



Gooch & Housego



Ultra Low Ratio Tap Coupler

The Ultra Low Ratio Tap Coupler splits a very small amount of light from a signal path to a tap port.

Suitable for very high optical power, it's main application is in the monitoring of optical sources such as fibre lasers.

Low tap ratios such as 0.1%, 0.01% or 0.001% enable the **monitoring** photodetector to operate without damage or saturation.

G&H proprietary manufacturing technology provides ultra-low loss in the signal path, thereby maximising optical power handling. Consistently high return loss (>55dB) reduces the amount of optical power reflected back along the input fibre. This helps the fibre laser operate in a stable manner.

Standard parts are available for wavelengths from 700 to 1599nm. For other wavelengths, coupling ratios or customised fibre types please contact the sales office.

Key Features:

- Tap ratio up to 50dB
- High return loss
- Ultra-low signal insertion loss
- High power handling
- Available at wide variety of laser wavelengths
- Custom product

Applications:

- Fibre Lasers
- RAMAN amplifiers
- High Power EDFA



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Specifications

Parameter	Specification			Unit
Coupling Ratio	0.1	0.01	0.001	%
Tap Insertion Loss	30 ±3	40 ±4	50 ±5	dB
Signal Insertion Loss ^{1,2}	0.1			dB
Return Loss	≥55			dB
Operating Wavelength ³	Any selected wavelength from 700 to 1599			nm
Optical Power handling ^{5, 6}	4			W
Housing type codes:	3, 4, 5, 7 & C			
Operating Temperature	-40 to +75			°C
Storage Temperature	-40 to +85			°C
Pigtail Tensile Load	5			N
Fibre Type ⁴	Singlemode			

1. Maximum insertion loss at operating wavelength. Not including TDL or PDL.
2. In 2x2 couplers insertion loss is not specified for launch through second input port P4 (coloured blue)
3. Other wavelengths available as custom components. Please contact the G&H Sales team.
4. For customised fibre types please contact the G&H Sales team.
5. For operation at powers of greater than 4W the component housing and fibre must be adequately heat-sunk (for additional information contact G&H Sales). Components intended for high power operation are only available in the 2x2 configuration. Component performance and reliability under high power must be determined within the customer system.
6. The performance and reliability of optical connectors is not guaranteed for optical powers of greater than 1W.
7. For connectorised component, operating temperature range is -5 to +75°C.

Housing Options

Housing Code	Description	Dimensions (mm)	Pigtail
3	Regular	3.0 (∅) x 50 (L)	Primary-coated fibre
4	Semi-ruggedised slim	3.0 (∅) x 60 (L)	∅ 0.9 mm loose-tube
5	Semi-ruggedised	5.0 (∅) x 75 (L)	∅ 0.9 mm loose-tube
7	High Power	5 (W) x 5 (H) x 85 (L max)	Primary-coated fibre
C	Regular High Power	3.0 (∅) x 50 (L)	Primary-coated fibre

Configuration



Contact: sales@goochandhousego.com

www.goochandhousego.com

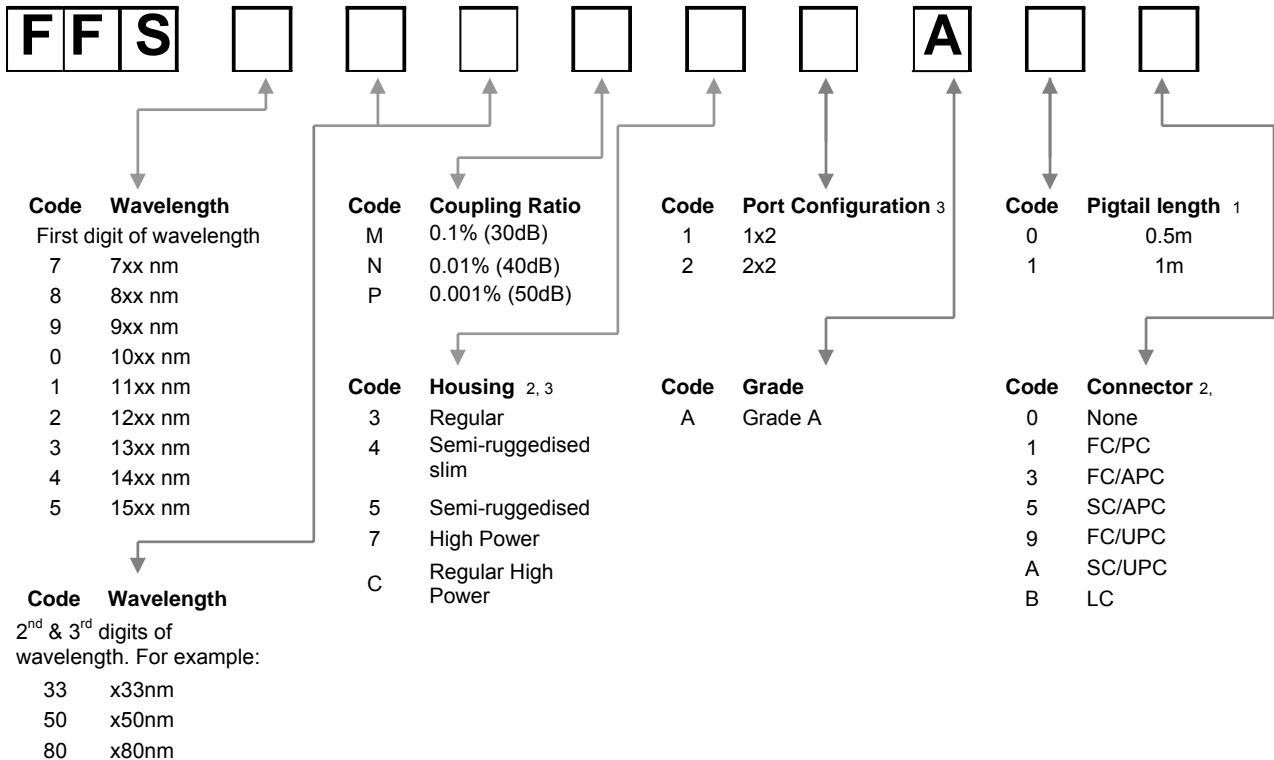
As part of our policy of continuous product improvement we reserve the right to change specifications at any time

Ordering Code

Examples:

FFS-080 P32 A10 (Fused Fibre Speciality Coupler, 1080nm, 0.001% coupling ratio, regular housing, 2x2, A grade, 1m pigtails, no connectors)

FFS-550 M32 A10 (Fused Fibre Speciality Coupler, 1550nm, 0.1% coupling ratio, regular housing, 2x2, 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. Connectors may be fitted to housing types 4 & 5. For connectorisation of other housing types please contact G&H Sales. Note that insertion loss stated does not include connector losses.
3. 7 & C housing options not available as 1x2 port configuration.