Gooch & Housego

2+1x1 Multimode Power Combiner with PM Signal Feedthrough

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

Available in a standard (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 variants using non-standard fibres are available on request.

Please contact the sales team for further information.

Key Features:

- 1.5µm & 1.0µm PM Signal fibres available
- All fibre construction
- High power design
- High Coupling Efficiency
- PM Axis maintained
- Custom configurations available

Applications:

- Cladding pumped fibre lasers
- Cladding pumped fibre amplifiers
- Telecoms
- Medical
- Industrial
- Defence

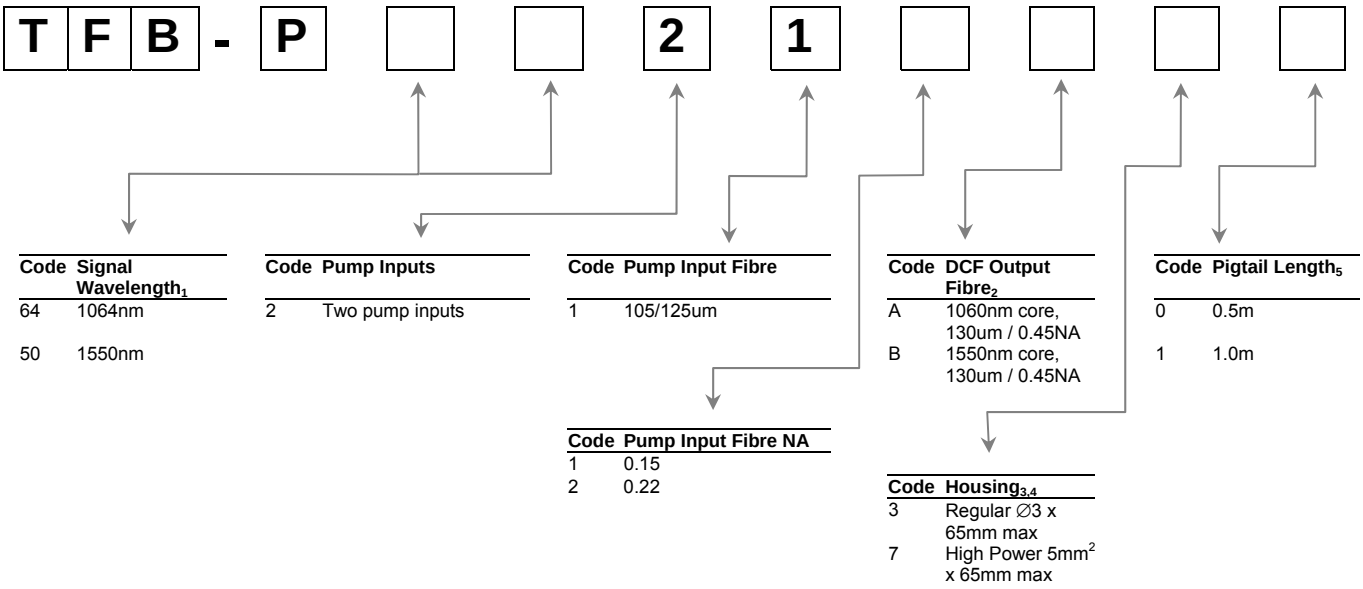
Optical Specifications[1]

Parameter	Specification	Unit
Pump Input Fibre NA	0.15 or 0.22	-
Pump Input Wavelength	780 to 1000	nm
Signal Input Wavelength	1530-1565 (1550) or 1030-1090 (1064)	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	0 to +65	°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 975nm as standard.
3. Signal (feedthrough) transmission efficiency reported at centre wavelength

Ordering Code Information

Example: TFB-P50212B31 (2+1x1 Tapered Fibre Bundle with PM 1550nm Signal feedthrough, two 105/125um 0.22NA pump inputs, 1550nm core DCF Output in regular housing with 1.0m pigtails).



1. Signal wavelengths of 1064nm or 1550nm assume the use of Nufern PM-980-HP and PM-1550-HP (or equivalent) signal input fibres respectively.
2. Typical mode field diameters are based on ~7.5µm for 1064nm and ~10.5µm for 1550nm. Fibres are passive.
3. Maximum housing lengths shown.
4. The 3mm cylindrical package is recommended for pump powers up to 10W per port. The High Power housing is suitable for pump powers up to 50W per port. Adequate heat-sinking is required for high power operation. For more information please contact the G&H sales team.
5. Minimum pigtail lengths