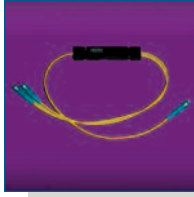


1x2 & 2x2 Couplers



Single Mode Wideband Couplers

S and D Series

Wideband couplers utilize the proven FBT (fused biconic taper) process to minimize insertion and polarization dependent loss across a wide bandpass.

Technical Specifications

Operating Windows	1310nm, 1550nm or 1310/1550nm +/- 40nm
Uniformity (dB 50/50)	0.50 Grade A 0.90 Grade B
Thermal Stability (dB Peak to Peak)	<0.20 Grade A <0.30 Grade B
Polarization Stability (dB)	<0.10 Grade A <0.15 Grade B
Back Reflection	< -55dB
Operating Temperature	-40 to +85 °C (-20 to +70 °C for PVC cable)
Tube Package Styles	3.0 x 35mm / 3.0 x 54mm / 3.0 x 70mm
Box Package Styles	90 x 14 x 8.5mm / 100 x 80 x 10mm / LGX Compatible

Ordering Information

Available in 1x2 or 2x2 configurations with various package styles. Lead lengths can be specified along with your choice of connector styles. Please contact FOC for details.

Multimode Couplers

M Series

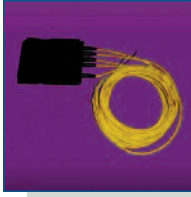
Technical Specifications

Operating Windows	850nm, 1300nm or 850/1300nm
Maximum Excess Loss (dB)	0.70 Grade A 1.00 Grade B
Uniformity (dB 50/50)	0.70 Grade A 1.00 Grade B
Thermal Stability (dB Peak to Peak)	<0.20 Grade A <0.25 Grade B
Operating Temperature	-40 to +85 °C (-20 to +70 °C for PVC cable)
Tube Package Styles	2.4 x 42mm / 3.0 x 54mm / 3.0 x 70mm
Box Package Styles	95 x 11.8 x 10mm / 100 x 80 x 10mm / LGX Compatible

Ordering Information

Available in 1x2 or 2x2 configurations with various package styles. Lead lengths can be specified along with your choice of connector styles. Please contact FOC for details.

Tree Couplers



Single Mode Wideband Tree Couplers

T Series

Combining multiple 1x2 or 2x2 FBT couplers, tree couplers provide an economical solution to enable wavelengths to split to multiple ports while maintaining low insertion loss, back reflection and polarization dependant loss.

Technical Specifications

Operating Windows	1310nm, 1550nm or 1310/1550nm (Narrow = +/- 10nm) (Wideband = +/- 40nm)
Thermal Stability (dB Peak to Peak)	<0.20 Grade A <0.30 Grade B
Polarization Stability (dB)	<0.10 Grade A <0.15 Grade B
Back Reflection	< -55dB
Operating Temperature	-40 to +85 °C (-20 to +70 °C for PVC cable)
Box Package Styles	100 x 80 x 10mm / 125 x 96 x 16mm / 130 x 100 x 18mm
Other Package Styles	LGX Compatible (single or double wide) 19" Rack Mountable (single or double wide)

Ordering Information

Available in 1x4, 2x4, 1x8, 2x8, 1x16, 2x16, 1x32 and 2x32 configurations with various package styles. Lead lengths can be specified along with you choice of connector styles. Please contact FOC for details.

Multimode Tree Couplers

MT Series

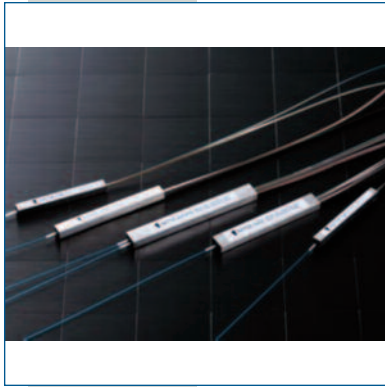
Technical Specifications

Operating Windows	850nm or 1300nm
Thermal Stability (dB Peak to Peak)	<0.20 Grade A <0.30 Grade B
Operating Temperature	-40 to +85 °C (-20 to +70 °C for PVC cable)
Box Package Styles	100 x 80 x 10mm / 140 x 90 x 10mm
Enclosure Package Styles	4 Rack Space / 154 x 110 x 16mm
Rack Mount Package Styles	485 x 255 x 45mm (single high) / 485 x 255 x 90mm (double high)

Ordering Information

Available in 1x4, 2x4, 1x8, 2x8, 1x16, 2x16, 1x32 and 2x32 configurations with various package styles. Lead lengths can be specified along with you choice of connector styles. Please contact FOC for details.

