



*flawless fusion with infinite possibilities*

**SIFAM**  
F I B R E O P T I C S



## Multimode Power Combiner with Signal Feedthrough

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

SIFAM 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:

- 1.5µm and 1.0µm 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

SIFAM Fibre Optics Ltd  
Broomhill Way, Torquay  
Devon TQ2 7QL  
England



Certificate No. 0962231

Tel: +44(0) 1803 407784  
Fax: +44(0) 1803 407786  
sales@sifamfo.com  
www.sifamfo.com

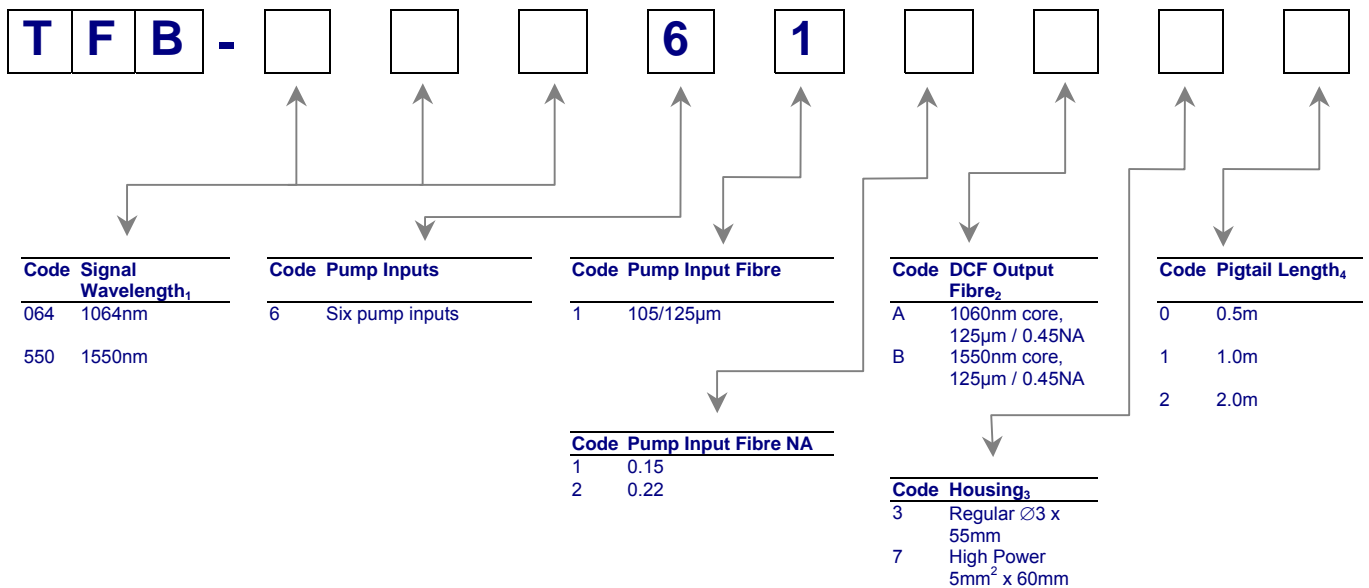
## Optical Specifications<sub>1</sub>

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 undoped.
3. Maximum housing lengths shown. Maximum housing lengths. Adequate heat-sinking is required for high power operation. For more information please contact the SIFAM sales team.
4. Minimum pigtail lengths.