

DIAMOND

Fiber Optic Components

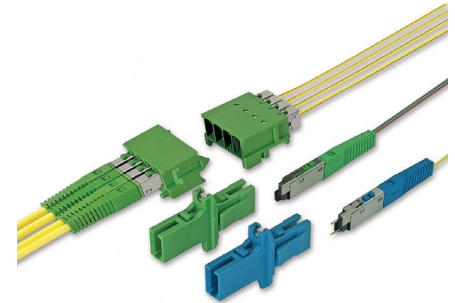
MFS & Fan-Out cords

SINGLE MODE PC/APC
MULTIMODE PC

CABLE ASSEMBLIES AND ADAPTERS

The Diamond Multiple Fiber System (MFS) combines Diamond's advanced polishing technology and the flexibility of the MT ferrule resulting in a high density and performance modular solution, which can be utilized in both back plane and front panel applications.

The MFS plug are available in 4-, 8-, & 12- fiber versions, PC and APC finishes, and support both multi-mode and single mode applications. The MFS back plane modules are compact, supporting up to 48 fibers in a 24.8 x 15.8 mm footprint and are designed for compatibility and integration with standard metric back plane systems. Each module can accept up to 4 plugs, which can be added or removed incrementally.



MFS Backplane and connectors

FEATURES AND BENEFITS

- ▶ Each single connector supports up to 12 fibers
low cost per termination for high density applications
- ▶ Suitable long pre-guiding tracks
high repeatability and stability
- ▶ Precision molded MT ferrule and advanced polishing process
lower IL and higher repeatability

APPLICATIONS

- ▶ Patch cords and Fan-Out assemblies
- ▶ Data and Telecommunication Networks, industrial

STANDARDS

- ▶ EN 186310 „Connector sets for optical fibers and cables
Type MF“
- ▶ TIA/EIA 604-15 „Fiber optic intermateability standard - Type MF“

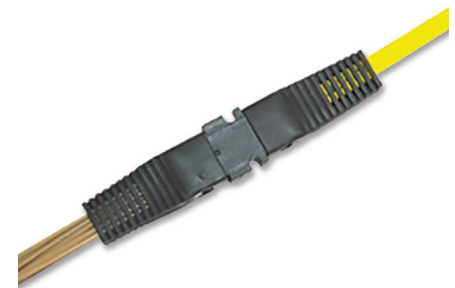
AVAILABLE AS

- ▶ Terminated connector

SPECIFICATIONS

	MULTIMODE 0° PC	SINGLE MODE 0° PC	SINGLE MODE 8° APC	UNITS	TEST CONDITIONS
Insertion Loss (IL)	typ. 0.35	typ. 0.25 max. 0.75	typ 0.25 max. 0.75	dB	IEC 61300-3-4; λ = 1300/1550nm
Return Loss (RL)	typ. 30	min. 40	min. 60*	dB	IEC 61300-3-6; λ = 1300/1550nm
Repeatability of IL	max. ±0.2			dB	IEC 61300-2-2; λ = 1300/1550nm
Service life	500 mate/demate cycles				
Operating temperature	-40/+85**			°C	
Storage temperature	-40/+90**			°C	
Strain relief (cable)	> 50			N	

* Measured with high precision reflectometer
** May be further limited by cable specifications



FAN-OUT cords



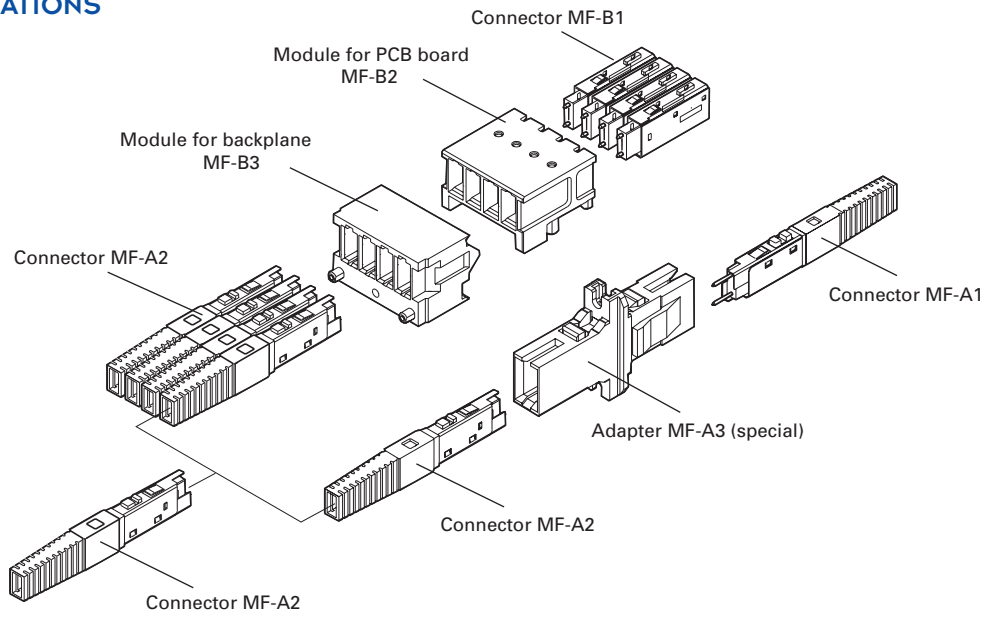
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Specifications subject to change
without notice

