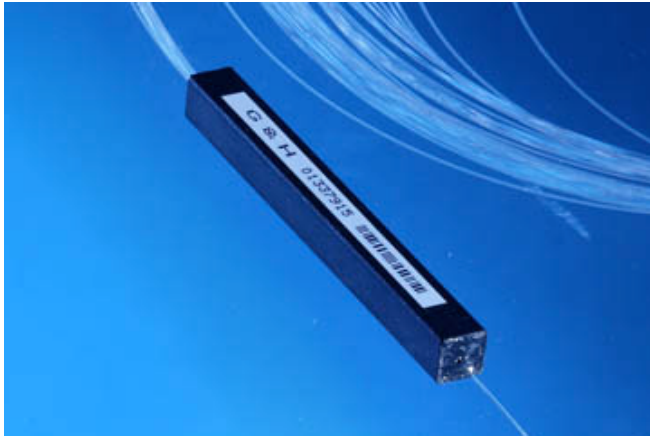


# Gooch & Housego



## Multimode Power Combiner with Signal Feedthrough

G&H's TFB series Power Combiners provide a high efficiency means of combining light from several multimode sources into one fibre.

G&H proprietary manufacturing techniques allow the precise fusion of input fibres around a central signal feedthrough fibre and a dual clad output fibre providing high coupling efficiency over a wide pump wavelength range.

Available in a standard (6+1)x1 configuration, the combiner can be fabricated from a range of industry standard fibres for ease of splicing to commercially available laser diodes and fibre applications.

Custom options cover large mode area (LMA) signal feedthrough fibres, dual clad output fibres and port count / configurations and are available on request.

Please contact the sales team for further information.

### Key Features:

- | 1.5 $\mu$ m and 1.0 $\mu$ m Signal feedthroughs available
- | All fibre construction
- | High power design
- | High Coupling Efficiency
- | Custom configurations available

### Applications:

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

Contact: [sales@goochandhousego.com](mailto:sales@goochandhousego.com)

[www.goochandhousego.com](http://www.goochandhousego.com)

As part of our policy of continuous product improvement we reserve the right to change specifications at any time

PEC 0131 Issue 3



光技術をサポートする

株式会社オプトサイエンス

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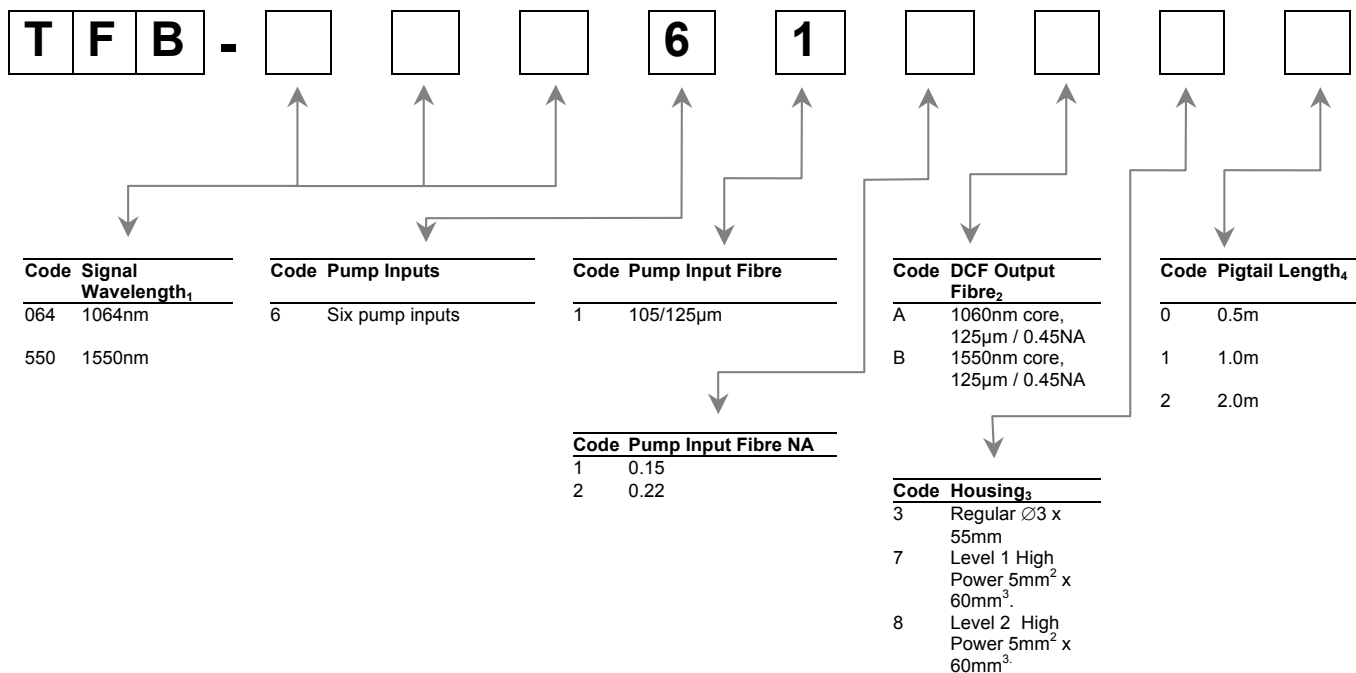
## Optical Specifications<sub>1</sub>

Parameter	Specification		Unit
Pump Input Fibre NA	0.15	0.22	-
Pump Input Wavelength	900 to 1000		nm
Signal Input Wavelength	1550 or 1064		nm
Pump (MM) Transmission Efficiency <sub>2</sub>	≥ 90 (Typ > 95)	≥ 90	%
Signal Transmission Efficiency <sub>3</sub>	≥ 80 (Typ > 85)		%
Return Loss/Directivity	>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 975nm as standard.
3. Signal (feedthrough) transmission efficiency reported at centre wavelength; specification typical for centre wavelength ±15nm (minimum).

## Ordering Code Information

**Example: TFB-550611B30** (6+1x1 Tapered Fibre Bundle with 1550nm Signal input, six 105/125µm 0.15NA pump inputs, 1550nm core DCF Output in regular housing with 0.5m pigtails).



1. Signal wavelengths of 1064nm or 1550nm assume the use of Corning Hi1060 or SMF-28 (or equivalent) fibres respectively.
2. Typical core diameters are based on ~4µm for 1064nm and ~8µm for 1550nm. 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.