



MODE FIELD ADAPTER

Features:

- High power handling capability
- Spanning a wide optical spectral range
- Adapts and conserves modal content
- Custom design flexibility

Preliminary



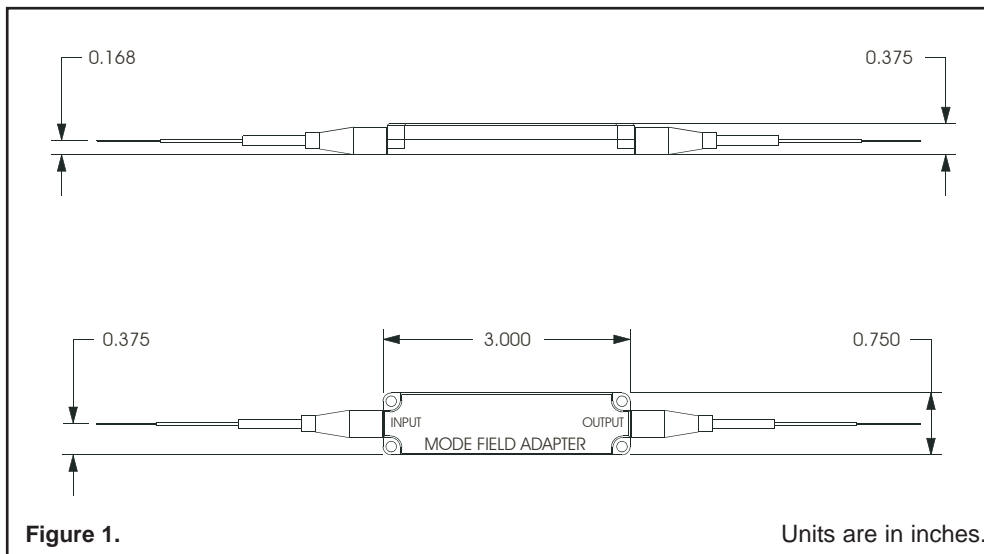
Applications:

- High power fiber lasers
- High power pigtailed isolators
- High Power fiber optic component manufacturing
- Research and design

Product Description:

A mode field adapter is an essential device to efficiently transfer light for a standard singlemode fiber to the LP01 mode of large mode area (LMA) and low order mode multimode fibers. The performance is greatly superior to using a regular splice, as an ordinary splice will produce a degraded quality output beam, with a poor M2 factor.

Mode field adapters also generate lower losses than ordinary splices, thus ensuring higher power transmission compared to regular splicing.



Ordering Information for Standard Parts:

Barcode	Part number	Description
39991	MFA-6/125-20/125-0.11-0.08-S-LMA-XX-1-1	Mode field adapter from a 6/125 μm (NA=0.11) singlemode input fiber to a 20/125 LMA fiber with an NA of 0.08. The device is pigtailed with 1 meter long 900 micron loose tube cabled fibers with no connectors on either end.
TBD	MFA-6/125-25/125-0.11-0.08-S-LMA-XX-1-1	Mode field adapter from a 6/125 μm (NA=0.11) singlemode input fiber adapted to a 25/125 LMA fiber with an NA of 0.08. The device is pigtailed with 1 meter long 900 micron loose tube cabled fibers with no connectors on either end.
TBD	MFA-6/125-20/130-0.11-0.08-S-LMA-XX-1-1	Mode field adapter from a 6/125 μm (NA=0.11) singlemode input fiber to a 20/130 LMA fiber with an NA of 0.08. The device is pigtailed with 1 meter long 900 micron loose tube cabled fibers with no connectors on either end.
TBD	MFA-6/125-25/250-0.11-0.06-S-LMA-XX-1-1	Mode field adapter from a 6/125 μm (NA=0.11) singlemode input fiber to a 25/250 LMA fiber with an NA of 0.06. The device is pigtailed with 1 meter long 900 micron loose tube cabled fibers with no connectors on either end.

Standard Product Specifications:

Parameters	Unit	Value			
Wavelength	nm	1040-1080			
Input fiber (Core/Clad)	um/um	6/125			
Output fiber (Core/Clad)	um/um	20/125	25/125	30/125	25/250
NA core (Output Fiber)		0.08	0.08	0.08	0.06
NA clad (Output Fiber)		0.46	0.46	0.46	0.46
Max power transmitted	W	> 50			
Max Insertion loss	dB	< 0.5			
Dimensions (L x W x H)	(mm x mm x mm)	76 x 19 x 10			

Custom Ordering Information:

OZ Optics welcomes the opportunity to provide custom designed products to meet your application needs. As with most manufacturers, customized products do take additional effort so please expect some differences in the pricing compared to our standard parts list. In particular, we will need additional time to prepare a comprehensive quotation, and lead times will be longer than normal. In certain cases non-recurring engineering (NRE) charges, lot charges, and/or a minimum order will be necessary. These points will be carefully explained in your quotation, so your decision will be as well informed as possible.

Description:

Mode Field Adapter:

MFA-a1/b1-a2/b2-NA1-NA2-f1-f2-XY-JD-L

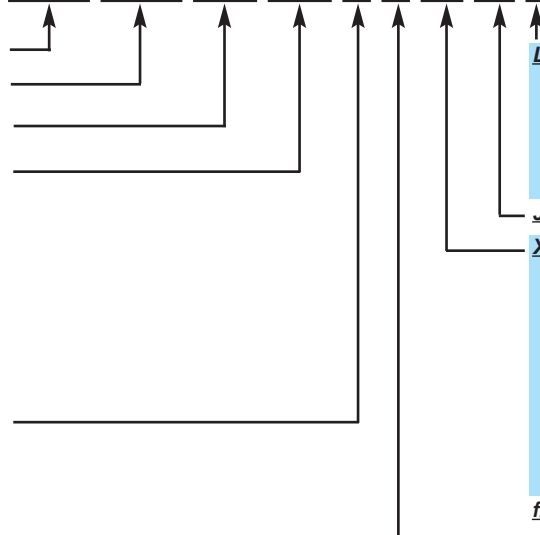
a1/b1 = Core/Clad Input:
Core/Cladding sizes, in microns
6/125 for 1060 nm SM fiber. See the OZ Standard Tables data sheet for other standard fiber sizes.

a2/b2 = Core/Clad Output:
Core/Cladding sizes, in microns
6/125 for 1060 nm SM fiber. See the OZ Standard Tables data sheet for other standard fiber sizes.

NA1 = Numerical Aperture of Input:
See the OZ Standard Tables data sheet for NA values.

NA2 = Numerical Aperture of Output:
See the OZ Standard Tables data sheet for NA values.

f1 = Fiber Type of Input:
S = Singlemode
M = Multimode
P = Polarization maintaining
LMA = Large mode area
PLMA = Polarization maintaining large mode area



L = Fiber length in meters, on each side of the device.
If they are different lengths, specify the input and output lengths separated by a comma.

Example: To order 1 meter of the fiber at the input and 7 meters at the output, replace the L with 1, 7. The total fiber length is equal to input fiber length plus the output fiber length.

JD = Jacket Dimension

XY = Input and Output Connector codes:

X = No connector
3S = Super NTT-FC/PC
3U = Ultra NTT-FC/PC
3A = Angled NTT-FC/PC
8 = AT & T-ST
SC = SC
SCA = Angled SC
LC = LC/PC
LCA = Angled LC
See table 6 of the OZ Standard Tables data sheet for other connectors

f2 = Fiber Type of Output:

S = Singlemode
M = Multimode
P = Polarization maintaining
LMA = Large mode area
PLMA = Polarization maintaining large mode area