



## MULTIMODE COMPONENTS

## 2 $\mu\text{m}$ Pump and Signal Combiners

ITF Labs' Multimode Pump and Signal Combiners feature exceptional optical characteristics. These devices can be used to combine the power from several multimode laser diodes and couple that power with a signal feed, delivering the combined power for applications in industrial, military, medical and telecommunications markets.

ITF Labs' Multimode Combiners offer efficient power transfer for high power applications like fiber lasers and fiber amplifiers, with a maximum conservation of brightness. The Multimode Combiners can be designed to meet a wide range of power handling configurations, number of input fibers and adaptation to different fiber types.



For more information on this or other products and their availability, please contact our customer service at **514.748.4848** (Int'l) / **1.888.922.1044** (Canada & USA only) or via e-mail at [info@itflabs.com](mailto:info@itflabs.com)

### KEY FEATURES

- High Power Transfer Efficiency
- Preservation of Modal Content
- Wavelength Insensitive
- Custom Configurations Available
- RoHS Compliant

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### STANDARD CONFIGURATIONS

Product Code	MMC0211C4057	PMC0211C3962	MMC0211C4069	MMC0611C4059	MMC0611C4058
<b>Optical Specifications</b>					
Signal Operating Wavelengths	1980-2020 nm				
Pump Operating Wavelengths	800-1000 nm				
Number of Multimode Inputs	2			6	
Number of Signal Ports	1				
Number of DCF Ports	1				
Pump Input Fiber Core/clad diameter NA	105/125 $\mu\text{m}$ 0.22				
Signal Input Fiber Core/clad diameter NA	10/125 $\mu\text{m}$ 0.15/0.46	PM 10/130 $\mu\text{m}$ 0.15/0.46	25/250 $\mu\text{m}$ 0.11/0.46	25/250 $\mu\text{m}$ 0.11/0.46	10/125 $\mu\text{m}$ 0.15/0.46
Output Fiber Core/clad diameter NA	10/125 $\mu\text{m}$ 0.15/0.46	PM 10/130 $\mu\text{m}$ 0.15/0.46	25/250 $\mu\text{m}$ 0.11/0.46	25/250 $\mu\text{m}$ 0.11/0.46	25/250 $\mu\text{m}$ 0.11/0.46
Power per Multimode Input/Total Power	50W/100W			25W/150 W	100W/600W
Maximum Pump Insertion Loss	< 0.5 dB			< 0.75 dB	< 0.3 dB
Maximum Signal Insertion Loss	< 0.35 dB		< 0.5 dB		< 0.7 dB
Optical Return Loss	35 dB				45 dB
Polarization Extinction Ratio (1)	-	20 dB	-	-	-
<b>Mechanical Specifications</b>					
Length x Width x Height	60 x 12 x 6.5 mm				
Fiber Pigtail Length Input/Output	1000 mm				

(1) Measured at 1550  $\mu\text{m}$ .

PATENT PENDING

### ORDERING INFORMATION

ITF Labs can also develop custom multimode power combiners to meet a wide range of technical requirements. Also available: A range of products such as Fiber Bragg Gratings and Mode Field Adaptors for your 2  $\mu\text{m}$  laser applications.



**ITF Labs**

400 Montpellier Blvd  
Montreal, Quebec H4N 2G7 CANADA

Tel: 514.748.4848

Fax: 514.744.2080

1.888.922.1044

www.itflabs.com info@itflabs.com