

**NEW** Variable Beamsplitter  
**NEW** Light path corrector

**VB/LPCB/LPC**



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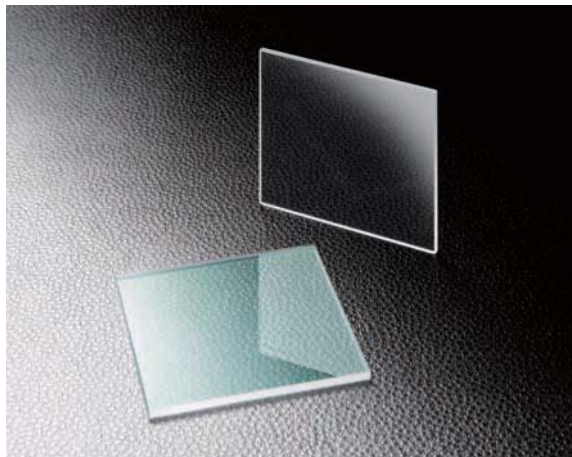
Multi-Element Optics

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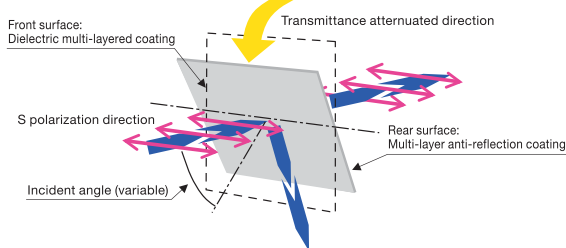
Substrates & Windows  
 Holder & Vibration isolator

With a variable beam splitter, the incident angle of a laser can be changed. The (R:T) ratios can also be modified.

This is commonly used for untenable or stabilized lasers but would require an optical adjustment from the light path to weaken the power and split the light.

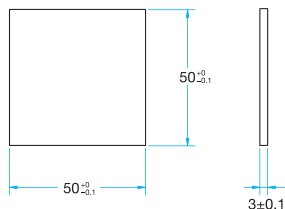


**Schematic**



**Outline Drawing**

(in mm)



**Specifications**

Material	BK7, Synthetic fused silica
Surface Flatness	$\lambda$
Parallelism	<5"
Coating	VB Front surface: Dielectric multi-layer Coating Rear surface: Multi-layer anti-reflection coating LPCB/LPC Both surfaces: Multi-layer anti-reflection coating
Surface Quality (Scratch-Dig)	10-5
Clear aperture	Circle that internally connected to 90% of the side length
Effective beam incident diameter	Ellipsoidal 30x43mm (Angle of inclination)

**Guide**

▶ Different size, wavelength and deviation ratio are not mentioned in this catalog but available as custom product upon on request.

**Reference** ▶ C063

▶ We offer the most comprehensive range of beam splitter holder and stages to choose from. Let us know the angle of your choice.

▶ This variable attenuator (model SHPS) can be used as a system and is available from this catalogue page. **Reference** ▶ B028



**Attention**

▶ When using with high power laser, make sure to execute at the end edge of the reflected light.

▶ The reflectance properties of the optics may change in a high temperature environment.

▶ When adjusting the transmittance, the incident angle may change and cause the light path to shift. To correct this, please use the light path corrector (model LPCB/LPC)

▶ For a large beam size at dia 30mm or over and used it at a high inclination level, the beam can be cut at the reflected area.

▶ For "P" polarization use, make sure that the incident angle is at 45 degrees or more.

**Variable beamsplitter**

Part Number	Wavelength Range [nm]	Transmittance of S polarization ( $\theta=0^\circ$ ) [%]	Transmittance of S polarization ( $\theta=45^\circ$ ) [%]	Material	Laser Damage Threshold* [J/cm <sup>2</sup> ]
<b>VB-50S03-1-266</b>	266	>90	<5	Synthetic fused silica	1
<b>VB-50S03-1-355</b>	355	>93	<5	Synthetic fused silica	1
<b>VB-50S03-1-532</b>	532	>95	<5	BK7	2.5
<b>VB-50S03-1-1064</b>	1064	>95	<5	BK7	3.5

