

These laser beamsplitters are of the finest quality and may be used with confidence in the most demanding applications. The coatings have been optimized for the specific laser wavelengths specified and exhibit very little absorption at those wavelengths. If you need a laser beamsplitter at some other laser line (or in some other splitting ratio) please let us know.

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## Laser and Broadband Plate Beamsplitters

- Available with highly parallel or wedged faces to reduce ghosts
- Polished both sides to  $\lambda/10$
- Coating optimized for low loss
- Available with Ultra-Violet grade fused silica and BK7 substrates
- Standard diameters from 25.4 to 50.8mm

These superior beamsplitters are multilayer dielectric coatings on a BK7 or synthetic fused silica substrate. The beamsplitter substrate is polished on both sides to a flatness of  $\lambda/10$ . Substrates can be either precisely parallel to 5arcsec or wedged with a 1 degree angle. The wedge angle eliminates ghost images by bending the beam out of the direction of the principal beam.

Note that when used as intended at 45 degrees these beamsplitters present a smaller cross section to the beam. (The 30mm diameter, 3mm thick size presents a 20mm cross section and the 50mm diameter, 5mm thick size presents a 32mm cross section). The coatings provide approximately equal reflected and transmitted beams with very little absorption loss (see reflectivity curves on pages 169-171). However the, p- and s-components are quite different (typically  $R_p=35\%$  and  $R_s=65\%$ ). Several different coatings are offered from the Ultra-Violet through the visible to the near IR.



### Specifications & Tolerances

Surface flatness: $\lambda/10$	Diameter: +0, -0.2mm
Thickness: $\pm 0.2$ mm	Parallelism: $\leq 5$ arcsec or $1^\circ$ wedge
Surface quality: 20-10	Clear aperture: $>90\%$ diameter
Bevel: 0.2mmx45° typical	Material: Synthetic fused silica or BK7
Laser damage threshold: Measured for a sample YAG beamsplitter - $>13\text{J}/\text{cm}^2$ for a 10ns pulse @ 1064nm	
Transmission: $R_{av}=50\%$ at laser wavelength	

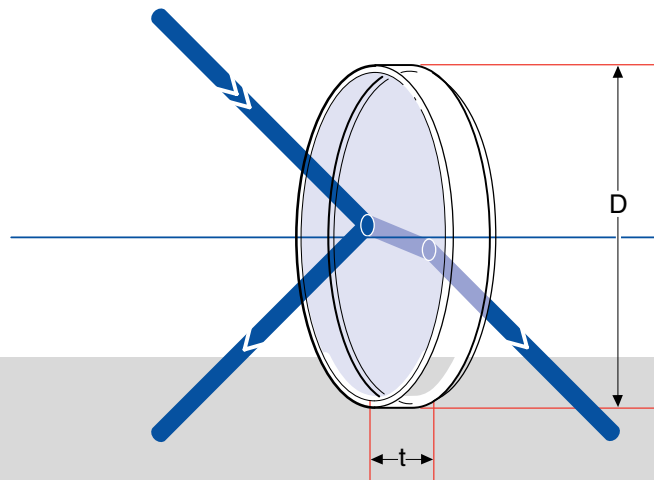
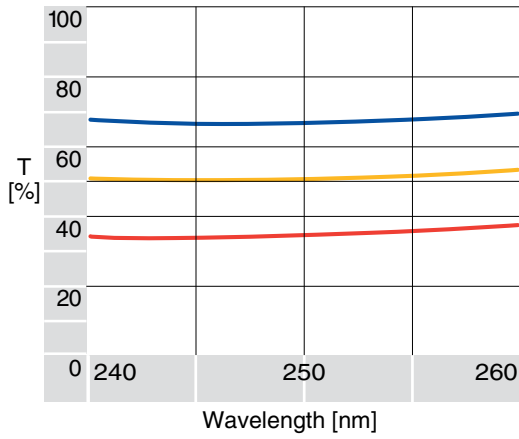


 PLATE BEAMSPLITTER

- Spherical Lenses
- Cylindrical Lenses
- Lens Kits
- Achromatic Doublets
- Multi-Element
- Micro Optics
- Mirrors
- Prisms
- Substrates & Windows