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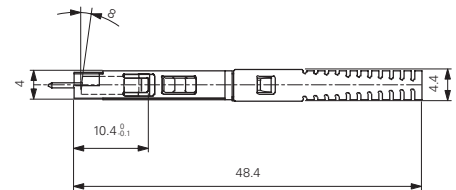
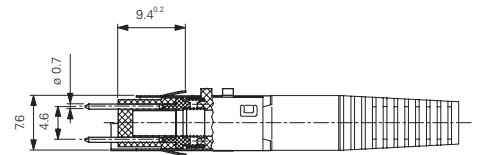
POSSIBLE COMBINATIONS



CONNECTOR TYPES AND DIMENSIONS

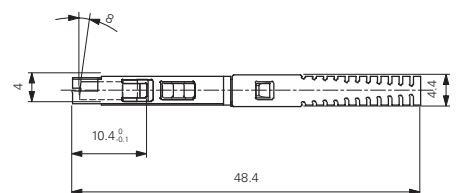
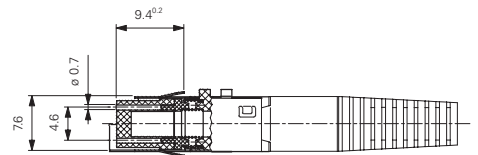
MF-A1 Connectors (with pins)

- Available types: **MF-A1 - PC**
MF-A1 - APC
 Ferrule style: MT (Plastic)
 External parts: Metal



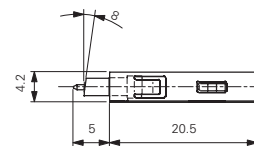
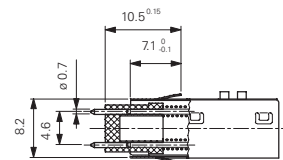
MF-A2 Connectors (without pins)

- Available types: **MF-A2 - PC**
MF-A2 - APC
 Ferrule style: MT (Plastic)
 External parts: Metal



MF-B1 Connectors (with pins)

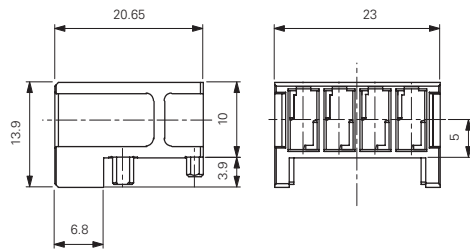
- Available types: **MF-B1 - PC**
MF-B1 - APC
 Ferrule style: MT (Plastic)
 External parts: Metal



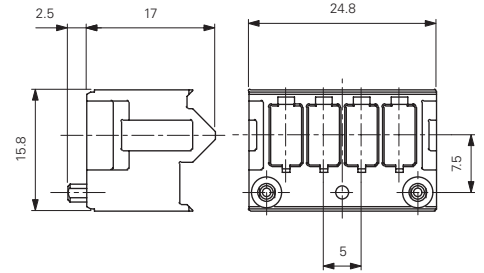
NOTE Standard boot colors: black for MM 50 μm ; beige for MM 62.5 μm , blue for SM PC; green for SM APC.

