Polarization Beam Splitter (PBS) Non-Epoxy Bonding

(350 -2500nm, up to 10W optical power)

DATASHEET

Return to the Webpage

The Polarization Beam Splitter (PBS) is a cube-format optical component designed to separate an incoming light beam into two orthogonally polarized output beams. Unlike conventional PBS cubes that rely on epoxy or cement bonding, Agiltron PBS devices are fabricated using a proprietary direct optical surface bonding process that joins two precision-coated right-angle prisms without the use of organic adhesives. The elimination of epoxy and cement layers significantly improves long-term reliability, environmental stability, optical power handling, and resistance to thermal aging. Each PBS cube incorporates high-performance dielectric polarization coatings and precision-polished optical surfaces to achieve excellent transmission, reflection efficiency, extinction ratio, and wavefront quality. Agiltron PBS cubes are ideally suited for demanding applications in fiber-optic communications, coherent optical systems, laser instrumentation, sensing, aerospace, defense, and quantum photonics where high optical performance and long-term stability are critical.

Features

- No Epoxy in the Lightpath
- High Power
- Ultra-high reliability
- Low insertion loss

Applications

- Aerospace
- Communication
- Quantum Systems

Specifications

Parameter		Min	Typical	Max	Unit
Transmission	1900-2500nm		90		%
	1650~2000nm		90		
	1260~1650nm		90		
	900~1300nm		90		
	550-950nm		95		
	350- 550nm		95		
Reflection		95			%
Surface Quality		20		40	Dig
Size			3x3x3		mm
Optic power Handling [1]	Normal power version		0.3	0.5	W
	High power version		5	10	W
Operating Temperature range		-20		70	°C
Storage Temperature		-40		100	°C

Notes:
[1]. Passing beam size > 0.5mm

RoHS COMPLIANT

Legal notices: All product information is believed to be accurate and is subject to change without notice. Information contained herein shall legally bind Agiltron only if it is specifically incorporated into the terms and conditions of a sales agreement. Some specific combinations of options may not be available. The user assumes all risks and liability whatsoever in connection with the use of a product or its application.

Rev 06/13/26

P +1 781-935-1200 E sales@agiltron.com W www.agiltron.com

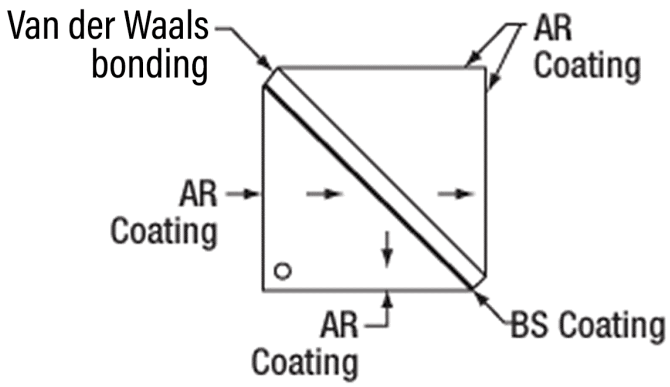
Information contained herein is deemed to be reliable and accurate as of the issue date. We reserve the right to change the design or specifications at any time without notice.
Agiltron is a registered trademark of Optowares Corporation in the U.S. and other countries.

Polarization Beam Splitter (PBS) Non-Epoxy Bonding

(350 -2500nm, up to 10W optical power)

DATASHEET

Construction Illustration



*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

Ordering Information (Part Number)

	NG	☐☐	☐	1
Prefix	**Type**	**Wavelength**	**Power**	**Holder**
PBS-	Non Glue = NG Special = 00	1260~1650nm = 26 1900~2500nm = 92 1650~2000nm = 62 900~1300nm = 91 550~950nm = 59 350~550nm = 35 Special = 00	0.5W = 1 5W = 2 10W = A	Non = 1

P +1 781-935-1200 E sales@agiltron.com W www.agiltron.com

Information contained herein is deemed to be reliable and accurate as of the issue date. We reserve the right to change the design or specifications at any time without notice.
Agiltron is a registered trademark of Optowares Corporation in the U.S. and other countries.