



## MULTIMODE COMPONENTS

ITF Labs' Multimode Pump Combiners feature exceptional optical characteristics. These devices can be used to combine the power from several multimode laser diodes, 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)

## HIGH POWER Pump Combiners For DCF Output



### KEY FEATURES

- High Power Transfer Efficiency
- Wavelength Insensitive
- Custom Configurations Available
- RoHS Compliant



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**株式会社オプトサイエンス**  
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### SPECIFICATIONS

#### STANDARD CONFIGURATIONS

Product Code	MMC07011011	MMC07012021	MMC07013021	MMC19012021	MMC19011071	MMC190110D1
<b>Optical Specifications</b>						
Pump Operating Wavelength	800-1000 nm					
Number of Multimode Inputs	7			19		
Number of Signal Ports	0					
Number of DCF Ports	1					
Pump Input Fiber Core/clad diameter NA	105/125 $\mu$ m 0.15	105/125 $\mu$ m 0.22	200/220 $\mu$ m 0.22	105/125 $\mu$ m 0.22	105/125 $\mu$ m 0.15	105/125 $\mu$ m 0.15
Output Fiber Core/clad diameter NA	125 $\mu$ m 0.46	20/400 $\mu$ m 0.06/0.46	20/400 $\mu$ m 0.06/0.46	20/400 $\mu$ m 0.06/0.46	20/200 $\mu$ m 0.11/0.46	25/250 $\mu$ m 0.11/0.46
Power per Multimode Input Total Power	100 W 700 W			40 W 760 W		
Multimode Power Transfer Efficiency/Insertion Loss	> 90% / 0.5 dB	> 93% / 0.3 dB				
Optical Return Loss - Pumps	45 dB					
<b>Mechanical Specifications</b>						
Dimensions	60 x 12 x 6.5 mm					
Fiber Pigtail Length Input/Output (1)	A= 1000 mm B= 2000 mm C= 3000 mm					

(1) Pricing is dependant on fiber pigtail length.

#### ORDERING INFORMATION

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



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**ALL GLASS PUMP COMBINERS**

PORT CONFIG.	PKG	PART #	PUMP INPUT	OUTPUT PORT
2x1	LP	MMC0201C4045	105/125 um NA=0.15	105/125 um NA=0.22
2x1	HP	MMC0201C2647	105/125 um NA=0.15	105/125 um NA=0.22
2x1	LP	MMC0201C3530	105/125 um NA=0.22	200/220 um NA=0.22
2x1	HP	MMC0201C3331	105/125 um NA=0.22	200/220 um NA=0.22
2x1	HP	MMC0201C2887	200/220 um NA=0.22	400/440 um NA=0.22
3x1	HP	MMC03011081	105/125 um NA=0.15	200/220 um NA=0.22
3x1	LP	MMC03012080	105/125 um NA=0.22	200/220 um NA=0.22
3x1	HP	MMC03012081	105/125 um NA=0.22	200/220 um NA=0.22
3x1	HP	MMC0301C5362	105/125 um NA=0.22	220/242 um NA=0.22
3x1	HP	MMC0301C4770	200/220 um NA=0.22	400/440 um NA=0.22
3x1	HP	MMC0301C3994	400/440 um NA=0.22	800/880 um NA=0.22
4x1	HP	MMC04011081	105/125 um NA=0.15	200/220 um NA=0.22
7x1	HP	MMC070110E1	105/125 um NA=0.15	220/242 um NA=0.22
7x1	HP	MMC0701C3322	105/125 um NA=0.22	220/242 um NA=0.22
7x1	HP	MMC07012091	105/125 um NA=0.22	400/440 um NA=0.22
7x1	HP	MMC0701C3044	200/220 um NA=0.22	600/660 um NA=0.22
7x1	HP	MMC0701C4968	400/440 um NA=0.22	1000/1060 um 0.22
13x1	HP	MMC13012091	105/125 um NA=0.22	400/440 um NA=0.22
13x1	HP	MMC1301C4079	200/220 um NA=0.22	800/880 um NA=0.22
19x1	HP	MMC1901C3773	105/125 um NA=0.15	800/880 um NA=0.22
19x1	HP	MMC1901C3633	105/125 um NA=0.22	400/440 um NA=0.22
19x1	HP	MMC190120I1	105/125 um NA=0.22	600/660 um NA=0.22
19x1	HP	MMC190130J1	200/220 um NA=0.22	800/880 um NA=0.22
22x1	HP	MMC2201C3634	105/125 um NA=0.22	600/660 um NA=0.22
31x1	HP	MMC3101C3547	105/125 um NA=0.15	600/660 um NA=0.22



