

PM COMBINER

Fused Fiber Combiner

DATASHEET

The G&H PM combiner enables the efficient combination of two orthogonally polarized sources of light such that they are output through the same, single fiber output.

In optical amplifiers this provides a doubling of pump power whilst ensuring pump redundancy should a pump failure occur.

Applications include high power optical amplifiers and undersea systems. All ports consist of polarization maintaining fiber.



Key Features

- Low insertion loss
- High power handling
- 9xx, 10xx, 14xx and 15xx nm variants

Applications

- Erbium doped fiber amplifiers (EDFAs)
- Raman amplifiers
- Undersea systems
- Coherent optical communications

Optical Specifications

Parameter	9xx	10xx	14xx	15xx	16xx
Range of available center wavelengths ^{1,2}	915-999 nm	1000-1099 nm	1400 - 1499 nm	1500-1599 nm	1600-1650 nm
Insertion loss (fast axis)³					
Grade M (max)	0.40 dB	0.40 dB	0.40 dB	0.50 dB	0.50 dB
Grade W (max)	0.60 dB	0.60 dB	0.60 dB	0.70 dB	0.70 dB
Housing Option	3, 5, 7, C				
Insertion loss (slow axis)³					
Grade M (max)	0.35 dB				
Grade W (max)	0.40 dB				
Return loss/directivity (min)	50 dB				
TDL (typical)	0.15 dB				
Pigtail tensile load (max)	5 N				
Optical power handling (max) ^{4,5}	4 W				
Fiber type	All ports PM fiber				
Pigtail	Primary coated fiber				
Operating temperature range	-5 - +75°C				
Storage temperature range	-40 - +85°C				

1 The center wavelength may be selected from within the operating wavelength ranges supplied.

2 Other wavelengths are available. Please contact the sales office.

3 Insertion loss at center wavelength (not including TDL or connector losses).

4 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.

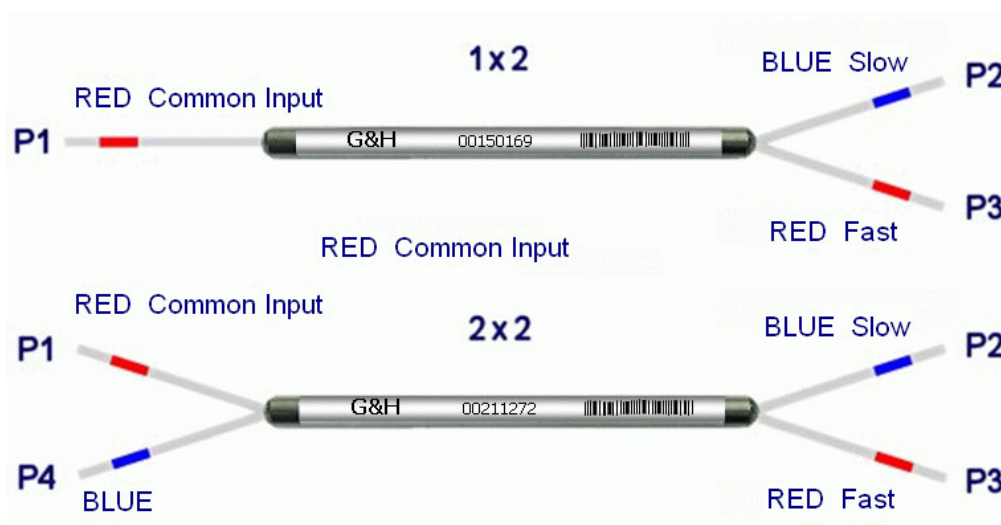
5 The performance and reliability of optical connectors is not guaranteed for optical powers of greater than 1 W.

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

Housing Options

Housing Code	Description	Dimensions (mm)	Pigtail
3	Regular	3.0 (Ø) x 71 (L)	Primary-coated fiber
5	Semi-ruggedized slim	3.0 (Ø) x 85 (L)	Ø0.9 mm loose-tube
7	High power	5 (W) x 5 (H) x 85 (L max)	Primary-coated fiber
C	Regular high power	3.0 (Ø) x 71 (L)	Primary-coated fiber

Configuration



Order code

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

Sample: FFP- CM3250F10 (PM fused fiber combiner, 1550 nm wavelength, M grade, regular housing, 2x2 port configuration, telecoms PM fiber 250 μ m buffer, 1 m pigtail length, no connectors.).

Order code	①	②	③	④	⑤	⑥	⑦	⑧	⑨
F	F	P	-						
① Passband (nm)	9XX		10XX		14XX		15XX		16XX
Code	5		8		S		C		L
② Grade	Grade M				Grade W				
Code	M				W				
③ Housing ^{4,5}	Regular		Semi-ruggedized slim		High power		Regular high power		
Code	3		5		7		C		
④ Configuration ⁵	1x2				2x2				
Code	1				2				
⑤ Last two digits of center wavelength (nm) ¹	e.g. XX20		e.g. XX50		e.g. XX70		e.g. XX80		
Code	20		50		70		80		
⑦ Fiber type	Telecoms PM fiber 400 μ m buffer			Telecoms PM fiber 250 μ m buffer		980 nm PM fiber 250 μ m buffer			
Code	E			F		G			
⑧ Pigtail length ²	0.5 m				1 m				
Code	0				1				
⑨ Connector ^{3,4}	None			FC/APC-PM		FC/PC-PM			
Code	0			P		R			

1 Channel center must be within the wavelength ranges shown in the optical specifications table.

2 Minimum pigtail length. Other pigtail lengths are available on request. Where connectorized, pigtail length is to connector end face.

3 Insertion loss in specification table does not include connector loss.

4 Connectors may be fitted to housing type 5. For connectorization of other housing types please contact the sales office.

5 7 and C not available as 1x2 port configuration.

PM Products are manufactured using 250 μ m PANDA PM fiber, 400 μ m PANDA PM fiber available at wavelengths higher than 1400 nm.

Ordering Information:



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 Email orders to: sales@xsoptix.com
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