

# BROADBAND DIELECTRIC CUBE BEAMSPLITTERS

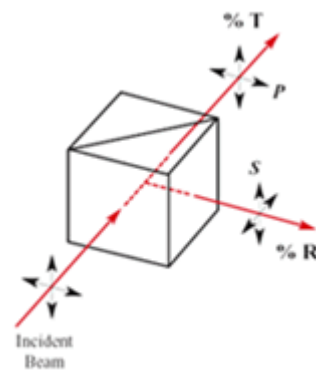
Broadband dielectric cube beamsplitters have a nominal split ratio of 50/50 for randomly or circularly polarized light. For other polarizations, the split ratio may vary significantly.

If the beam is randomly polarized, the split beams will be linearly polarized (weakly). If the incoming beam is circularly polarized, the split beams will be elliptically polarized. For your design, please refer to their following characteristics:

- The dielectric coating has negligible absorption.
- Reflected and transmitted beams have similar intensities for average s- and p-polarizations over a broad wavelength range.
- These beamsplitters are extremely polarization sensitive.

## Standard Specifications:

<b>Optical Material:</b>	BK7 grade A optical glass
<b>Diameter Tolerance:</b>	±0.2mm
<b>Surface Quality:</b>	60-40 scratch and dig
<b>Surface Flatness:</b>	$\lambda/4$ at 632.8nm
<b>Beam Deviation:</b>	<10 arc minutes
<b>Nominal T/R Ratio:</b>	50/50 ±5% for average polarization
<b>Clear Aperture:</b>	>85%
<b>Bevel:</b>	<0.25mm X 45°
<b>Coating:</b>	Antireflection coating on entrance and exit faces.
<b>Available Wavelength:</b>	Visible and Near Infrared.



## Standard Broadband Dielectric Cube Beamsplitters

Dimension(mm)	Product Number			
	450-650nm	650-900nm	900-1200nm	1200-1550nm
10.0x10.0x10.0	UQT-BDB0101	UQT-BDB0201	UQT-BDB0301	UQT-BDB0401
12.7x12.7x12.7	UQT-BDB0102	UQT-BDB0202	UQT-BDB0302	UQT-BDB0402
15.0x15.0x15.0	UQT-BDB0103	UQT-BDB0203	UQT-BDB0303	UQT-BDB0403
20.0x20.0x20.0	UQT-BDB0104	UQT-BDB0204	UQT-BDB0304	UQT-BDB0404
25.4x25.4x25.4	UQT-BDB0105	UQT-BDB0205	UQT-BDB0305	UQT-BDB0405

Please Contact [ultiQuest](#) for other dimensions in prototype and production quantities.

### NOTES!

- ➔ The transmittance curve is a graph based on actual measurements and may vary from production lot to production lot.
- ➔ The surface flatness is the reflected wavefront distortion of the surface before coating.
- ➔ Plate-type nonpolarizing beam splitters are also provided upon request.
- ➔ Be sure to wear laser safety goggles when checking optical path and adjusting optical axis.