PLC Optical Splitters



NITTA

NSP Series Optical Splitter Modules

For higher split counts, PLC (planar light circuit) optical splitters can offer higher performance in a smaller package. Nitta's tight tolerance manufacturing capabilities allow them to manufacture high quality, highly reliable PLCs that are fully compatible with GR-1209 and GR-1221 requirements.

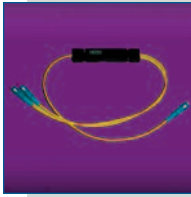
Technical Specifications

Configuration	1 x 4		1 x 8		1 x 16		2 x 1 x 16		1 x 32	
	Std.	Prem.	Std.	Prem.	Std.	Prem.	Std.	Prem.	Std.	Prem.
Type										
Insertion Loss (dB)	< 7.5	< 6.7	< 10.5	< 9.8	< 13.5	< 13.0	< 14.0	< 13.5	< 17.0	< 16.3
Loss Uniformity (dB)	< 0.8	< 0.6	< 0.8	< 0.6	< 1.0	< 0.8	< 1.0	< 0.8	< 1.3	< 1.0
PDL (dB)	< 0.15	< 0.10	< 0.15	< 0.10	< 0.20	< 0.15	< 0.20	< 0.15	< 0.20	< 0.15
Wavelength (nm)	1260 ~ 1600									
Back Reflection (dB)	> 55		> 55		> 55		> 55		> 55	
Directivity (dB)	> 55		> 55		> 55		> 55		> 55	
Operating Temp (°C)	-40 ~ +85									
Package Size (mm)	4 x 4 x 40		4 x 4 x 40		5 x 4 x 50		7 x 4 x 60		7 x 4 x 50	

Ordering Information

Available in 1x4, 1x8, 1x16, 2x1x16 and 1x32 configurations on bend insensitive or SMF-28 compatible fiber. Lead lengths can be specified along with you choice of connector styles. Please contact FOC for details.

Wavelength Division Multiplexers



Single Mode / Multimode WDMs

W Series

Wavelength Division Multiplexers (WDMs) can be used to enhance power output of C and L band lasers, can be used with 980/1550nm EDFA systems as well as combine and separate multimode 850/1300nm signals.

Technical Specifications

Operating Windows	1310/1550nm, 980/1550nm or 850/1300nm			
Thermal Stability	<0.20 dB Peak to Peak			
Directivity	> 50 dB (single mode only)			
Back Reflection	< -55 dB			
Operating Temperature	-40 to +85 °C (-20 to +70 °C for PVC cable)			
Type	Insertion Loss	Peak Isolation	Bandwidth	Polarization Stability
1310/1550nm Standard	0.25	> 20	+/- 20	< 0.10
1310/1550nm High Isolation	1.00	> 40	+/- 40	< 0.20
980/1550nm Pump	0.40	22	+/- 10	< 0.10
850/1300nm Multimode	1.0	16	+/- 10	NA

CWDMs and DWDMs

CW & DW Series

Thin film coarse wavelength and dense wavelength division multiplexers are used to increase bandwidth over a single fiber. CWDMs are designed to provide channels in the C band as well as the low L band spectrum. DWDMs split channels over the ITU standard (1.5um range) in multiple channel outputs.

Technical Specifications

Type	CWDM	DWDM
Center Wavelength Accuracy	< +/- 0.10nm	< +/- 0.10nm
Channel Spacing	20nm	1.6nm
Passband at 0.5dB	0.50nm	0.50nm
IL - 4 channel	< 1.9 dB mux < 1.9 dB demux	< 3.0 dB
IL - 8 channel	< 2.5 dB mux < 2.8 dB demux	< 5.0 dB
IL - 16 channel	< 5.2 dB mux < 5.2 dB demux	< 6.0 dB
Uniformity	< 1.5 dB	< 1.5 dB
Directivity	> 50 dB	> 50 dB
Backreflection	45 dB - SPC 55 dB - UPC 65 dB - APC	45 dB - SPC 55 dB - UPC 65 dB - APC

Ordering Information

Available in various package styles. Lead lengths can be specified along with you choice of connector styles. Please contact FOC for details.