Gooch & Housego
ENABLING PHOTONIC TECHNOLOGIES

MULTIMODE POWER COMBINER WITH SIGNAL FEED-THROUGH FOR 2 µM OPERATION

6+1x1 Tapered Fiber Bundle

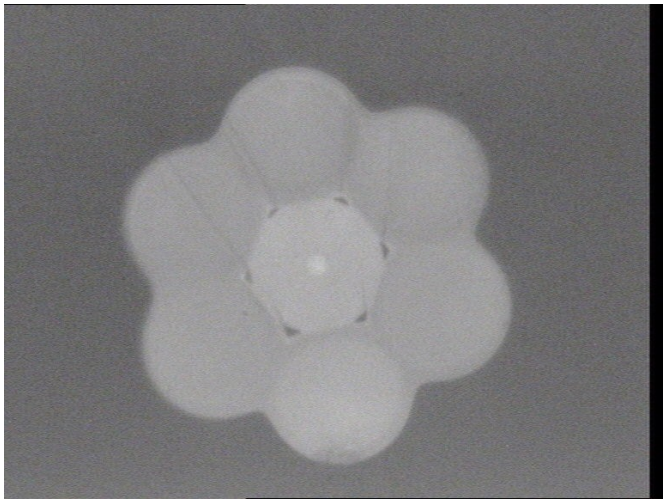
Gooch & Housego combiners provide a high efficiency means of combining light from several multimode sources into one fiber.

G&H proprietary manufacturing techniques allow the precise fusion of input fibers around a central signal feed-through fiber and a dual clad output fiber 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 and customized fibers for ease of splicing to commercially available laser diodes and fiber applications.

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

Please contact the sales team for further information.



Key Features

- 1.9 µm to 2.1 µm signal feed-through available
- All fiber construction
- High power design
- High coupling efficiency
- Custom configurations available

Applications

- Cladding pumped fiber lasers
- Cladding pumped fiber amplifiers
- Telecoms
- IR Imaging
- Biomedical
- Industrial
- Defense
- IR Counter measures

Ordering Information:

XSoptix
800 Village Walk #316
Guilford, CT 06437
Ph: 203-401-8093
Email orders to: sales@xsoptix.com
Fax orders to: 800-878-7282

Optical Specifications[1]

Parameter	Specification	
Pump input fiber NA	0.15	0.22
Pump input wavelength[2]	750 – 850 nm	
Signal input wavelength	1900 – 2100 nm	
Pump (MM) transmission efficiency[2]	≥90% (Typ >95%)	≥90% (Typ >95%)
Signal transmission efficiency[3]	≥ 80% (Typ >90%)	
Return loss/directivity	>40 dB	
Operating temperature	-5 – +75°C	
Storage temperature	-40 – +85°C	

1 All specifications are for operation at room temperature.

2 MM Transmission efficiencies based on typical system mode fill conditions and 0.5 m pigtails. Reported at 790 nm as standard.

3 Signal (feed-through) transmission efficiency reported at center wavelength; specification typical for center wavelength ±15 nm (minimum).

Order code

Order codes are comprised of a standard device prefix (e.g. TFB) followed by code letters or numbers which correspond to available options.

Sample: TFB-Y50611A70 (6+1x1 tapered fiber bundle, 1950 nm signal input, 6 pump inputs 105/125 µm 0.15 NA fiber, 10/125 µm 0.15/0.45 NA output fiber, high power housing, 0.5 m pigtail lengths).

Order code				①	②	③	④	⑤	⑥	⑦	⑧	⑨
T	F	B	-				6	1				

①② ③	Signal wave length[1]	1900 nm	1950 nm	2000 nm	2050 nm
	Code	Y00	Y50	Z00	Z50

④	Configuration (No. of pump inputs)[5]	6 pump inputs
	Code	6

⑤	Pump input fiber	105/125 µm
	Code	1

⑥	Pump input fiber NA	0.15	0.22
	Code	1	2

⑦	DCF output fiber[2]	10/125 µm 0.15/0.45 NA
	Code	A

⑧	Housing[3]	Regular ø 3 x 55 mm	Level 1 high power 5 mm^2 x 60 mm^3	Level 2 high power 5 mm^2 x 60mm^3
	Code	3	7	8

⑨	Pigtail length[4]	0.5 m	1 m	2 m
	Code	0	1	2

1 Signal wavelengths assume the use of industry standard single-mode fiber, double clad and LMA available on request.

2 Other fiber types available, please contact the sales team for further information. Fibers are passive.

3 Maximum housing lengths. Note- Adequate heat-sinking is required for high power operation. High power multimode combiner applications note (PEC 0134) on website or consult sales dept.

4 Minimum pigtail lengths.

5 Other pump port count available, please contact the sales team for further information.

Other products which may be of interest

- Fiber-Q™
- High power multimode combiners
- Combiners with all types of signal feedthrough fiber
- Ultra-low ratio tap couplers
- WDMs for combining signals with red pointer lasers
- OCT wideband couplers
- HI REL components

Typical Optical Performance