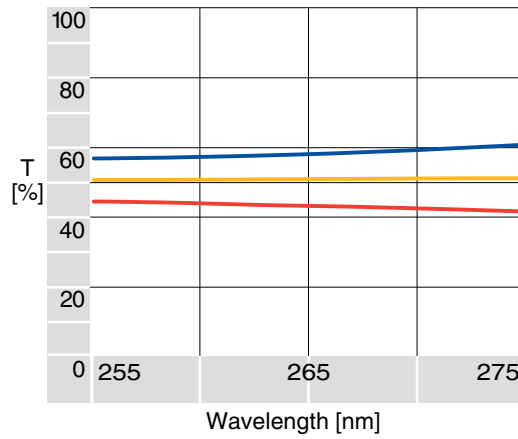
**Beamsplitters**

- Polarizers
- Filter & Apertures



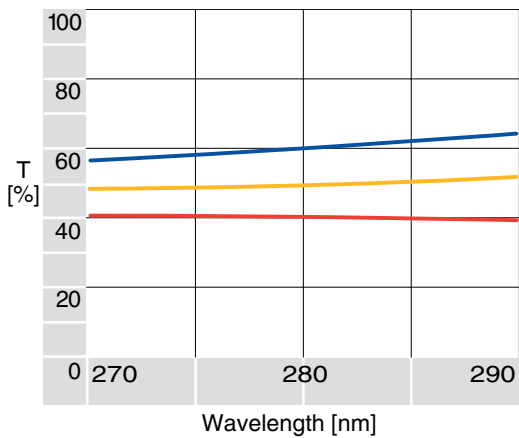
**LASER BEAMSPLITTER TRANSMITTANCE**  
248 nm

P-POL ————  
AVG-POL ————  
S-POL ————



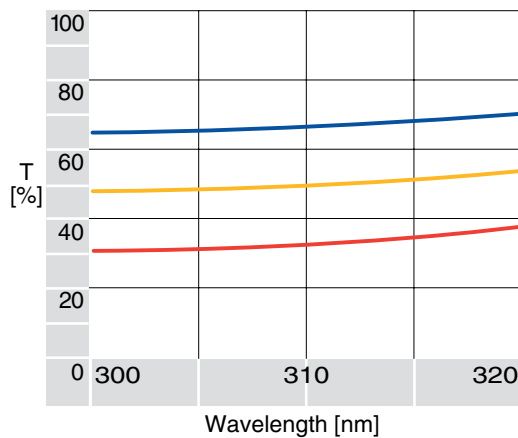
**LASER BEAMSPLITTER TRANSMITTANCE**  
266 nm

P-POL ————  
AVG-POL ————  
S-POL ————



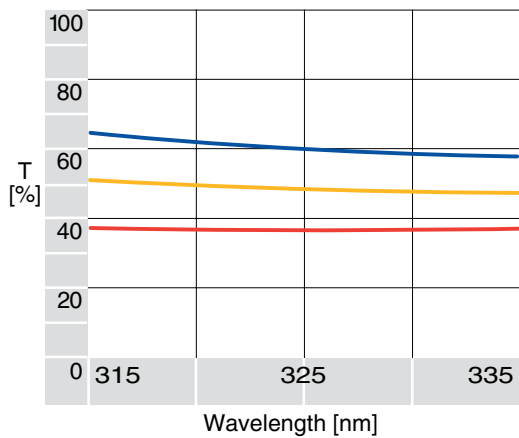
**LASER BEAMSPLITTER TRANSMITTANCE**  
282 nm

P-POL ————  
AVG-POL ————  
S-POL ————



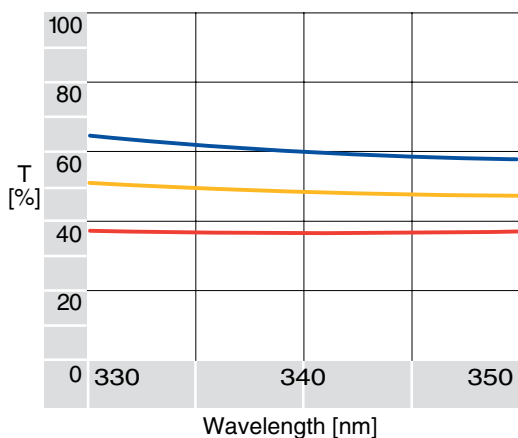
**LASER BEAMSPLITTER TRANSMITTANCE**  
308 nm

