

Gooch & Housego



Side-Coupled Multimode Power Combiner with PM Signal Feed-through for 2 μ m Operation

G&H proprietary manufacturing techniques allow the precise fusion of multimode pump fibres to a PM (polarisation maintaining) signal feed-through fibre and a PM dual clad output fibre providing high coupling efficiency over a wide pump wavelength range.

Available in a standard (1+1)x1 and (2+1)x1 configuration, the combiner can be fabricated from a range of industry standard fibres for ease of splicing to commercially available laser diodes, signal and gain fibres

Custom options cover large mode area (LMA), large diameter (LDF) and Active signal feed-through fibres are available on request.

Please contact the sales team for further information.

Key Features:

- 1.9 μ m to 2.1 μ m Signal feed-through available
- All fibre construction
- High power design
- High Coupling Efficiency
- Custom configurations available

Applications:

- Cladding pumped fibre lasers
- Cladding pumped fibre amplifiers
- Telecoms
- IR Imaging
- Biomedical
- Industrial
- Defence
- IR Counter measures

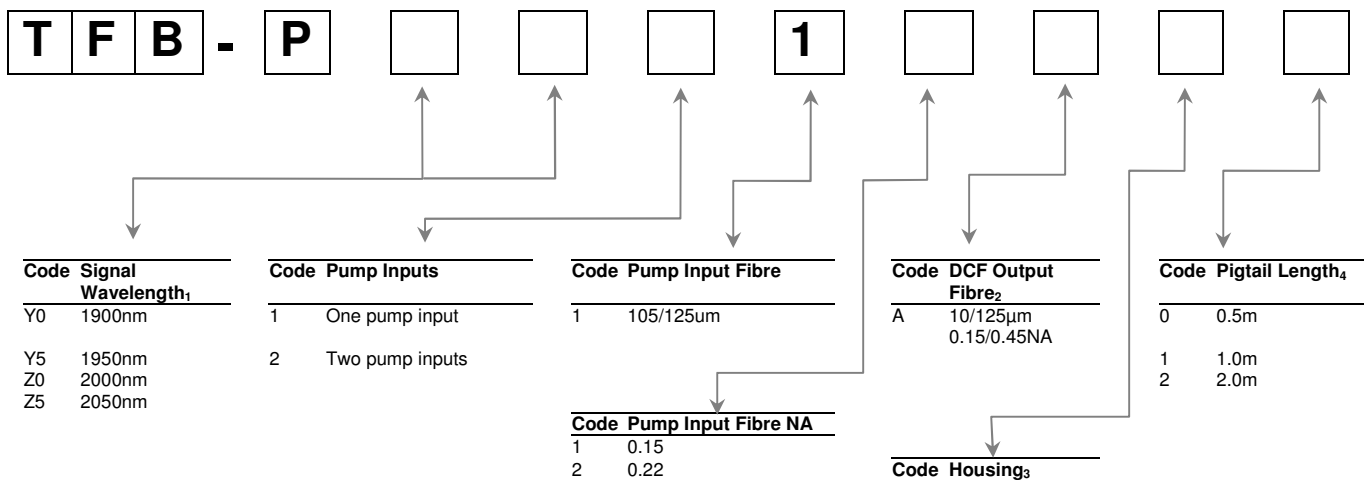
Optical Specifications₁

Parameter	Specification	Unit
Pump Input Fibre NA	0.15 or 0.22	-
Pump Input Wavelength	750 to 850	nm
Signal Input Wavelength	1900 to 2100	nm
Pump (MM) Transmission Efficiency ₂	≥ 90 (typ. >95)	%
Signal Transmission Efficiency ₃	≥ 93 (typ. >97)	%
Signal PER (Polarisation Extinction Ratio)	≥20	dB
Return Loss	≥40	dB
Operating Temperature	-5 to +75	°C
Storage Temperature	-40 to +85	°C