\* Laser pulse width 10ns, repetition frequency 20Hz

**Light path corrector**

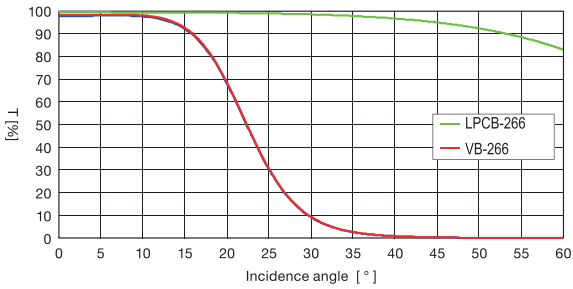
Part Number	Wavelength Range [nm]	Transmittance of S polarization ( $\theta=0^\circ - 45^\circ$ ) [%]	Material	Laser Damage Threshold* [J/cm <sup>2</sup> ]
<b>LPCB-50S03-1-266-0/45D</b>	266	Average 97	Synthetic fused silica	1
<b>LPCB-50S03-1-355-0/45D</b>	355	Average 97	Synthetic fused silica	1
<b>LPCB-50S03-1-532-0/45D</b>	532	Average 98	BK7	2.5
<b>LPCB-50S03-1-1064-0/45D</b>	1064	Average 98	BK7	3.5

\* Laser pulse width 10ns, repetition frequency 20Hz

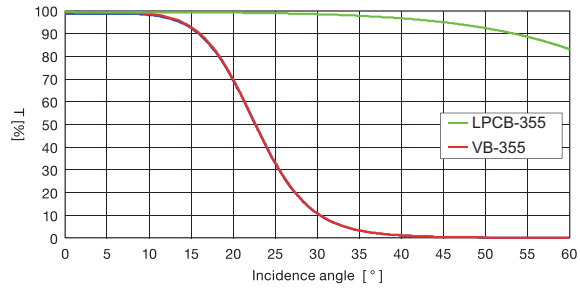
**Typical Transmittance Data**

T: Transmission (S polarization)

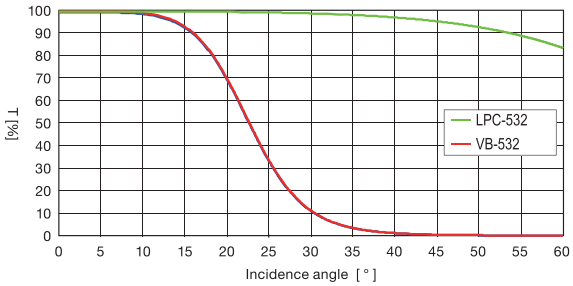
**VB-266/LPCB-266**



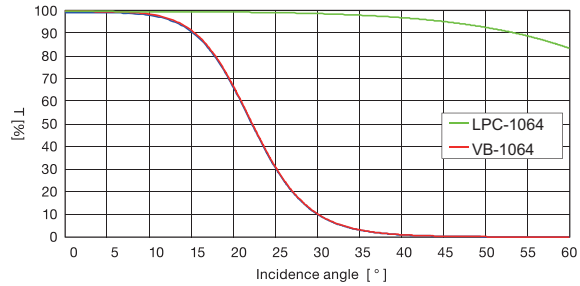
**VB-355/LPCB-355**



**VB-532/LPC-532**



**VB-1064/LPC-1064**

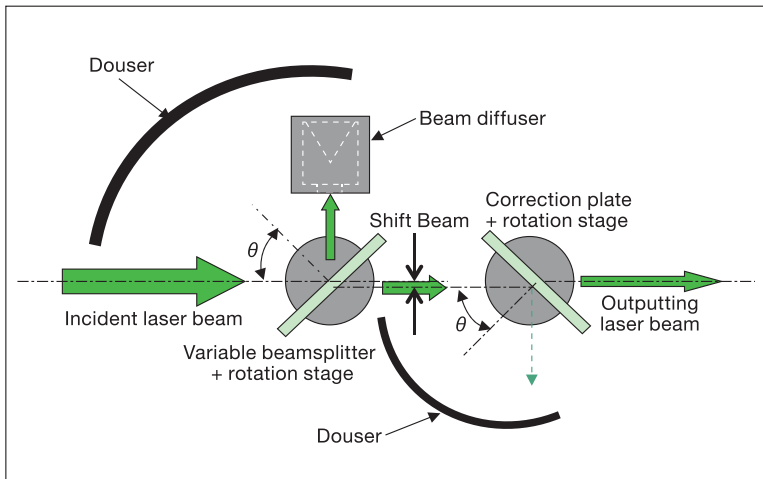


**Sample of use**

The variable beam splitter can be used individually. When modifying the incident angle, optics thickness and its refractive properties, a shift may occur in the light path. To reduce this shift, we highly recommend a light path corrector. Please see image below.

- Place the variable beamsplitter onto a rotation stage to allow an angle adjustment.
- Install the light path corrector onto a rotating stage.
- Position the light path corrector at a similar angle with the variable beamsplitter on an opposite side.
- If the reflected light of the variable beamsplitter is not used, make sure to place a light cut-off material or a beam diffuser at the edge-end of the light.
- The power of the reflected light from the light path corrector must be cut off at the edge-end of the light.

For part structure, please contact our International Sales Division.



**Compatible Optic Mounts**

ACLH-60, -60F

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