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**MULTIMODE PUMP COMBINERS**

PORT CONFIG.	PKG	PART #	PUMP INPUT	OUTPUT PORT
2x1	HP	MMC0201C3528	105/125 um NA=0.22	200 um NA=0.46
2x1	HP	MMC0201C2919	200/220 um NA=0.22	20/200 um NA=0.11/0.46
3x1	HP	MMC03012011	105/125 um NA=0.22	125 um NA=0.46
3x1	HP	MMC0301C3581	200/220 um NA=0.22	20/200 um NA=0.11/0.46
3x1	HP	MMC0301C3133	200/220 um NA=0.22	25/250 um NA=0.06/0.46
3x1	HP	MMC0301C5025	200/220 um NA=0.22	25/250 um NA=0.11/0.46
3x1	HP	MMC03014021	400/440 um NA=0.22	20/400 um NA=0.06/0.46
4x1	HP	MMC04012011	105/125 um NA=0.22	125 um NA=0.46
4x1	LP	MMC0401C3891	105/125 um NA=0.22	130 um NA=0.46
7x1	HP	MMC07011011	105/125 um NA=0.15	125 um NA=0.46
7x1	HP	MMC0701C3297	105/125 um NA=0.15	200 um NA=0.46
7x1	HP	MMC07012011	105/125 um NA=0.22	125 um NA=0.46
7x1	LP	MMC07012070	105/125 um NA=0.22	20/200 um NA=0.11/0.46
7x1	HP	MMC07012071	105/125 um NA=0.22	20/200 um NA=0.11/0.46
7x1	HP	MMC0701C3806	105/125 um NA=0.22	25/250 um NA=0.11/0.46
7x1	HP	MMC07012021	105/125 um NA=0.22	20/400 um NA=0.06/0.46
7x1	HP	MMC0701C3948	200/220 um NA=0.15	12.5/250 um NA=0.07/0.46
7x1	HP	MMC0701C3910	200/220 um NA=0.22	250 um NA=0.46
7x1	HP	MMC07013021	200/220 um NA=0.22	20/400 um NA=0.06/0.46
7x1	HP	MMC0701C5800	200/220 um NA=0.22	400/480 um NA=0.30/0.46
7x1	HP	MMC0701C3866	220/242 um NA=0.22	20/400 um NA=0.06/0.46
7x1	HP	MMC0701C3976	400/440 um NA=0.22	200/600 um NA=0.06/0.46
19x1	HP	MMC19011071	105/125 um NA=0.15	20/200 um NA=0.11/0.46
19x1	HP	MMC1901C4813	105/125 um NA=0.15	25/250 um NA=0.07/0.46
19x1	HP	MMC190110D1	105/125 um NA=0.15	25/250 um NA=0.11/0.46
19x1	HP	MMC1901C3299	105/125 um NA=0.22	200 um NA=0.46
19x1	HP	MMC1901C3066	105/125 um NA=0.22	250 um NA=0.46
19x1	HP	MMC19012041	105/125 um NA=0.22	30/250 um NA=0.06/0.46
19x1	HP	MMC19012021	105/125 um NA=0.22	20/400 um NA=0.06/0.46
31x1	HP	MMC3101C4903	105/125 um NA=0.15	250 um NA=0.46
31x1	HP	MMC3101C3555	105/125 um NA=0.22	20/400 um NA=0.06/0.46



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