Fiber Mode Field Adapter

1030~1080nm or 1450~1600nm

DATASHEET

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Mode Field Adapters (MFAs) are passive two port fiber devices that gradually modify the mode field to enable low-loss fusion between fibers with different core diameters and numerical apertures (NA). By adiabatically transforming the optical mode, MFAs achieve high coupling efficiency while minimizing beam distortion. Agiltron's MFAs use mode-field optimization technology to deliver low insertion loss and minimal beam quality degradation, making them well suited for high-power fiber lasers and fiber amplifiers. We produce two package size for different power levels.

Features

- High Power
- High Transfer Efficiency
- Custom Configurations Available
- Stable and Reliable

Specifications

Parameter							Unit
Operating Wavelength	1030~1080nm or 1450~1600nm						nm
SMA Fiber	6/125	10/125	10/125	6/125	20/250	62.5/125	dB
LMA Fiber	10/125	20/125	25/250	20/400	30/250	105/125	dB
Signal IL for Forward use	0.3	0.4	0.5	0.5	0.2	-	dB
Signal IL for Reverse use	0.3	0.5	0.7	0.7	0.2	2	mW
Total Power Handling	10				50	10	W
Polarization Extinction Ratio	≥ 18 for PM Fiber						dB
Return Loss	> 45						dB
Pigtail	Standard 1m or custom						
Operating Temperature	0~75						°C
Storage Temperature	-40~85						°C

* Values are referenced without connectors.

** Other package dimensions and optical performances available by request.

*** If you have other power inquiries, please contact us for details.

Applications

- High Power Fiber Lasers
- Fiber Amplifiers

RoHS COMPLIANT

Rev 02/10/26

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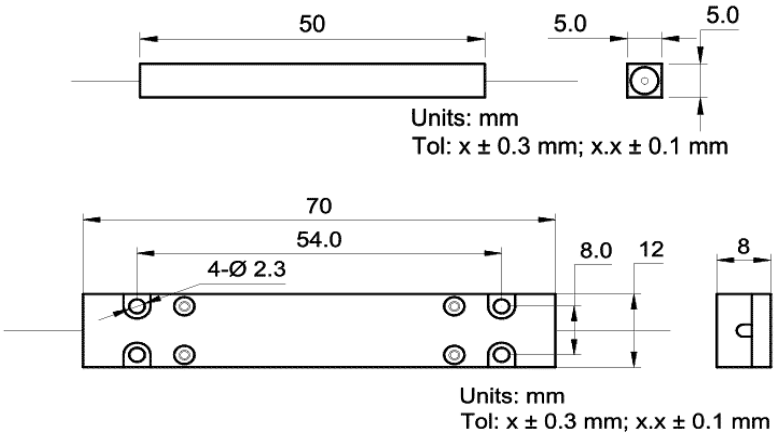
Mechanical Dimensions (mm)



*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

Ordering Information

	□	□□	□□	□	□	□	□
Prefix	**Wavelength**	**SMA Fiber**	**LMA Fiber**	**Power**	**Fiber Cover**	**Fiber Length**	**Connector**
MFAF-	1030~1080nm = 1 1450~1600nm = 5 Special = 0	***Select below*** Special = 00	***Select below*** Special = 00	5W = 1 10W = 2 30W = 3 50W = 4 100W = 5	Bare = 1 0.9mm tube = 2 Special = 0	0.25m = 1 0.5m = 2 Special = 0	None = 1 FC/PC = 2 FC/APC = 3 SC/PC = 4 SC/APC = 5 ST/PC = 6 LC/PC = 7 Special = 0

Code	Fiber Type	Short Name	Core ø (µm)	Clad ø (µm)	Core NA	Operating λ (nm)
01	Single-Mode	SMF (G.652)	8–9	125	~0.14	1310, 1550
02	Polarization-Maint.	PMF	6–10	125	0.12–0.14	780–2000
03	PM Large Mode Area	PM-LMA	15–35	125–250	0.06–0.08	1030–1550
04	Erbium-Doped	EDF (e.g., ER35-7)	4–10	125	0.12–0.25	1530–1610
05	PM Erbium-Doped	PM-EDF	5.5–10	125–128	0.20	1530–1610
06	Ytterbium-Doped	YDF (Phospho.)	6–30	125–400	0.06–0.14	1030–1100
07	PM Ytterbium-Doped	PM-YDF	5–35	125–400	0.06–0.14	1030–1100
08	Er/Yb Co-Doped	EYDF (DCF-EY)	6–25	125–400	0.10–0.20	1550 (LIDAR)
09	Thulium-Doped	TDF (DCF-TM)	6–25	125–400	0.09–0.22	1850–2100
10	Holmium-Doped	HDF	10–25	125–400	~0.10	2050–2150
11	Double-Clad Gain	DCF-YB	10–50	128–600	0.06–0.08	Pump: 915/976
12	PM Double-Clad	PM-DCF	10–25	125–400	0.075	High Power
13	Very-LMA Fiber	VLMA	35–80	250–600	0.02–0.06	1030–1100
14	Rod-Type Fiber	Rod Fiber	50–100	500–1000	>0.02	kW-class
15	Chirally-Coupled	CCCF	20–50	200–400	~0.06	SM quality
16	Photonic Crystal	PCF	Varies	Varies	Design-spec	400–2400
17	High-NA Pump	Pump Fiber	105–600	125–1000	>0.22	808, 915, 976
18	Triple-Clad Passive	DCF-UN	50–200	250–400	0.15–0.22	Beam Delivery
19	Multimode Fiber	50/125	50	125	0.22	400-2650
20	Multimode Fiber	62.5/125	62.5	125	0.22	400-2650
21	Multimode Fiber	105/125	105	125	0.22	400-2650

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