm
- **Beam deviation:** < 3 arcmin
- **Surface figure:** 3/0.25 according to ISO 10110
  λ/8 according to MIL-O-1380A
- **Surface quality:** 5/4 x 0.063 for 1.0" substrates according to ISO 10110
  20-10 according to MIL-O-1380A
- **Ratio R/T** R = T = 50 ± 5 %
  Difference between s-pol and p-pol < 5 %.
- **Clear aperture:** 85 % of the dimensions
- **Damage threshold:** ca. 100 W/cm² (cw)
  ca. 0.5 J/cm² (10 ns)
- **Wavelength:** For single wavelengths in the range of 442 nm – 1550 nm
- **Dimensions [mm]:** 10.0; 12.7; 20.0; 25.4; 38.1; 50.8

If you can manage with less-demanding specifications in your application, we have less expensive cubes with a surface quality of 60-40 according to MIL-O-1380A available.

Germany & Other Countries
Laser Components GmbH
Tel: +49 8142 2864 – 0
Fax: +49 8142 2864 – 11
info@lasercomponents.com
www.lasercomponents.com

France
Laser Components S.A.S.
Tel: +33 1 39 59 52 25
Fax: +33 1 39 59 53 50
info@lasercomponents.fr
www.lasercomponents.fr

United Kingdom
Laser Components (UK) Ltd.
Tel: +44 1245 491 499
Fax: +44 1245 491 801
info@lasercomponents.co.uk
www.lasercomponents.co.uk

Broadband Beam Splitter Cubes

Broadband beam splitter cubes are suited for an unpolarized wavelength range. They are designed for a degree of reflection and transmission of 50 %.

The cubes are cemented. Due to the reduced surface quality, they can only be used for lasers with low power levels.

The mentioned LDT values can not be guaranteed for cemented cubes, these are expected values.

Nomenclature

CBS	-450-650	-060
Product code (Broadband Beam Splitter Cube)	Wavelength in nm	Dimension in inches x 100

Specifications:

- **Material:** BK7
- **Dimension tolerance:** ± 0.25 mm
- **Beam deviation:** < 3 arcmin
- **Surface figure:** 3/0.5 according to ISO 10110
  λ/4 according to MIL-O-1380A
- **Surface quality:** 5/4 x 0.25 for 1.0" substrates according to ISO 10110
  60-40 according to MIL-O-1380A
- **Clear aperture:** 85 % of the dimensions
- **Damage threshold:** ca. 100 W/cm² (cw)
  ca. 0.5 J/cm² (10 ns)
- **Wavelength ranges:** 450 nm – 650 nm
  650 nm – 900 nm
  900 nm – 1200 nm
  1200 nm – 1550 nm
- **Dimensions [mm]:** 10.0; 12.7; 15.0; 20.0

Germany & Other Countries
Laser Components GmbH
Tel: +49 8142 2864 – 0
Fax: +49 8142 2864 – 11
info@lasercomponents.com
www.lasercomponents.com

France
Laser Components S.A.S.
Tel: +33 1 39 59 52 25
Fax: +33 1 39 59 53 50
info@lasercomponents.fr
www.lasercomponents.fr

United Kingdom
Laser Components (UK) Ltd.
Tel: +44 1245 491 499
Fax: +44 1245 491 801
info@lasercomponents.co.uk
www.lasercomponents.co.uk