



# Multimode Components



## Key Features

High Power Transfer Efficiency

Preservation of Modal Content

Wavelength Insensitive

Custom Configurations Available

RoHS Compliant

## Applications

Fiber Lasers

Fiber Amplifiers

## 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 Info

Please contact us at:

North America: 514.748.4848  
888.922.1044

Europe & Asia: +33 (0) 1 69 80 57 50  
or via e-mail at [info@itflabs.com](mailto:info@itflabs.com)





# Multimode Components

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

## SPECIFICATIONS\* 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	105/125 $\mu\text{m}$				
NA	0.22				
Signal Input Fiber					
Core/clad diameter	10/125 $\mu\text{m}$	PM 10/130 $\mu\text{m}$	25/250 $\mu\text{m}$	25/250 $\mu\text{m}$	10/125 $\mu\text{m}$
NA	0.15/0.46	0.15/0.46	0.11/0.46	0.11/0.46	0.15/0.46
Output Fiber					
Core/clad diameter	10/125 $\mu\text{m}$	PM 10/130 $\mu\text{m}$	25/250 $\mu\text{m}$	25/250 $\mu\text{m}$	25/250 $\mu\text{m}$
NA	0.15/0.46	0.15/0.46	0.11/0.46	0.11/0.46	0.11/0.46
Power per Multimode Input/Total Power	50W/100W			25W/150W	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

Revised Jan 2012

\*Specifications subject to change without notice.

## ORDERING INFORMATION

For standard products, please use product codes specified above. ITF Labs can also develop custom products to meet a wide range of technical requirements.

**ITF Labs**  
 North America: 514.748.4848  
 888.922.1044  
 Europe and Asia: +33 (0)1 69 80 57 50  
[www.itflabs.com](http://www.itflabs.com) • [info@itflabs.com](mailto:info@itflabs.com)

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