

FUSED PUMP SIGNAL WDM 980 NM

Fused Fiber WDM

DATASHEET

The Gooch & Housego fused pump signal WDM, 980 nm multiplexes signal and pump power in 980 nm, 960 nm or 1060 nm-pumped erbium doped fiber amplifiers.

G&H proprietary manufacturing technology provides uniquely low excess loss and wavelength dependence, along with low polarization and temperature dependence for all ports. The ultra-low loss of these components promotes high efficiency of use of pump power and low noise figure.

These high performance parts are available in many wavelength configurations, housing, fiber and connector options. They can therefore be readily specified in a wide variety of applications, enabling rapid design cycles and new project builds. Wavelength configurations allow for 960 nm, 980 nm or 1060 nm pumping and C, L or C+L signal bands.

Reliability is assured through qualification to Telcordia GR-1221, with a field proven FIT rate of <1.

For the sub-miniature version of this product please refer to the sub-miniature pump signal WDM data sheet.



Key Features

- Promotes low amplifier noise figure
- Promotes low pump power wastage
- Ultra-low typical < 0.05 dB excess loss
- Wide range of regular parts available
- High power handling
- <1FITs</pre>

Applications

- C, L or C+L band EDFA
- 960, 980 or 1060nm pump rejection
- Fiber lasers

Compliance

Telcordia GR-1221

FUSED PUMP SIGNAL WDM 980 NM

Page 1



Optical Specifications

Wavelength		Grade	housing Option ⁵	Available Fiber Type ⁵	Insertion Loss ¹ (dB)	WDL ² (dB)	PDL ³ (dB)	TDL ⁴ (dB)	Isolation (dB)
Pump	Signal				Max	Max	Max	Max	Min
980 nm 960 nm	C band	Р	3,4,5,6,7,0	2	0.08	0.04	0.02	0.02	20
	C band L band	Α	2,3,4,5,6,7,C	2	0.10	0.07	0.02	0.02	20
980 nm	C band L band	M	2,3,4,5,6,7,C	2	0.10	0.07	0.02	0.02	18
960 nm 1060 nm ⁶	C band L band	N	2,3,4,5,6,7,C	2	0.15	0.10	0.02	0.02	18
	C band L band	В	2,3,4,5,6,7,C	2,5	0.20	0.10	0.02	0.02	16
980 nm	C+L band	Р	3,4,5,6,7,C	2	0.25	0.20	0.02	0.02	16
980 nm	C+L band	А	2,3,4,5,6,7,0	2,5	0.40	0.30	0.02	0.02	14
980 nm	C+L band	В	2,3,4,5,6,7,C	2,5	0.50	0.40	0.05	0.05	10

- 1 Insertion loss over operating wavelength range (not including PDL, TDL or connector losses).
- 2 Change in insertion loss over the operating wavelength range.
- 3 Change in insertion loss over all input polarization states in signal wavelength range.
- 4 Change in insertion loss from -5 +75°C.
- 5 Cross reference to ordering information table for available options.
- 6 1060 nm components not available in housing option 2 (miniature).

Parameter		Specification
Operating wavelength range	C band	1528-1563 nm
	C + L band	1528-1605 nm
	L band	1570-1605 nm
	960 nm	955-970 nm
	980 nm	970-990 nm
	1060 nm	1050-1070 nm
Return loss/directivity1		55 dB
Pigtail tensile load		5 N
Optical power handling3,4		4 W
Operating temperature range2		-40 - +75°C
Storage temperature range		-40 - +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.
- 2 For connectorized component, operating temperature range is -5 +75°C.
- 3 For operation at powers of greater than 4 W 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.
- 4 The performance and reliability of optical connectors is not guaranteed for optical powers of greater than 1 W.

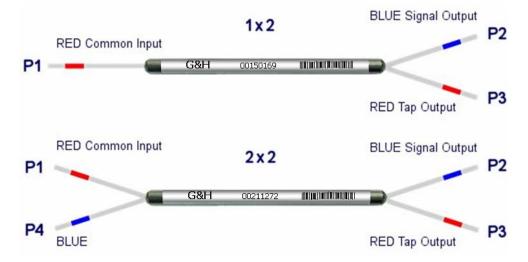
FUSED PUMP SIGNAL WDM 980 NM



Housing Option

Housing Code	Description	Dimensions (mm)	Pigtail
2	Miniature	3.0 (Ø) x 45 (L)	Primary-coated fiber
3	Regular	3.0 (Ø) x 55 (L)	Primary-coated fiber
4	Semi-ruggedized slim	3.0 (∅) x 65 (L)	∅0.9 mm loose-tube
5	Semi-ruggedized	5.0 (∅) x 80 (L)	∅0.9 mm loose-tube
6	Fully-ruggedized	80 (L) x 10 (W) x 8 (H)	∅3.0 mm fan-out sleeving
7	High power	5 (W) x 5 (H) x 85 (L max)	Primary-coated fiber
С	Regular high power	3.0 (∅) x 55 (L)	Primary-coated fiber

Configuration





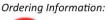
Order code

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

Sample: FFW-5C31A2210 (Fused Fiber WDM, 980 nm pump, C band signal, regular housing, 1x2 port configuration, A grade, Lucent BF05635-02 fiber, 1 m pigtail, no connector).

Order code			1	2	(3	4	(5		6	7	8	9				
F F W -									2								
① Pump wavelength			980 nm				1060 nm			960 nm							
Code				5			8			F							
2	Sig	ınal wave	elength ⁴		C+L band				C band			L band					
	Code			1 C					L								
3	3 Housing ^{4,5}		Miniatur	e Reg	jular	Semi- ruggedized slim		Semi- ruggedized ru			lly- High edized power		Regular high power				
	Code		2		3	4		5		E	5	7	С				
4 Port configuration 5				1x2						2x2							
	Coc	de					1			2							
5	⑤ Grade			Grade P Grad		rade A		Grade M		Grade N		Grade B					
	Code			Р	P A M N					В							
7	Fib	er type			Lucent BF05635-02 Coming HI 1060 I						1060 Flex	<					
	Coc	de			2						5						
8	Pig	tail leng	th ²		0.5 m						1 m						
	Code				0					1							
9	Cor	nnector∃	,4		None	F	Z/PC	FC/AF	APC SC/APC		APC FC/UP		C S	SC/UPC	LC ¹		
	Coc	de			0		1	3		5		9		А	В		

- 1 Not available for housing option 6.
- 2 Minimum pigtail length. Further pigtail lengths available on request. Where connectorized, pigtail length is to connector end
- 3 Insertion loss in specification table does not include connector losses.
- 4 Connectors may be fitted to housing types 4, 5 and 6. For connectorization of other housing types please contact the sales office.
- 5 7 & C not available as 1x2 port configuration.





800 Village Walk #316 Guilford, CT 06437 Ph: 203-401-8093

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

For further information

E: torquaysales@goochandhousego.com

goochandhousego.com

FUSED PUMP SIGNAL WDM 980 NM

Data sheet PEC0102 Issue 5 September 2016