ADAPTER TYPES AND DIMENSIONS

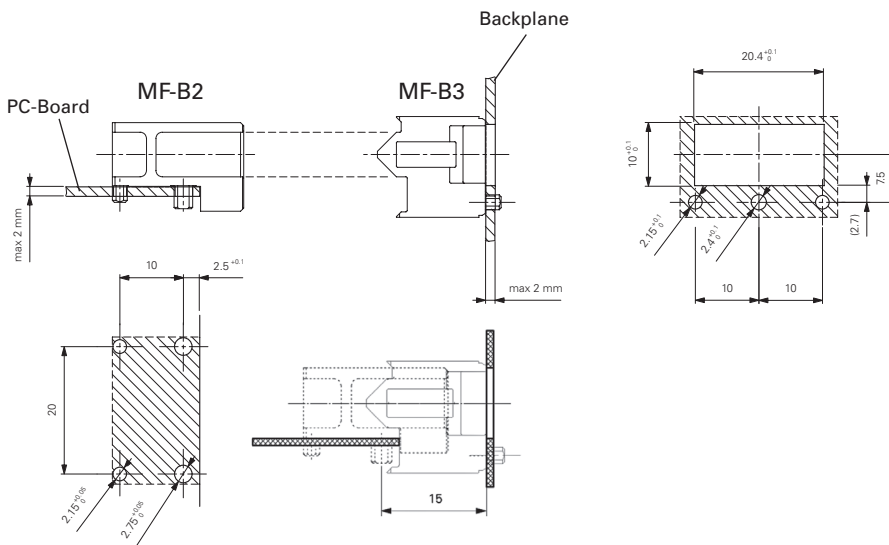
MF-B2 PCB module



MF-B3 Backplane module

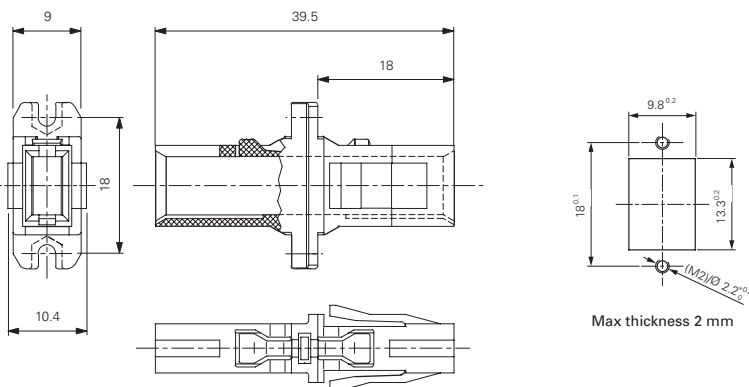


Cutout dimensions for MF-B2/MF-B3

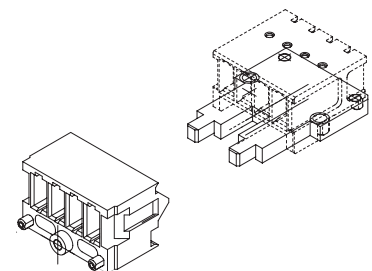


SPECIALS

MF-A3 Single connector mating adapter



4 plugs adapter suitable for fixed PCB and front panels (upon request)



NOTE Plastic adapters, PCB and Backplane modules standard colors: MM (beige); SM PC (blue); SM APC (green).

Suitable fiber types and dimensions:

For MF-A1 and MF-A2:

- 4x 9/125
- 4x 9/125 buffered
- 8x 9/125
- 8x 9/125 buffered
- 12x 9/125
- 12x 9/125 buffered*
- 4x 50/125
- 4x 50/125 buffered
- 8x 50/125
- 8x 50/125 buffered
- 12x 50/125x
- 12x 50/125 buffered*

For MF-B1: (no buffered type, only ribbon fiber)

- 4x 9/125
- 8x 9/125
- 12x 9/125
- 4x 50/125
- 8x 50/125
- 12x 50/125

* Available upon request

THE FAN-OUT CORD

A fan-out cable assembly typically consists of multi-fiber connectors terminated on multiple ribbon fiber or cable on one end, and single fiber connectors terminated on 900µm tubing on the other. A Fan-Out is used to facilitate the conversion from the ribbon to individual fiber format. Diamond’s FAN-OUT has a number of distinguishable features including strain relief boots for superior bend radius protection and innovative stackable design. It’s compact size, 12 fiber capacity and integrated strain relief, makes it a clear choice for high density and high reliability applications. Diamond produces high performance splice free fan-out cable assemblies using 4,8 and 12 channel ribbon fiber or ribbon cable. These assemblies are available with Diamond’s advanced MFS or MPO connectors and almost all industry standard single fiber connectors terminated with our patented Active Alignment process.

