

MULTIMODE POWER COMBINER

Fused Fiber Combiner

DATASHEET

Gooch & Housego's tapered fiber bundle series power combiners provide an all-fiber high efficiency means of combining light from several multimode sources into one fiber.

Fabricated using G&H proprietary controlled fusion process the combiner enables high coupling efficiency over a wide wavelength range.

Available in standard 3x1 and 7x1 configurations, G&H power combiners can be fabricated from a range of industry standard multimode fibers allowing ease of splicing to commercially available laser diodes.

Custom fiber and port configurations are available on request.



Key Features

- All fiber construction
- High coupling efficiency
- High power design
- Custom configurations available

Applications

- Cladding pumped fiber lasers
- Medical
- Industrial
- Defense

Optical Specifications¹

Parameter	Specification
Pump input fiber NA	0.15 0.22
Pump input wavelength	900-1000 nm
Pump (MM) transmission efficiency ²	≥90% (Typ > 95%) ≥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 Transmission efficiency based 7x1 with 125 μm/0.45 NA output fiber and 0.5 m pigtailed. Reported at 975 nm as standard.

Order code

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

Sample: TFB-MMM711A70 (7x1 Tapered fiber bundle, 7 pump inputs 105/125 μm 0.15 NA fiber, output fiber 125 μm 0.45 NA, high power housing, 0.5 m pigtail lengths).

Order code				①	②	③	④	⑤	⑥	⑦	⑧	⑨
T	F	B	-	M	M	M		1				
④	Configuration (No. of pump inputs)			3x1				7x1				
	Code			3				7				
⑤	Pump input fiber			105/125 μm								
	Code			1								
⑥	Pump input fiber NA			0.15				0.22				
	Code			1				2				
⑦	Output fiber			125 μm /0.45 NA				200 μm /0.45 NA				
	Code			A				B				
⑧	Housing¹			Regular \varnothing 3 x 55 mm			Level 1 high power 5 mm ² x 60 mm ¹		Level 2 high power 5 mm ² x 60 mm ¹			
	Code			3			7		8			
⑨	Pigtail length²			0.5 m			1 m		2 m			
	Code			0			1		2			

¹ Maximum housing lengths. Note - Adequate heat-sinking is required for high power operation. See high power multimode combiner applications note (PEC 0134) on website or consult the sales office.

² Minimum pigtail lengths.

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

For further information

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