P-POL ————  
AVG-POL ————  
S-POL ————



**LASER BEAMSPLITTER TRANSMITTANCE**  
325 nm

P-POL ————  
AVG-POL ————  
S-POL ————



**LASER BEAMSPLITTER TRANSMITTANCE**  
337 nm

P-POL ————  
AVG-POL ————  
S-POL ————

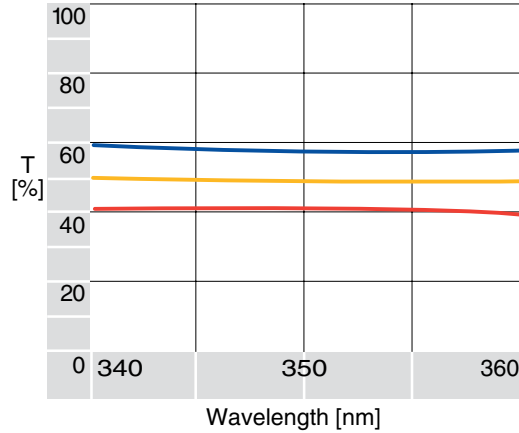
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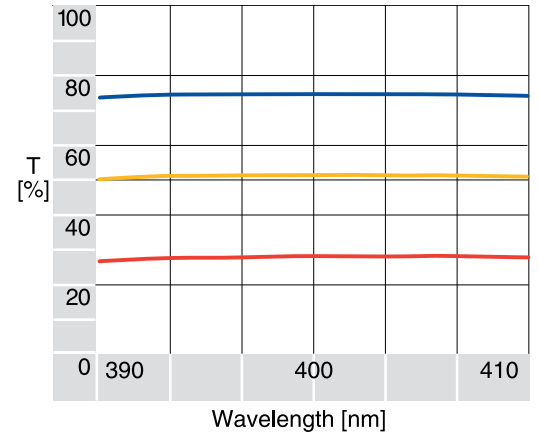
## Laser and Broadband Plate Beamsplitters

If you need a beamsplitter quickly, just let us know. Our next-day delivery option costs a little extra, but your system will be up and running that much sooner. And if you don't see the exact beamsplitter that you need give us a call. We have a wide range of special sizes, split ratios, and coatings available.



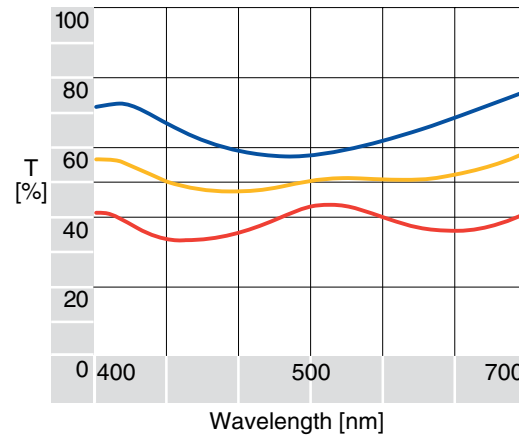
**LASER BEAMSPLITTER TRANSMITTANCE**  
405 nm  
352 nm

P-POL ———  
 AVG-POL ———  
 S-POL ———



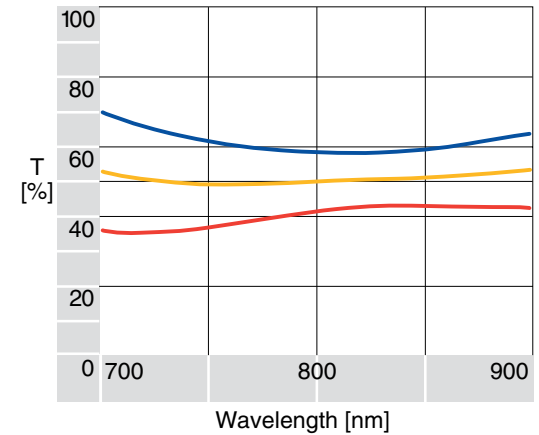
**LASER BEAMSPLITTER TRANSMITTANCE**  
405 nm

P-POL ———  
 AVG-POL ———  
 S-POL ———



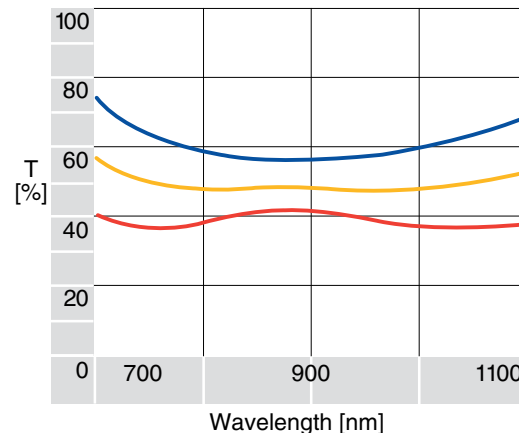
**BROADBAND BEAMSPLITTER TRANSMITTANCE**  
400-700 nm

