

Product Bulletin



Dynamically Reconfigurable Wavelength Blocker for C or Extended L Band

The JDS Uniphase wavelength blocker (WB) is designed for dynamically reconfigurable switching and routing applications in next generation optical communications networks. Using an all-optical design, the WB attenuates or blocks any number of wavelengths in an extended L band at both 50 GHz and 100 GHz channel spacings, and in the C band at 50 GHz channel spacings. The device is remotely reconfigured to select other wavelengths.

The WB reduces operating and capital costs of optical networks by enabling remote, dynamic channel reconfiguration and by reducing the number of opto-electronic regenerators required in the network. Any or all of the wavelengths enter the device, and any selection of these wavelengths is simultaneously attenuated to any level, or the wavelengths are blocked altogether.

Each wavelength power level is independently attenuated or blocked remotely via an electronic signal. Wide passband and low dispersion characteristics allow the WB to be cascaded, permitting multiple device concatenation in all-optical wavelength routed networks.

The WB shows leading performance over its entire operating temperature range. Key performance features include low insertion loss, high extinction ratio, wide bandwidth with flat-topped channel profiles, low polarization dependent loss (PDL), low ripple, excellent spectral flatness, low drive power, and fast response time.

Key Features

- Compact footprint
- Wide bandwidth with flat-topped channel profiles (ideal for cascading)
- Low dispersion (ideal for cascading)
- Low insertion loss
- Low PDL, ripple, and drive power

Applications

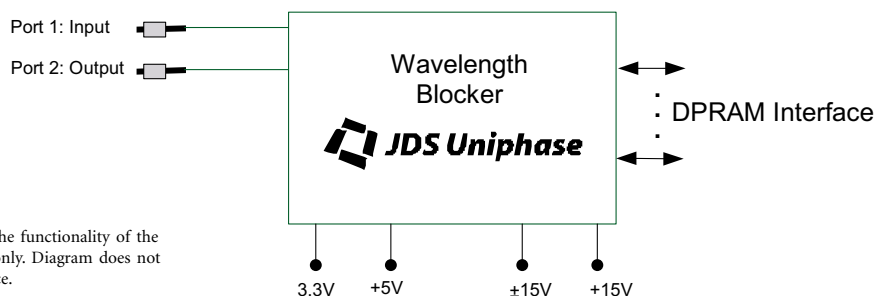
- Dynamic wavelength management
- Network protection and restoration
- Reconfigurable optical add/drop multiplexers
- Dynamic capacity provisioning

Specifications

Parameter		WB 50 GHz, C-Band	WB 50 GHz, xL-Band ¹	WB 100 GHz, xL-Band ¹
Optical				
Spectral range		1527.5 to 1565.6 nm	1554.94 to 1607.466 nm	1554.94 to 1607.466 nm
Wavelength spacing	Maximum	50 GHz	50 GHz	100 GHz
Insertion loss	Maximum	7.0 dB	7.0 dB	7.0 dB
Tunable attenuation range		0 to 20 dB	0 to 20 dB	0 to 20 dB
Extinction ratio (maximum channel attenuation)	Minimum	32 dB	32 dB	32 dB
Channel bandwidth, at 0.5 dB (relative to ITU grid)	Minimum	±10 GHz	±11 GHz	±25 GHz
Ripple, at channel bandwidth	Maximum	0.3 dB	0.3 dB	0.3 dB
Optical response time	Maximum	30 ms	30 ms	30 ms
Polarization dependent loss (at 0 dB attenuation)	Maximum	0.5 dB	0.5 dB	0.5 dB
Environmental and Operational				
Operating temperature		-5 to 65 °C	-5 to 65 °C	-5 to 65 °C
Mechanical and Packaging				
Optical block dimensions (W x D x H)		200 x 80 x 30 mm	200 x 80 x 30 mm	100 x 40 x 20 mm
Entire module dimensions (W x D x H)		245 x 140 x 70 mm	245 x 140 x 70 mm	220 x 110 x 32 mm
Electrical				
Supply voltage A (3.3 V ± 5%)	Maximum	0.8 A	0.8 A	0.8 A
Supply voltage B (5 V ± 5%)	Maximum	1.0 A	1.0 A	1.0 A
Supply voltage C (±15 V ± 5%)	Maximum	± 0.5 A	± 0.5 A	± 0.5 A
Supply voltage D (15 V ± 5%)	Maximum	± 0.8 A	± 0.8 A	± 0.8 A

1. xL-Band = extended L band 1554.94 to 1607.466 nm

Functional Diagram



Note: This diagram shows the functionality of the Wavelength Blocker only. Diagram does not resemble actual device.

Ordering Information

For more information on this or other products and their availability, please contact your local JDS Uniphase account manager or JDS Uniphase directly at 800-871-8537 in North America and 800-8735-5378 worldwide or via e-mail at jdsu.sales@jdsu.com.



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