



flawless fusion with infinite possibilities

SIFAM
F I B R E O P T I C S

Wideband Coupler



SIFAM's Wideband Coupler provides new levels of performance and reliability for two-window couplers. The coupler enables coupling and splitting simultaneously over the 1310nm and 1550nm windows.

Within optical networks the ultra-low insertion loss of the Wideband Coupler makes it easier to meet stringent optical power budgets. Furthermore the component is designed for high reliability and low FIT rates, through robust fusion and advanced component packaging.

Components are available in a variety of package styles to suit a wide range of applications, including optical networking. Wavelengths other than 1310/1550nm are also available as a custom product. Please contact us to discuss your specific requirements.

Key Features:

- 1310 and 1550nm operation
- High performance
- ± 20 nm bandwidth in each window
- Consistently reliable
- Low loss

Applications:

- Optical networking
- Passive optical networks
- CATV
- Undersea systems

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Optical Specifications

Coupling Ratio	Grade	Signal Path			Tap Path		
		Insertion Loss _{1,2} (dB)		PDL ₃ (dB)	Insertion Loss _{1,2} (dB)		PDL ₃ (dB)
Example ₄		Min	Max	Max	Min	Max	Max
5%	P	-	0.4	0.10	11.9	14.7	0.35
5%	A	-	0.5	0.10	11.6	15.3	0.35
10%	P	-	0.7	0.10	9.1	11.2	0.30
10%	A	-	0.8	0.10	8.9	11.5	0.30
33%	P	-	2.1	0.15	4.4	5.5	0.20
33%	A	-	2.2	0.15	4.3	5.7	0.20
50%	P	2.6	3.5	0.15	2.7	3.4	0.15
50%	A	2.6	3.6	0.20	2.6	3.6	0.20

1. Insertion loss over operating wavelength range (not including PDL, TDL or any connector losses),
2. In 2x2 couplers insertion loss is not specified for launch through second input port P4 (coloured blue)
3. Change in insertion loss over all input polarisation states at band centre wavelength
4. Any coupling ratio available – contact SIFAM for specification of coupling ratios not listed.

Parameter	Specification	Unit	
Operating Wavelength Range	1310/1550nm	1310±20 and 1550±20	nm
Return Loss/Directivity ₁	55		dB
Pigtail Tensile Load	5		N
Optical power handling	4		W
Operating Temperature Range ₂	-40 to +75		°C
Storage Temperature Range	-40 to +85		°C

1. Return loss is the ratio of power launched to power reflected for port P1. Directivity for the 2x2 component is the ratio of power launched to P1 to the power reflected to P4.
2. For connectorised component, operating temperature range is -5 to +75°C.

Housing Option

Housing Code	Description	Dimensions (mm)	Pigtail
3	Regular	3.0 (Ø) x 50 (L)	Primary-coated fibre
4	Ø 0.9 mm slim	3.0 (Ø) x 60 (L)	Ø 0.9 mm loose-tube
5	Ø 0.9 mm semi-ruggedised	5.0 (Ø) x 75 (L)	Ø 0.9 mm loose-tube
6	Ø 3.0 mm fully-ruggedised	80 (L) x 10 (W) x 8 (H)	Ø 3.0 mm fan-out sleeving

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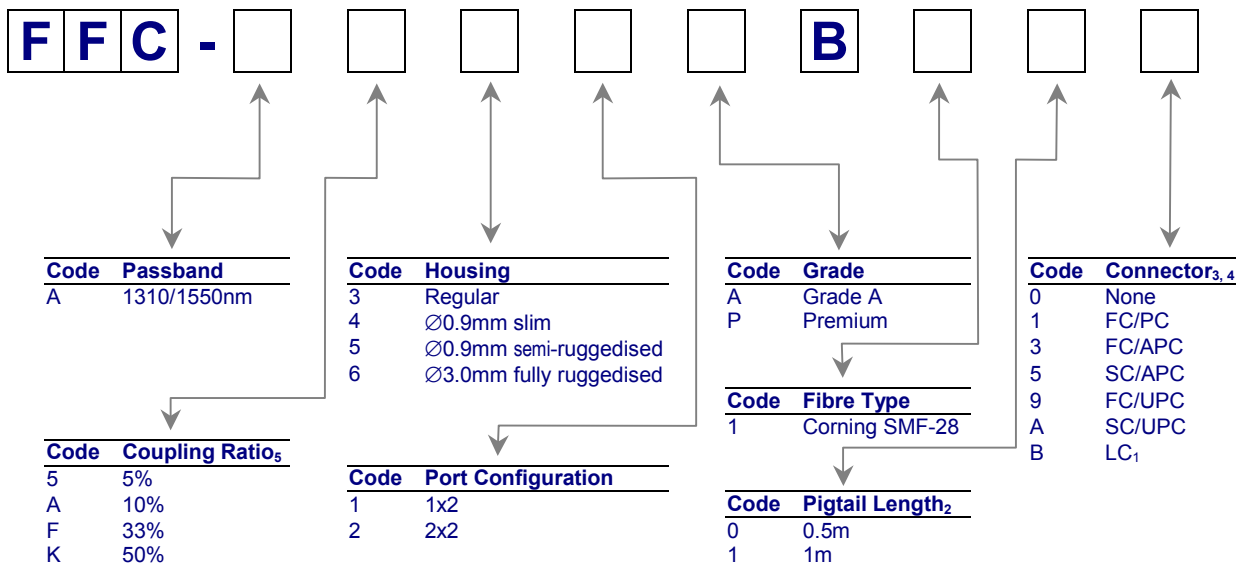
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Configuration



Ordering Code Information

Sample: FFC-AK31PB110 (1310/1550nm, 50/50 coupling ratio, regular housing, 1x2, premium grade, SMF-28 fibre, 1m pigtail, no connector)



1. Not available for housing option 6.
2. Minimum pigtail length. Further pigtail lengths available on request. Where connectorised, pigtail length is to connector end face.
3. Insertion loss in specification table does not include connector losses.
4. Connectors are fitted as standard to housing codes 4,5, and 6 only. To request connectors fitted to housing code 3, please contact the sales office.
5. Any coupling ratio available – contact SIFAM for specification and ordering codes of coupling ratios not listed.

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