



NEAR INFRARED WDM

Fused Fiber WDM

DATASHEET

The Near Infrared WDM enables the low loss combining or splitting of a pair of wavelengths within the 700 nm to 1199 nm region.

Gooch & Housego can rapidly produce such custom WDMs, with typical minimum wavelength separation of 50 nm.

Designed for applications in fiber laser, sensing, biomedical, military and avionics the WDM utilizes G&H's low loss fused fiber technology. No light leaves the fiber and therefore no alignment is required. Furthermore the output fiber pigtails may be directly integrated into beam delivery systems.

Specific applications could include combining two sensor wavelengths onto one fiber, splitting laser harmonics, or combining wavelengths in fiber lasers.

For components which split optical signals of the same wavelength within the near infrared region please refer to the datasheet near infrared coupler.



Key Features

- 700 - 1199 nm operation
- Custom wavelength capability
- 50 nm minimum wavelength spacing (<50 nm channel spacing available on request)
- Low loss
- High power handling
- Custom product

Applications

- Fiber lasers
- Sensors
- Biomedical equipment
- Avionics
- Military
- Research

Optical Specifications

Channel Spacing	Max Insertion Loss ^{1,2,3}	Min Isolation ³
100 - 50 nm	0.5 dB	12 dB
>100 nm	0.4 dB	14 dB

1. In 2x2 components 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. Improved specifications may be available- contact sales department.

Parameter	Specification
Operating wavelength	Specified wavelength within the range 700-1199 nm
Optical power handling ^{2,3}	4 W
Operating/storage temperature range ¹	-40 - +75°C/-40 - +85°C
Pigtail Tensile Load	5 N
Fiber Type	Speciality single mode fiber

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

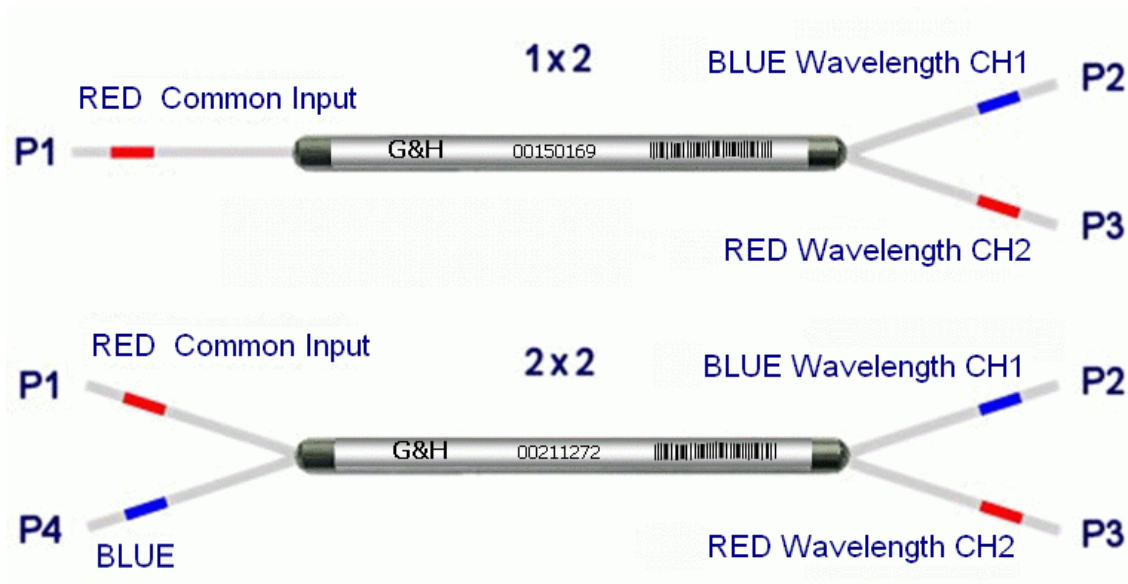
2 For operation at powers of greater than 4 W the component housing and fiber must be adequately heat-sunk (for additional information contact G&H sales). Components intended for high power operation are only available in the 2x2 configuration. Component performance and reliability under high power must be determined within the customer system.

3 The performance and reliability of optical connectors is not guaranteed for optical powers of greater than 1 W.

Housing Option

Housing Code	Description	1x2, 2x2 Dimensions (mm)	Pigtails
3	Regular	3.0 (Ø) x 60 (L)	Primary-coated fiber
4	Semi-ruggedized slim	3.0 (Ø) x 70 (L)	Ø0.9mm loose-tube
5	Semi-ruggedized	5.0 (Ø) x 85 (L)	Ø0.9 mm loose-tube
7	High power housing	5 (W) x 5 (H) x 85 (L)	Primary-coated fiber
C	Regular high power	3.0 (Ø) x 60 (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-780060130 (Fused fiber WDM, 780/1060 nm wavelengths, 1x2 port configuration, regular housing, 1 m pigtailed lengths, no connectors)

Order code				①	②	③	④	⑤	⑥	⑦	⑧	⑨
F	F	W	-									
①	Wavelength channel 1			7XX	8XX	9XX	10XX	11XX				
	Code			7	8	9	0	1				
②	Last two digits of channel 1 center wavelength			e.g. XX20	e.g. XX50	e.g. XX70	e.g. XX80					
③	Code			20	50	70	80					
④	Wavelength channel 2			7XX	8XX	9XX	10XX	11XX				
	Code			7	8	9	0	1				
⑤	Last two digits of channel 2 center wavelength			e.g. XX20	e.g. XX50	e.g. XX70	e.g. XX80					
⑥	Code			20	50	70	80					
⑦	Port configuration³			1x2			2x2					
	Code			1			2					
⑧	Housing^{2,3}			Regular	Semi-ruggedized-slim	Semi-ruggedized	High Power	Regular high power				
	Code			3	4	5	7	C				
⑨	Connector^{1,2}			None	FC/PC	FC/APC	SC/APC	FC/UPC	SC/UPC	LC		
	Code			0	1	3	5	9	A	B		

1 1 m pigtail length as standard. Further pigtail lengths available on request from G&H sales. Where connectorized, pigtail length is to connector end face.

2 Connectors may be fitted to housing types 4 & 5. For connectorization of other housings please contact G&H sales. Note that insertion loss stated does not include connector losses.

3 7 & C not available in 1x2 Port Configuration. For more information contact G&H sales.

Ordering Information:



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

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