JDS Uniphase

Product Bulletin

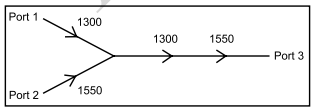
WD1315 Series
1300/1550 nm
High Isolation WDM Couplers

The WD1315 Series couplers are available in bidirectional and unidirectional models, as well as a unique universal version designed for all applications. The couplers feature wide wavelength channels and typically have 50 to 65 dB interband isolation.

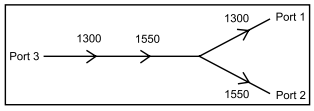
These high performance broadband WDMs allow multiplexing and demultiplexing of channels in the 1310 to 1550 nm bands, while providing low loss and high isolation.

Configurations

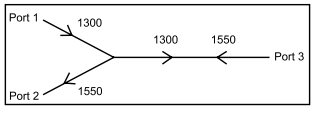
WD1315M
Unidirectional multiplexer



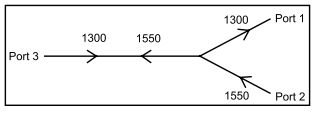
WD1315D
Unidirectional demultiplexer



WD1315X
Bidirectional coupler for 1300 nm mux/1550 nm demux



WD1315Y
Bidirectional coupler for 1300 nm demux/1550 nm mux



WD1315U
Universal 1300/1550 nm coupler - suitable for all of the above.

Key Features

- Universal model isolation typically 50 to 65 dB
- Unidirectional transmission with >45 dB isolation
- Bidirectional transmission with greater than 80 dB directivity, permitting use with non-contacting connectors
- Wide spectral channels allow use of Fabry-Perot or distributed feedback (DFB) lasers without tight wavelength selection or control
- Upgradable to more in-band wavelength channels

Applications

- Bidirectional or unidirectional systems
- Combines/separates 1300 and 1550 nm channels
- For analog and digital transmission systems
- Increase installed capacity
- Reduce fiber costs

Specifications

Parameter		WD1315M	WD1315D	WD1315X	WD1315Y	WD1315U
1300 nm channel				1260 to 1360 nm		
1550 nm channel				1480 to 1600 nm		
Loss (across entire channel)[1]				<0.8 dB (0.3 to 0.5 dB typical)		
Isolation[2]	Port 3 to 1 at 1480 to 1600 nm	N/A	>50 dB	N/A	>45 dB	>55 dB
	Port 3 to 2 at 1260 to 1360 nm	N/A	>45 dB	>45 dB	N/A	see below
	Port 3 to 2 at 1275 to 1335 nm	N/A	>50 dB	>50 dB	N/A	see below
	Port 3 to 2 at 1335 to 1360 nm	N/A	N/A	N/A	N/A	>45 dB
	Port 3 to 2 at 1260 to 1335 nm	N/A	N/A	N/A	N/A	>50 dB
Return loss[1]				>55 dB (>23 dB multimode)		
Directivity (near end isolation)				>80 dB (>65 dB multimode)		
Polarization dependent loss				<0.05 dB		
Temperature dependent loss variation				<0.005 dB/°C		
Fiber length				1.5 m standard		
Dimensions (W x H x D)			5.6 x 5.6 x 38.1 mm (250 µm coated fiber) 8.9 x 8.9 x 45.7 mm (900 µm coated fiber) 14.7 x 8.1 x 82.6 mm (3 mm jacketed fiber)			
Operating temperature				-40 to 85 °C		
Storage temperature				-40 to 85 °C		

1. Excluding connector loss. It is the loss at 23 °C for entire wavelength range.
2. Valid over full temperature range and at all wavelengths across the channel.

Ordering Information

Indicate your requirements by selecting one option from each configuration table. Please print the corresponding codes in the available boxes to form your part number. For more information on this or other products and their availability, please contact your local JDS Uniphase sales representative or JDS Uniphase directly at 613 727-1303, or by fax 613 727-8284, or via email at sales@ca.jdsunph.com, or visit our Web site at www.jdsunph.com.

Sample: WD1315X+1A00ANC1.5

WD1315 ☐ +1 ☐ ☐ ☐ ☐ ☐ ☐ 1.5

Code	Model
M	WD1315M
D	WD1315D
U	WD1315U
X	WD1315X
Y	WD1315Y

Code	Fiber
A	9/125
B	50/125
C	62.5/125

Code	Buffer Size
00	250 µm buffered fiber (NC only)
11	900 µm tight buffer
02	3.0 mm jacketed cable

Code	Packaging
A	5.6 x 5.6 x 38.1 mm, with tabs (250 µm)
B	5.6 x 5.6 x 38.1 mm, without tabs (250 µm)
C	8.9 x 8.9 x 45.7 mm (900 µm)
D	14.7 x 8.1 x 82.6 mm (3.0 mm)

Code	Connector Type
NC	No connector
FP	FC/HPC
FA	FC/APC (SM only)
SC	SC/HPC
SU	SC/APC (SM only)
SP	ST/HPC
DP	D4/HPC
BC	Biconic
VA	SMA (MM only)

JDS Uniphase

JDS Uniphase Corporation
570 West Hunt Club Road
Nepean (Ottawa), Ontario
K2G 5W8 Canada

Tel 613 727-1303
Fax 613 727-8284
sales@ca.jdsunph.com
www.jdsunph.com

MKT-DS-0029 Rev.C 10/99 Printed in Canada