

## 3x1, 4x1, 7x1, 19x1 and 31x1 High Power Pump Combiners

For Co-Pumped Laser Designs and Direct Diode Applications

ITF Technologies' High Power Multimode Pump Combiners feature exceptional optical performance. These devices can be used to combine the power from several multimode laser diodes into a single clad or double clad fiber (DCF). These combiners are designed to address industrial, research and medical markets. They can meet a wide range of power handling configurations and a large selection of input/output fiber types.

ITF Technologies also offer "all glass" High Power Multimode Combiners for direct pumping with a maximum conservation of brightness for high power applications like direct diode material processing and "combiner tree" fiber laser designs.



### KEY FEATURES

High Power Transfer Efficiency

Wavelength Insensitive

Custom Configurations Available

ROHS Compliant

### APPLICATIONS

Fiber Lasers

Laser Diode Combining

kW Class Fiber Lasers

Industrial & Research

### FOR MORE INFO

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## 3x1, 4x1, 7x1, 19x1 and 31x1 High Power Pump Combiners

## FOR CO-PUMPED LASER DESIGNS AND DIRECT DIODE APPLICATIONS

### 3x1 and 4x1 - Double Clad Fiber Output

PUMP FIBER	OUTPUT FIBER	POWER HANDLING (PUMPS)	PRODUCT CODE
105/125 0.22	125 um NA=0.46	100 W/port	MMC03012011
105/125 0.22	125 um NA=0.46	100 W/port	MMC04012011

### 7x1 - Double Clad Fiber Output

PUMP FIBER	OUTPUT FIBER	POWER HANDLING (PUMPS)	PRODUCT CODE
105/125 0.22	XX/250 um NA=0.XX/0.46	100 W/port	√
105/125 0.22	XX/400 um NA=0.XX/0.46	150 W/port	√
200/220 0.22	XX/400 um NA=0.XX/0.46	Up to 400 W/port	√
220/242 0.22	XX/400 um NA=0.XX/0.46	Up to 400 W/port	√

### 19x1 - Double Clad Fiber Output

PUMP FIBER	OUTPUT FIBER	POWER HANDLING (PUMPS)	PRODUCT CODE
106.5/125 0.22	250 um NA=0.46	60 W/port	MMC1901C10727
106.5/125 0.22	20/400 um NA=0.06/0.46	140 W/port	MMC1901C8605

### 3x1 and 4x1 - Direct Pumping Combiners - High Brightness Output

PUMP FIBER	OUTPUT FIBER	POWER HANDLING (PUMPS)	PRODUCT CODE
105/125 0.22	200/220 um NA=0.22	100 W/port	MMC03012081
105/125 0.22	200/220 um NA=0.22	100 W/port	MMC04012084
105/125 0.22	220/242 um NA=0.22	100 W/port	MMC0301C5362
105/125 0.22	220/242 um NA=0.22	100 W/port	MMC040120E4

### 7x1 - Direct Pumping Combiners - High Brightness Output

PUMP FIBER	OUTPUT FIBER	POWER HANDLING (PUMPS)	PRODUCT CODE
105/125 0.22	220/242 um NA=0.22	50 W/port	MMC070120E4
105/125 0.22	400/440 um NA=0.22	100 W/port	MMC07012091
200/220 0.22	600/660 um NA=0.22/0.46	Up to 400 W/ports	√

### 31x1 - Direct Pumping Combiners - High Brightness Output

PUMP FIBER	OUTPUT FIBER	POWER HANDLING (PUMPS)	PRODUCT CODE
105/125 0.22	600/600 um NA=0.22/0.46	140 W/port	MMC3101C9924

Typical power handling presented

Custom designs and prototypes also available, including 25x1 configurations and 135/155um pump input ports

√: Product available - product code not yet defined

## ORDERING INFO

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### PACKAGE DIMENSIONS

High Power: 60.0 x 12.0 x 6.5 mm  
Operating wavelength : 800 - 1000 nm

Typical power handling presented

Custom designs and prototypes also available