



flawless fusion with infinite possibilities

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

Near Infrared Coupler



The Near Infrared Coupler splits light at any selected wavelength from 700nm to 1150nm.

Designed for applications in fibre laser, sensor and avionics applications, the coupler utilises SIFAM's low loss fused fibre technology.

No light leaves the fibre and therefore no alignment is required; and there are no unwanted reflections. Furthermore the output fibre pigtailed systems may be directly integrated into beam delivery systems.

For components and modules which combine different wavelengths within the near infrared region please refer to the datasheet 'Near Infrared WDM'.

Key Features:

- 700 to 1150nm operation
- Any coupling ratio available
- All fibre – no alignment required
- No unwanted reflections
- Low light loss
- High power handling

Applications:

- Fibre lasers
- Sensors
- Avionics
- Biomedical equipment
- Research

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Optical Specifications

Coupling Ratio (%) ₃	Grade	Available Wavelength(s)	Available Housing Option	Signal Path Insertion Loss (dB) _{1,2}	Tap Path Insertion Loss (dB) _{1,2}
1	A	700 to 1150nm	3,4,5,6	0.15	24.9
	B			0.20	25.3
5	A	700 to 1150nm	3,4,5,6	0.40	15.9
	B			0.50	16.2
10	A	700 to 1150nm	3,4,5,6	0.9	12.2
	B			1.1	12.4
20	A	700 to 1150nm	3,4,5,6	1.5	8.4
	B			1.7	8.6
30	A	700 to 1150nm	3,4,5,6	2.2	6.4
	B			2.4	6.5
40	A	700 to 1150nm	3,4,5,6	3.0	4.9
	B			3.2	5.1
50	A	700 to 1150nm	3,4,5,6	3.8	3.8
	B			4.0	4.0

1. In 2x2 couplers insertion loss is not specified for launch through second input port P4 (coloured blue)
2. Maximum insertion loss at operating wavelength. Not including TDL, PDL or connector losses.
3. Any coupling ratio available. Please contact us for specifications of coupling ratios not listed.

Parameter	Specification	Unit
Operating Wavelength	Specified wavelength within the range 700-1150nm	nm
Operating / Storage Temperature Range	-40 to +75 / -40 to + 85	°C
Pigtail Tensile Load	5	N
Fibre Type	Speciality singlemode fibre	

1. For connectorised component, operating temperature range is -5 to +75°C.

Housing Option

Housing Code	Description	1x2, 2x2 Dimensions (mm)	Pigtail
3	Regular	3.0 (Ø) x 50 (L)	Primary-coated fibre
4	Ø0.9 mm slim	3.0 (Ø) x 60 (L)	Ø 0.9mm 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

Configuration



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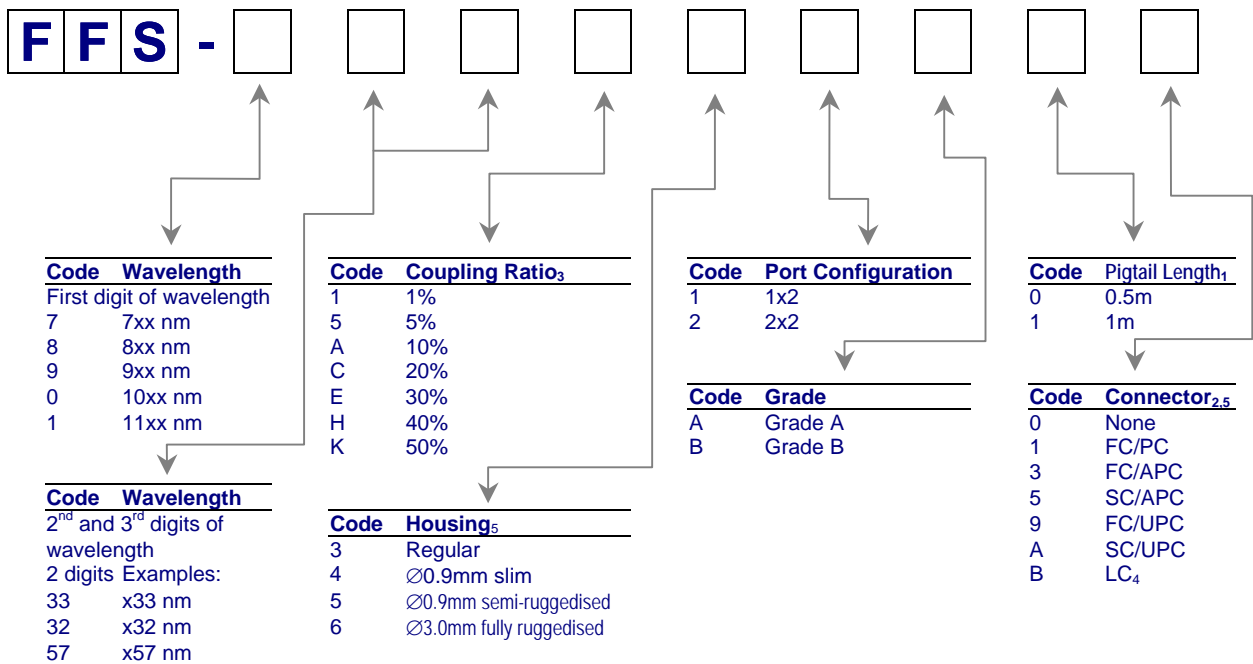
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Ordering Code Information

FFS-780K31A10 (Fused Fibre Speciality Coupler, 780nm, 50/50 coupling ratio, regular housing, 1x2, A grade, 1m pigtails, no connectors)

FFS-060K31A10 (Fused Fibre Speciality Coupler, 1060nm, 50/50 coupling ratio, regular housing, 1x2, A grade, 1m pigtails, no connectors)



1. Minimum pigtail length. Further pigtail lengths available on request. Where connectorised, pigtail length is to connector end face.
2. Insertion Loss in specification table does not include connector losses.
3. Any coupling ratio available. Please contact SIFAM for ordering codes of coupling ratios not listed.
4. LC connector not available for housing code 6, fully ruggedised housing.
5. Connectors may be fitted to housing types 4, 5 and 6. For connectorisation of housing type 3 please contact the sales office.

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