

SINGLE FUSE COUPLER 1X3, 3X3, 1X4, 4X4

Fused Fiber Coupler

The single fuse coupler provides optical splitting and combining for >2 ports. A single low loss fusion takes place to produce 1x3, 3x3, 1x4 and 4x4 couplers in a cylindrical package.

Standard versions of these components are available optimised for 980 nm, 1310 nm, 1480 nm, 1550 nm or 1585 nm wavelengths. These may be used in a wide variety of applications including optical network expansion.

Single fuse couplers by virtue of their phase properties, are also ideal for use in fiber Gyros. Versions are available with ultra-compact housings and $\varnothing 80\mu\text{m}$ cladding fiber pigtails, directly compatible with Gyro sensing loops. Low loss ensures optimal Gyro sensitivity.

These Gyro-optimised single fuse couplers are available on a custom basis. Please contact us for a specification tailored to your requirements.



Key Features

- Single low loss fusion
- 1x3, 3x3, 1x4, 4x4
- Standard product for network expansion
- $\varnothing 80\mu\text{m}$ cladding fiber capability
- Custom designs for Gyro applications

Applications

- Optical network expansion
- Fiber Gyros
- Sensors
- Research

Optical Specifications¹

Parameter	Specification							
Operating wavelength	980, 1310, 1480, 1550 or 1585 nm							
Port configuration	1x3		3x3		1x4		4x4	
Coupling ratio (%)	33/33/33		33/33/33		25/25/25/25		25/25/25/25	
Grade	A	B	A	B	A	B	A	B
Maximum insertion loss ²	5.7 dB	6.2 dB	6.2 dB	6.5 dB	7.0 dB	7.8 dB	8.0 dB	8.6 dB
Return loss/directivity	50 dB							
Pigtail tensile load	5 N							
Optical power handling	4 W							
Operating temperature ³	-40 to +75° C							
Storage temperature	-40 to +85° C							
Fiber type	Corning SMF-28 ⁴ or 980 nm fiber ⁵							

¹ All specifications are preliminary.

² Insertion loss (not including PDL, TDL or any connector losses).

³ For connectorized component, operating temperature range is -5 to +75°C.

⁴ Custom designs using Ø80 µm fiber for Gyro applications are available. Please contact the sales office for further information.

⁵ For 980 nm component.

Housing Option

Housing Code	Description	Dimensions (mm)		Pigtail
3	Regular	1x3, 3x3	3.0 (∅) x 55 (L)	Primary-coated fiber
		1x4, 4x4	3.0 (∅) x 71 (L)	

Order code

Order codes are comprised of a standard device prefix (e.g. FFC) followed by code letters or numbers which correspond to available options.

Sample: FFC-CD35A110 (Single fuse coupler, 1550 nm center channel wavelength, 25% coupling ratio, regular housing, 3x3 port configuration, grade A, Coming SMF-28 fiber, 1 m pigtail length, no connectors).

Order code				①	②	③	④	⑤	⑥	⑦	⑧	⑨
F	F	C	-						N			
①	Passband			1550 nm		1585 nm		1310 nm		1480 nm		
	Code			C		L		4		3		
②	Coupling ratio	25% (Nx4)				33% (Nx4)						
	Code	D				F						
③	Housing	Regular										
	Code	3										
④	Port configuration	1x3		3x3		1x4		4x4				
	Code	3		5		6		9				
⑤	Grade	Grade A				Grade B						
	Code	A				B						
⑦	Fiber Type³	Coming SMF-28				980 nm fiber ⁴						
	Code	1				2						
⑧	Pigtail length¹	0.5 m				1 m						
	Code	0				1						
⑨	Connector²	None										
	Code	0										


1 Minimum pigtail length. Further pigtail lengths available on request. Where connectorized, pigtail length is to connector end face.

2 For connectorization of this component please contact the sales office.

3 Custom designs using Ø80 µm fiber for Gyro applications are available. Please contact the sales office for further information.

4 For 980 nm components only.

Ordering Information:



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Email orders to: sales@xsoptix.com
 Fax orders to: 800-878-7282

For further information

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