P-POL ———  
 AVG-POL ———  
 S-POL ———



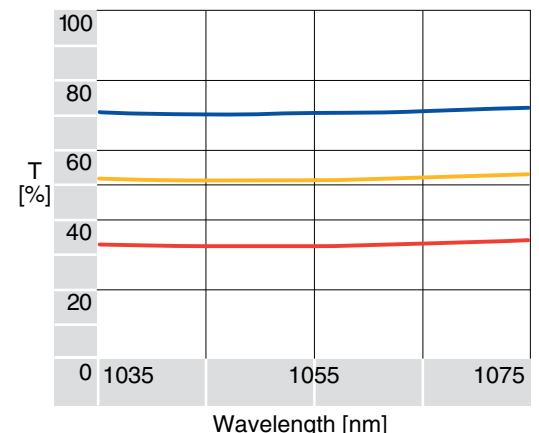
**LASER BEAMSPLITTER TRANSMITTANCE**  
700-900 nm

P-POL ———  
 AVG-POL ———  
 S-POL ———



**BROADBAND BEAMSPLITTER TRANSMITTANCE**  
700-1100 nm

P-POL ———  
 AVG-POL ———  
 S-POL ———



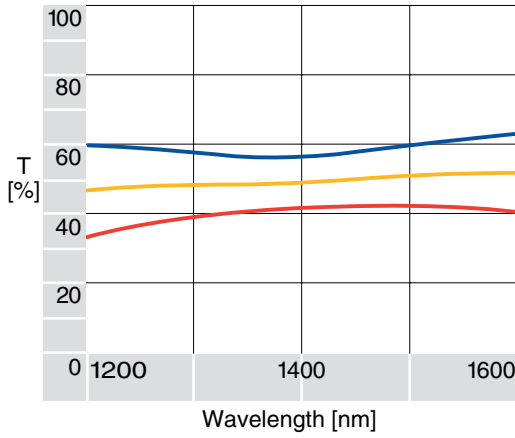
**LASER BEAMSPLITTER TRANSMITTANCE**  
1040-1070 nm

P-POL ———  
 AVG-POL ———  
 S-POL ———

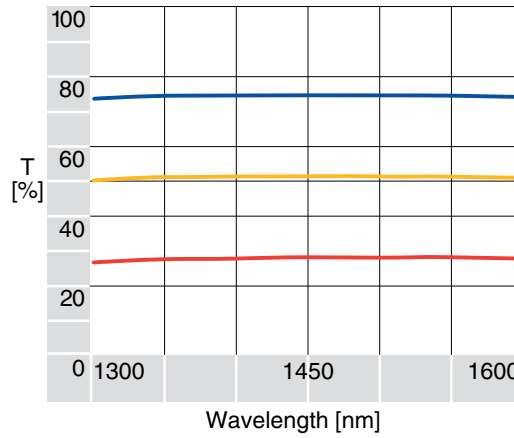
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**BROADBAND BEAMSPLITTER TRANSMITTANCE**  
1200-1600 nm  
P-POL ———  
AVG-POL ———  
S-POL ———



