

Product Bulletin



JDS Uniphase manual backreflectors provide precise levels of return loss to transmitters, which allows measurements of system sensitivity or system degradation as a function of backreflection. When used with a transmitter/receiver pair and characterization equipment, the backreflectors can be used to establish the magnitude of reflections that significantly degrade transmission system performance and to characterize the problems they cause.

The backreflectors use JDS Uniphase's ultra-linear attenuator prism and highly reliable microlens technology, combined with a micrometer with electronic display of return loss. Two configurations of the VB8B backreflectors are available; no coupler and fused coupler.

The no coupler version has a single pigtail used as both an input and an output port. It can be used to generate very large levels of reflection. Alternatively, it can be used with an external coupler of the desired ratio to build customized reflection test sets.

The fused coupler version is equipped with a fused fiber coupler that splits the light, providing monitor and output ports as well as an input port. This version supplies lower maximum backreflection than the no coupler version because part of the input light is diverted to the output port. The monitor and output ports allow measurements to be made using a transmitter and a receiver.

The backreflectors are battery-powered, which provides portability and compact packaging.

Variable Optical Backreflectors (VB8B Series)

Measurement Usage

- Specify the maximum allowable reflection level for connectors, receiver pigtails, and attenuators
- Verify optical isolator performance
- Select the most appropriate reflection-insensitive light source for the system

Key Features & Benefits

- Operation at 1300 or 1550 nm
- 0.02 dB resolution
- Low polarization sensitivity
- Constant insertion loss
- Long battery life

Applications

- Transmitter/receiver development and testing
- Reflection test for connectors
- Quality assurance acceptance testing
- Laser development and production

Specifications

PARAMETER	NO COUPLER	FUSED COUPLER (30/70)
Calibration wavelengths	1300 or 1550 nm	1300 or 1550 nm
Maximum backreflection level ¹	≥ - 1.5 dB	≥ - 9.0 dB
Minimum backreflection level ¹	≤ - 50 dB	≤ - 45 dB
Linear range	≥ 30 dB	≥ 25 dB
Insertion loss ¹ (IN to OUT)	-	≤ 5 dB
Calibration accuracy ²	± 0.2 dB	± 0.5 dB
Maximum optical input power	200 mW	200 mW
Standard fiber type all ports	single-mode 9/125 μm cabled fiber with 3 mm jacket	
Pigtail length	≥ 1.5 m	
Polarization dependent loss	≤ 1.0 dB	
Resolution/setting capability	0.02 dB	
Operating temperature	0-40 °C	
Storage temperature	- 40-60 °C	
Humidity	maximum 95 % up to 40 °C, 60 % above 40 °C non-condensing	

1. With respect to input level and excluding external components or connectors (if installed).
2. In linear range with unpolarized input.

Ordering Information

Indicate your requirements by selecting one option from each configuration table. Print the corresponding codes in the available boxes to form your part number.

For more information on this or other products and their availability, contact your local JDS Uniphase sales representative or JDS Uniphase directly.

Sample Order: VB8B711+2ASU0