FEATURES AND BENEFITS

- ▶ High density Multi-fiber design
4,8 or 12 channel ribbon fiber or ribbon cable
- ▶ Compact design
easily stacked and secured for high-density applications
- ▶ Strain relief boots
superior bend radius protection resulting in higher reliability
- ▶ Available in different lengths to support your custom applications

APPLICATIONS

- ▶ High density channel routing between equipment and interconnect racks
- ▶ Termination of outside plant cable at the customer demarcation point

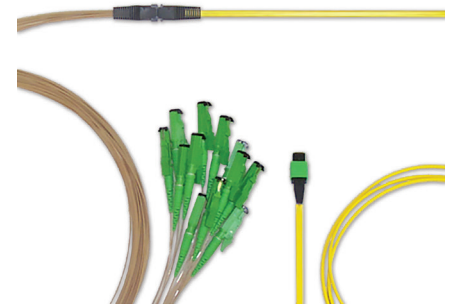
SPECIFICATIONS

	MULTIMODE	SINGLE MODE	UNITS	TEST CONDITIONS
Insertion Loss (IL)*	max. 0.1		dB	IEC 61300-3-4; λ = 1300/1550nm
Operating temperature	-40 +85**		°C	
Storage temperature	-40 +90**		°C	

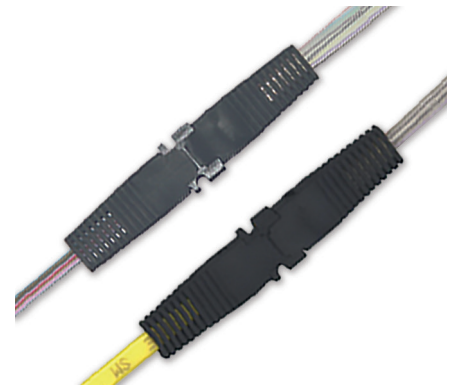
* The IL values represent the attenuation only due to the Fan-Out (Excluding contribution of connectors)
 ** May be further limited by cable specifications

TYPICAL CONFIGURATIONS (as mentioned within the Qualification Test Report)

CONFIGURATION	RIBBON TYPE	TUBING MATERIAL	NOTES
Type A	Cable	Peek Ø 0.9mm	High strength cable FAN-OUT
Type B	Fiber	Hytrel Ø 0.9mm	Fiber FAN-OUT
Type C	Cable	Hytrel Ø 0.9mm	Cable FAN-OUT

