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:
- 1.5μm 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
Optical Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pump Input Fibre NA</td>
<td>0.15</td>
<td>-</td>
</tr>
<tr>
<td>Pump Input Wavelength</td>
<td>900 to 1000</td>
<td>nm</td>
</tr>
<tr>
<td>Signal Input Wavelength</td>
<td>1550 or 1064</td>
<td>nm</td>
</tr>
<tr>
<td>Pump (MM) Transmission Efficiency₂</td>
<td>≥ 90 (Typ &gt; 95)</td>
<td>%</td>
</tr>
<tr>
<td>Signal Transmission Efficiency₃</td>
<td>≥ 80 (Typ &gt; 85)</td>
<td>%</td>
</tr>
<tr>
<td>Return Loss/Directivity</td>
<td>&gt;40</td>
<td>dB</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-5 to +75</td>
<td>°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-40 to +85</td>
<td>°C</td>
</tr>
</tbody>
</table>

1. All specifications are for operation at room temperature.
2. MM Transmission efficiencies based on typical system mode fill conditions and 0.5m pigtailed. 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.
4. Minimum pigtail lengths.

Contact: sales@goochandhousego.com       www.goochandhousego.com

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

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