



# FUSED PUMP SIGNAL WDM 1480 NM

## Fused Fiber WDM

### DATASHEET

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The Gooch & Housego fused pump signal WDM, 1480 nm multiplexes signal and pump power in 1480 nm-pumped erbium doped fiber amplifiers.

G&H proprietary manufacturing technology provides uniquely low excess loss, along with low polarization and temperature dependence for all ports.

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 are 1480 nm-C band and 1480 nm-L band.



#### Key Features

- Ultra-low typical <0.05 dB excess loss
- Wide range of regular parts available
- High power handling

#### Applications

- C or L-band pump/signal multiplexing
- 1480 nm pump rejection
- Fiber lasers

## Optical Specifications

Wavelength		Grade	Insertion Loss <sup>1</sup> (dB)	WDL <sup>2</sup> (dB)	PDL <sup>3</sup> (dB)	TDL <sup>4</sup> (dB)	Isolation (dB)
Pump	Signal		Max	Max	Max	Max	Min
1480nm	C band L band	P	0.30	0.20	0.10	0.10	14
1480nm	C band L band	A	0.50	0.30	0.15	0.10	12

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.

Parameter	Specification	
Operating wavelength range	1480nm band	1475-1485 nm
	C band	1545-1555 nm
	L band	1580-1590 nm
Return loss/directivity <sup>1</sup>	55 dB	
Pigtail tensile load	5 N	
Optical power handling <sup>3,4</sup>	4 W	
Operating/storage temperature range <sup>2</sup>	-40 - +75°C/-40 - +85°C	

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 fiber 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.

## Housing Option

Housing Code	Description	Dimensions (mm)	Pigtail
3	Regular	3.0 (Ø) x 55 (L)	Primary-coated fiber
4	Semi-ruggedized slim	3.0 (Ø) x 70 (L)	Ø0.9 mm loose-tube
5	Semi-ruggedized	5.0 (Ø) x 80 (L)	Ø0.9 mm loose-tube
6	Fully-ruggedized	80 (L) x 10 (W) x 8 (H)	Ø3.0 mm fan-out sleeving
7	High power	5 (W) x 5 (H) x 85 (L max)	Primary-coated fiber
C	Regular high power	3.0 (Ø) 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-3C31A2110 (Fused Fiber WDM, 1480 nm pump, C band signal, regular housing, 1x2, A grade, Coming SMF-28 fiber, 1 m pigtail length, no connector).

Order code	①	②	③	④	⑤	⑥	⑦	⑧	⑨		
<b>F</b>	<b>F</b>	<b>W</b>	<b>-</b>					<b>2</b>	<b>1</b>		
① <b>Pump wavelength</b>	1480 nm										
<b>Code</b>	3										
② <b>Signal wavelength</b>	C band					L band					
<b>Code</b>	C					L					
③ <b>Housing<sup>4,5</sup></b>	Regular	Semi-ruggedized slim	Semi-ruggedized	Fully-ruggedized	High power	Regular high power					
<b>Code</b>	3	4	5	6	7	C					
④ <b>Port configuration<sup>5</sup></b>	1x2				2x2						
<b>Code</b>	1				2						
⑤ <b>Grade</b>	Grade P					Grade A					
<b>Code</b>	P					A					
⑦ <b>Fiber type</b>	Coming SMF-28										
<b>Code</b>	1										
⑧ <b>Pigtail length<sup>2</sup></b>	0.5 m					1 m					
<b>Code</b>	0					1					
⑨ <b>Connector<sup>3,4</sup></b>	None	FC/PC	FC/APC	SC/APC	FC/UPC	SC/UPC	LC <sup>1</sup>				
<b>Code</b>	0	1	3	5	9	A	B				

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 face.

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.

**Ordering Information:**



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

Email orders to: [sales@xsoptix.com](mailto:sales@xsoptix.com)  
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For further information

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