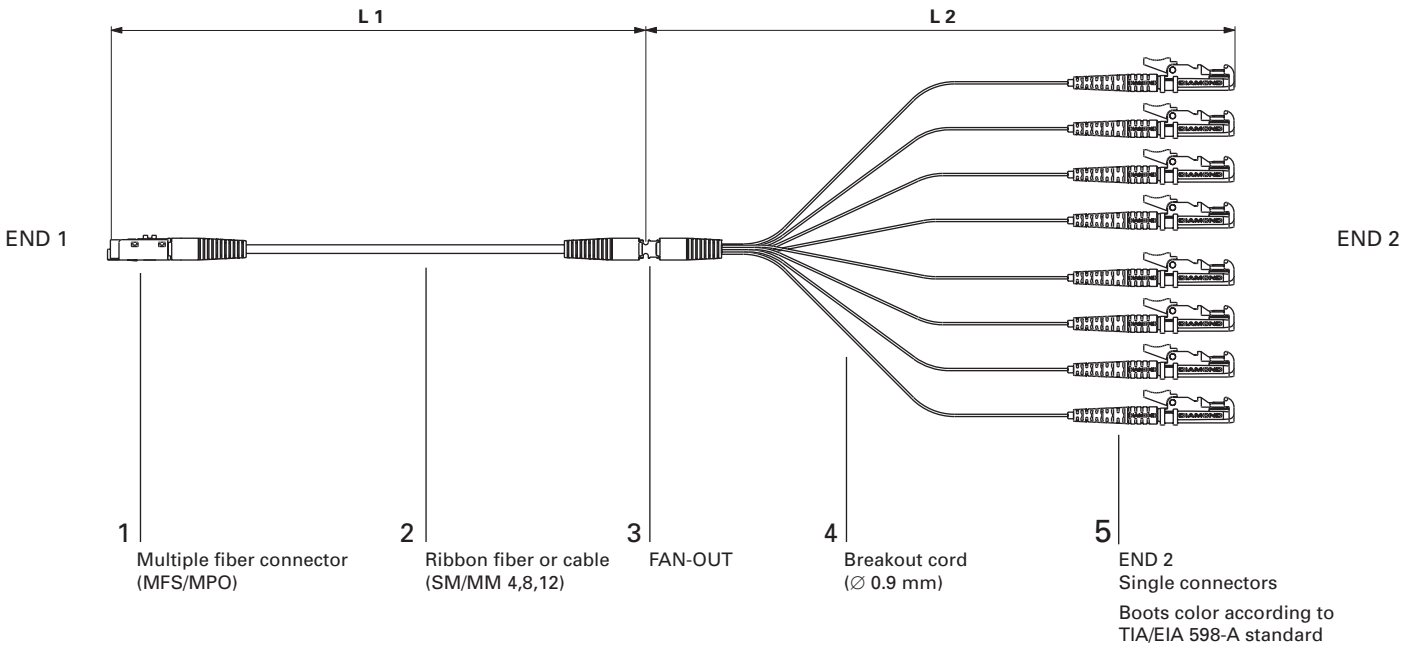


Fan-Out cord



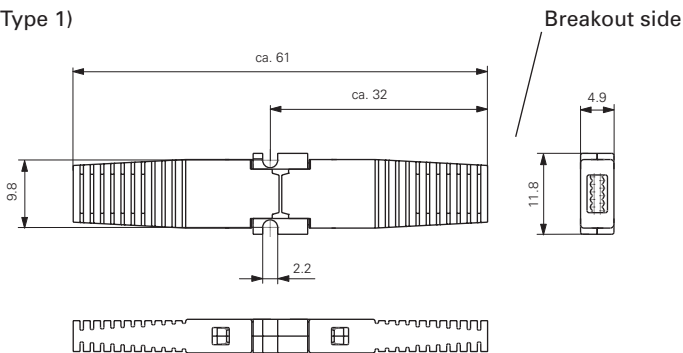
Ribbon fiber and ribbon cable Fan-Out cords

FAN-OUT CORD TYPICAL CONFIGURATION



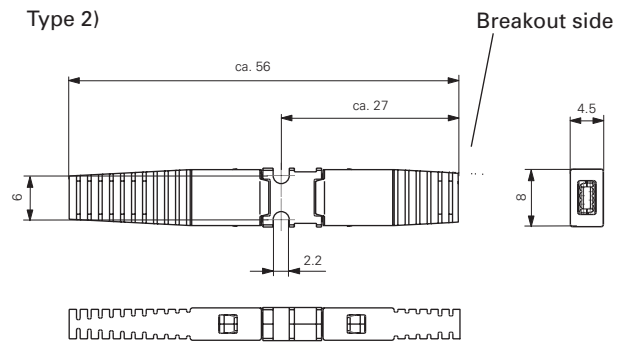
FAN-OUT TYPES AND DIMENSIONS

Type 1)



Suitable for 12 x ribbon fiber or cable and 8 x ribbon cable

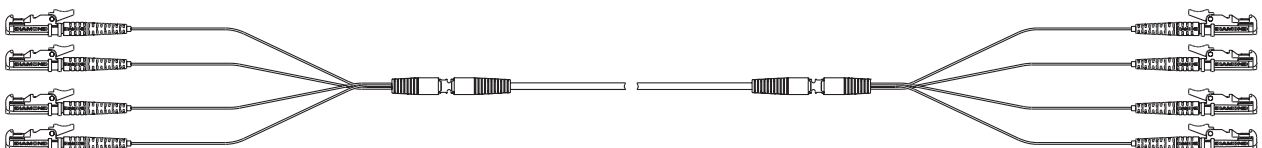
Type 2)



Suitable for 4 x ribbon fiber or cable and 8 x ribbon fiber

OTHER AVAILABLE CONFIGURATION*

e.g: Both ends Fanout



* please contact your local DIAMOND representative to discuss application specific information

ORDER INFORMATION

Please refer to the part numbers provided in the separate P/N list.

For assemblies or other configurations, please contact your nearest local Diamond representative or fill in the contact form available on the www.diamond-fo.com website.