

# Wide bandwidth Fused Couplers

High performance couplers and taps with  $\pm 40\text{nm}$  bandwidth at 1300nm, C-band or L-band

## FEATURES:

- Low excess loss
- High directivity
- Low PDL
- Good environmental stability
- High return loss
- Telcordia GR-1221-CORE

## APPLICATIONS:

- Power splitting
- Power monitoring
- Optical fiber sensors
- Optical fiber networks
- CATV

The Phoenix Photonics range of fused fiber couplers has been developed to offer the designer flexibility in optimizing system performance. The proven FBT technology base has been utilized to optimize specific device parameters, reflected in the specific product categorization. Parameters that can be selected through the choice of appropriate device are; coupling ratio, insertion loss, wavelength flatness, polarization stability and center wavelength.

All of the coupler options offer very low excess loss and PDL performance, are available in a range of coupling ratios from 1% to 50% and have 1x2 or 2x2 configuration.

## Wideband

Wideband couplers offer increased bandwidth to  $\pm 40\text{nm}$  in single window operation enabling full coverage of C&L-bands.

SPECIFICATION:		Units	1x2 or 2x2 Port Couplers							
Wavelength <sup>1</sup>		nm	1310, 1550, 1590							
Bandwidth		nm	$\pm 40$							
Excess Loss		dB	0.05(typ.), 0.08 (max.)							
Splitting Ratio <sup>2</sup>		%	<b>50/50</b>	<b>60/40</b>	<b>70/30</b>	<b>80/20</b>	<b>90/10</b>	<b>95/5</b>	<b>97/3</b>	<b>99/1</b>
Ratio Tolerance		%					$\pm 1.5$	$\pm 1.0$	$\pm 0.8$	$\pm 0.4$
Insertion Loss <sup>3</sup>	Typ.	dB	3.05	2.3/4.1	1.6/5.3	1.0/7.1				
	Max.	dB	3.3	2.5/4.4	1.8/5.6	1.1/7.4				
WDL (tap port)		dB					$\pm 0.1$	$\pm 0.15$	$\pm 0.2$	$\pm 0.2$
PDL (through port)		dB	0.1	0.1	0.1	0.1				
PDL (tap port)		dB	0.1	0.1	0.15	0.15			$< 0.12$	
Thermal Stability <sup>4</sup>		dB	$< 0.1$				$< 0.2$			
Operating Temperature		$^{\circ}\text{C}$	$-40$ to $+85$							
Directivity <sup>5</sup>	1x2	dB	$> 50$							
	2x2	dB	$> 65$							
Pigtails		mm	1000							

Lead Type	250 $\mu\text{m}$	900 $\mu\text{m}$ loose tube	3mm cable
Package Dimensions	3mm dia. x 54mm	3.5mm dia. x 66mm	90mmx16mmx9mm
		90mmx16mmx9mm	

Notes:

- 1 Center wavelength can be tailored to customer requirements
- 2 Other splitting ratios can be provided, please contact our sales representative for further information.
- 3 Insertion loss without connectors
- 4 Maximum variation of coupling ratio over full, specified temperature range
- 5 Directivity of 60dB can be supplied on request

**PRODUCT ORDERING INFORMATION:**