**LASER BEAMSPLITTER TRANSMITTANCE**  
1300-1550 nm  
P-POL ———  
AVG-POL ———  
S-POL ———

### Laser & Broadband Plate Beamsplitters

Wavelength Range (nm)	Laser Type	Diameter, D (mm)	Thickness, t (mm)	Substrate	Price	PART NUMBER
248.4	KrF	30.0	3.0	SFS		<b>038-1550</b>
248.4	KrF	30.0	5.0	SFS		<b>038-1550-W</b>
248.4	KrF	50.0	5.0	SFS		<b>038-1560</b>
248.4	KrF	50.0	8.0	SFS		<b>038-1560-W</b>
266	YAG4TH	30.0	3.0	SFS		<b>038-1570</b>
266	YAG4TH	30.0	5.0	SFS		<b>038-1570-W</b>
266	YAG4TH	50.0	5.0	SFS		<b>038-1580</b>
266	YAG4TH	50.0	8.0	SFS		<b>038-1580-W</b>
282	XeBr	30.0	3.0	SFS		<b>038-1650</b>
282	XeBr	30.0	5.0	SFS		<b>038-1650-W</b>
282	XeBr	50.0	5.0	SFS		<b>038-1660</b>
282	XeBr	50.0	8.0	SFS		<b>038-1660-W</b>
308	XeCl	30.0	3.0	SFS		<b>038-1670</b>
308	XeCl	30.0	5.0	SFS		<b>038-1670-W</b>
308	XeCl	50.0	5.0	SFS		<b>038-1680</b>
308	XeCl	50.0	8.0	SFS		<b>038-1680-W</b>
325	HeCd	30.0	3.0	SFS		<b>038-1760</b>
325	HeCd	30.0	5.0	SFS		<b>038-1760-W</b>
325	HeCd	50.0	5.0	SFS		<b>038-1770</b>
325	HeCd	50.0	8.0	SFS		<b>038-1770-W</b>
337	N2	30.0	3.0	SFS		<b>038-1780</b>
337	N2	30.0	5.0	SFS		<b>038-1780-W</b>
337	N2	50.0	5.0	SFS		<b>038-1790</b>
337	N2	50.0	8.0	SFS		<b>038-1790-W</b>
352	XeF	30.0	3.0	SFS		<b>038-1880</b>
352	XeF	30.0	5.0	SFS		<b>038-1880-W</b>
352	XeF	50.0	5.0	SFS		<b>038-1890</b>
352	XeF	50.0	8.0	SFS		<b>038-1890-W</b>
355	NdYag 3rd	30.0	3.0	SFS		<b>038-1910</b>
355	NdYag 3rd	30.0	5.0	SFS		<b>038-1910-W</b>
355	NdYag 3rd	50.0	5.0	SFS		<b>038-1920</b>
355	NdYag 3rd	50.0	8.0	SFS		<b>038-1920-W</b>

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Beamsplitters

Polarizers

Filter &amp; Apertures

Wavelength Range (nm)	Laser Type	Diameter, D (mm)	Thickness, t (mm)	Substrate	Price	PART NUMBER
390-410	LD	30.0	3.0	BK7		038-1950
390-410	LD	30.0	5.0	BK7		038-1950-W
390-410	LD	50.0	5.0	BK7		038-1960
390-410	LD	50.0	8.0	BK7		038-1960-W
400-700	Broadband	25.4	3.0	BK7		038-0560
400-700	Broadband	25.4	5.0	BK7		038-0560-W
400-700	Broadband	30.0	3.0	BK7		038-0570
400-700	Broadband	30.0	5.0	BK7		038-0570-W
400-700	Broadband	50.0	5.0	BK7		038-0580
400-700	Broadband	50.0	8.0	BK7		038-0580-W
400-700	Broadband	50.8	5.0	BK7		038-0590
400-700	Broadband	50.8	8.0	BK7		038-0590-W
700-900	Diode	30.0	3.0	BK7		038-0770
700-900	Diode	30.0	5.0	BK7		038-0770-W
700-900	Diode	50.0	5.0	BK7		038-0780
700-900	Diode	50.0	8.0	BK7		038-0780-W
1064	YAG	25.4	3.0	BK7		038-0970
1064	YAG	25.4	5.0	BK7		038-0970-W
1064	YAG	30.0	3.0	BK7		038-0990
1064	YAG	30.0	5.0	BK7		038-0990-W
1064	YAG	50.0	5.0	BK7		038-1110
1064	YAG	50.0	8.0	BK7		038-1110-W
1064	YAG	50.8	5.0	BK7		038-1115
1064	YAG	50.8	8.0	BK7		038-1115-W
1200-1600	Broadband	25.4	3.0	BK7		038-1120
1200-1600	Broadband	25.4	5.0	BK7		038-1120-W
1200-1600	Broadband	30.0	3.0	BK7		038-1123
1200-1600	Broadband	30.0	5.0	BK7		038-1123-W
1200-1600	Broadband	50.0	5.0	BK7		038-1125
1200-1600	Broadband	50.0	8.0	BK7		038-1125-W
1200-1600	Broadband	50.8	5.0	BK7		038-1130
1200-1600	Broadband	50.8	8.0	BK7		038-1130-W
1300-1550	Diode	30.0	3.0	BK7		038-1150
1300-1550	Diode	30.0	5.0	BK7		038-1150-W
1300-1550	Diode	50.0	5.0	BK7		038-1160
1300-1550	Diode	50.0	8.0	BK7		038-1160-W

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