1. All specifications are for operation at room temperature.
2. MM Transmission efficiencies based on typical system mode fill conditions and 0.5m pigtails. Reported at 790nm as standard.
3. Signal (feed-through) transmission efficiency reported at centre wavelength

Ordering Code Information

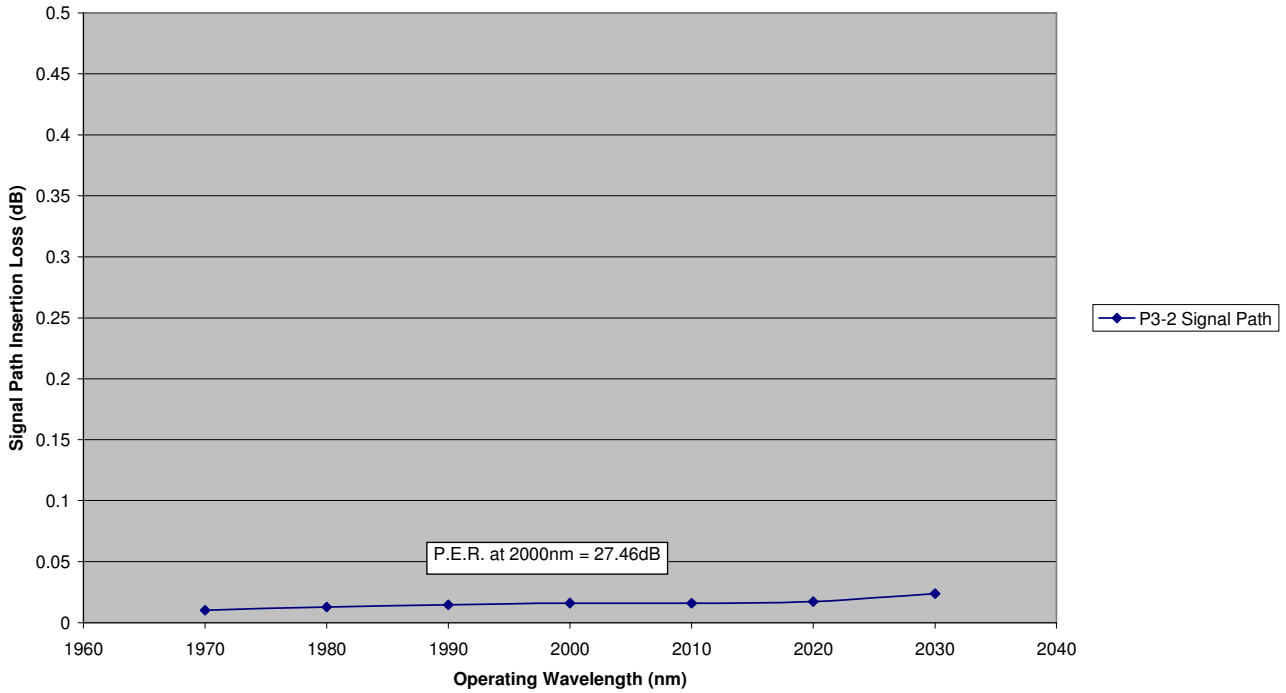
Example: TFB-PY5212A71 (2+1x1 Tapered Fibre Bundle with PM 1950nm Signal feed-through, two 105/125um 0.22NA pump inputs, 10/125um 0.15/0.45NA Output in level 1 high power with 1.0m pigtails).



1. Signal wavelengths assume the use of industry standard single-mode fibre, double clad and LMA available on request.
2. Other fibre types available, please contact the sales team for further information. Fibres are passive.
3. Maximum housing lengths. Note- Adequate heat-sinking is required for high power operation. See Heat Sinking notes (PEC 0134) on website or consult Sales Dept.
4. Minimum pigtail lengths

Typical Optical Performance

2000nm PM2+1x1 Combiner (SFO2300 - 30170302)



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