



Gooch & Housego

Subminiature Pump Signal WDM



The Subminiature Pump Signal WDM provides low loss multiplexing of pump and signal in an ultra-short 32mm length package. Designed for space constrained optical amplifiers, the product is manufactured using $\varnothing 80\mu\text{m}$ cladding fibre. This enables low fibre bend radius without compromising mechanical integrity.

G&H proprietary manufacturing technology provides uniquely low insertion loss for signal and pump paths. This promotes low noise figure and the efficient use of pump power in optical amplifiers.

Standard wavelengths of operation are based on 980nm pumping and C, L or C+L signal bands. However many other wavelength combinations are available for diverse requirements such as sensing, fibre lasers and fibre gyros. Do not hesitate to contact us with your specific requirements.

Reliability is assured through qualification to Telcordia GR-1221.

Key Features:

- 32mm package length
- $\varnothing 80\mu\text{m}$ cladding fibre
- C, L or C+L signal bands
- Ultra low typical $<0.05\text{dB}$ excess loss
- High power handling
- Proven reliability

Applications:

- Miniature Optical Amplifiers
- Miniature Modules
- Fibre Gyros
- Fibre Lasers
- Sensors

Compliance:

- Telcordia GR-1221

As part of our policy of continuous product improvement we reserve the right to change specifications at any time
PEC 0106 Issue 2



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Optical Specifications

Wavelength		Grade	Available Fibre Type Option ⁵	Insertion Loss (dB) ¹	WDL (dB) ²	PDL (dB) ³	TDL (dB) ⁴	Isolation (dB)
Pump	Signal			Max	Max	Max	Max	Min
980nm	C band	M	4	0.10	0.07	0.02	0.02	18
	L band	N	4	0.15	0.10	0.02	0.02	18
		B	4,9	0.20	0.10	0.02	0.02	16
980nm	C+L band	B	4,9	0.50	0.40	0.02	0.02	10

1. Insertion loss over operating wavelength range (not including PDL and TDL)
2. Change in insertion loss over the operating wavelength range
3. Change in insertion loss over all input polarisation states in signal wavelength range
4. Change in insertion loss from -5 to 75°C
5. Cross reference to Ordering Information Table for available options

Parameter		Specification	Unit
Operating Wavelength Range ₁	C band	1528-1563	nm
	C + L band	1528-1605	nm
	L band	1570-1605	nm
	980nm	970-990	nm
Return Loss/Directivity ₁		55	dB
Pigtail Tensile Load		5	N
Optical power handling		4	W
Operating / Storage Temperature Range		-40 to +75 / -40 to +85	°C
Environmental Qualification		Telcordia GR 1221	

1. Measured reference port P3 input for signal wavelength, P2 input for pump wavelength and P1 input for signal and pump wavelengths.

Housing Option

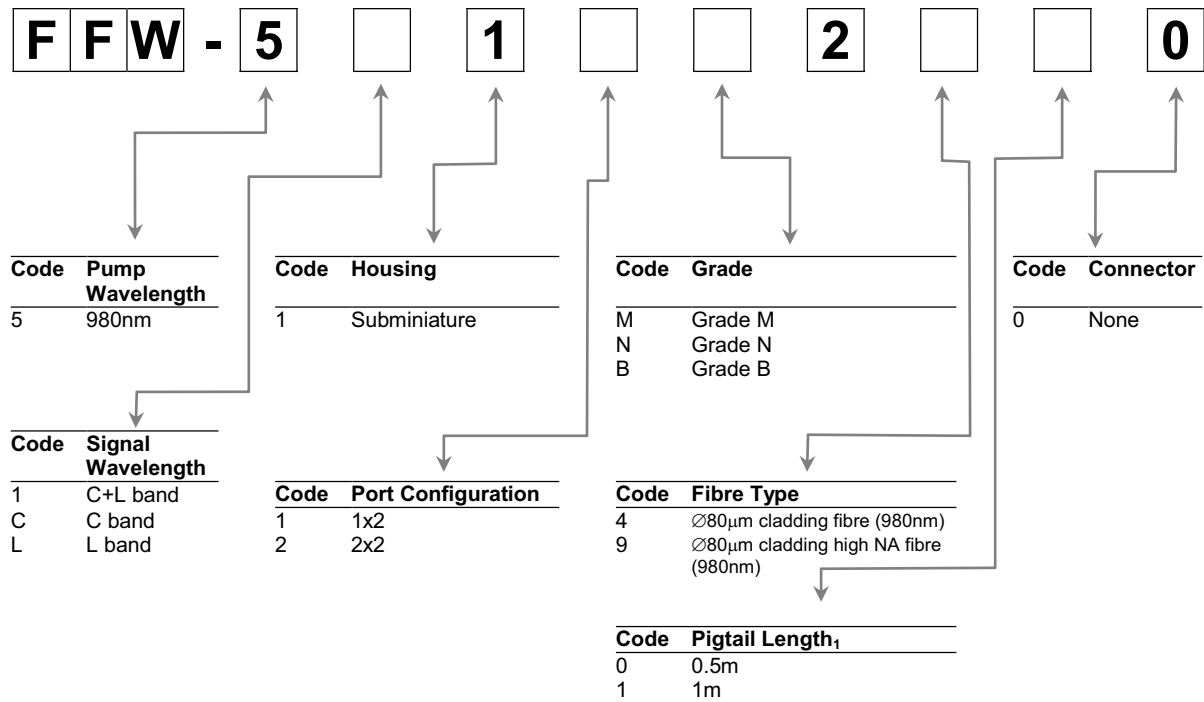
Housing Code	Description	1x2, 2x2 Dimensions (mm)	Pigtail
1	Subminiature	3.0 (Ø) x 32 (L)	Primary-coated fibre, 80µm cladding

Configuration



Ordering Code Information

Sample: FFW-5C11M2410 (Fused Fibre WDM, 980nm pump, C band signal, subminiature housing, 1x2, M grade, Ø80µm cladding fibre (980nm), 1m pigtail, no connector).



1. Minimum pigtail length. Further pigtail lengths available on request.

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