

DIAMOND

Fiber Optic Components

MPO & Fan-Out cords

CABLE ASSEMBLIES AND ADAPTERS

The MPO is an high-density multi-fiber connector system built around precision molded MT ferrule. The MPO's spring loaded push-pull latching mechanism is easy to use while ensuring positive engagement both important features for mission critical high density applications. Ferrule alignment is achieved through high precision guide pins.

Diamond's MPO is available in 4,8 and 12 fiber versions, PC and APC finishes, and support both multimode and single mode applications. Premium optical performance (low IL and high RL) is a result of our advanced polishing technology.

FEATURES AND BENEFITS

- ▶ Supports up to 12 fibers
low cost per termination for high density applications
- ▶ Push-pull mechanism
ease of operation
- ▶ Precision molded MT ferrule and advanced polishing process
lower IL and higher repeatability

APPLICATIONS

- ▶ Patch cords and Fan-Out assemblies
- ▶ ATM & DWDM high speed communication systems
- ▶ Multimedia
- ▶ CATV and Video
- ▶ Data and Telecommunication Networks
- ▶ Industrial

STANDARDS

- ▶ IEC 61754-7 „Fiber optic connectors interfaces - Type MPO connector family“
- ▶ TIA/EIA 604-5A „Fiber optic intermateability standard - Type MPO“

AVAILABLE AS

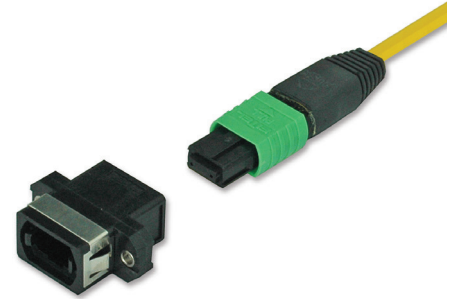
- ▶ Terminated connector

SPECIFICATIONS

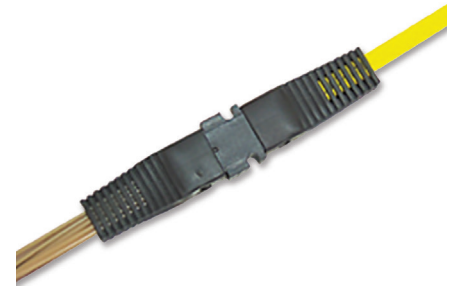
	MULTIMODE 0° PC	SINGLE MODE 0° PC	SINGLE MODE 8° APC	UNITS	TEST CONDITIONS
Insertion Loss (IL)	typ. 0.35	typ. 0.25 max. 0.75	typ. 0.25 max. 0.75	dB	IEC 61300-3-4; λ = 1300/1550nm
Return Loss (RL)	typ. 30	min. 40	min. 60*	dB	IEC 61300-3-6; λ = 1300/1550nm
Repeatability of IL	max. ±0.2			dB	IEC 61300-2-2;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

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

SINGLE MODE PC/APC
MULTIMODE PC



MPO connector



FAN-OUT cords



DIAMOND SA | Via dei Patrizi 5 | CH-6616 Losone - Switzerland
Tel. +41 58 307 45 45 | e-mail info@diamond-fo.com

www.diamond-fo.com

Specifications subject to change
without notice

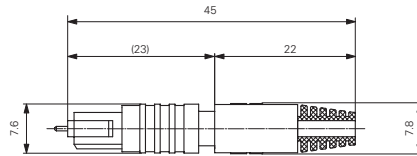
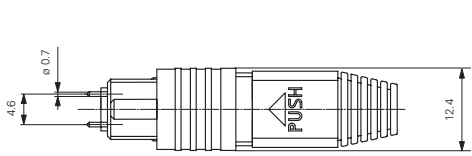
BDD 1951827 01_18

CONNECTOR TYPES AND DIMENSIONS

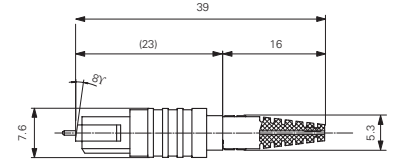
MPO-A1 Connectors (with pins)

Available types: **MPO-A1 - PC**
MPO-A1 - APC

Ferrule style: MT (Plastic)
External parts: Plastic



Ribbon cable PC version

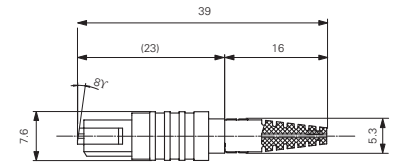
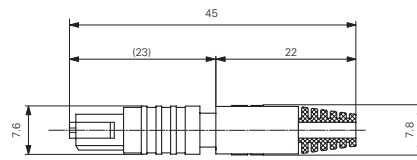
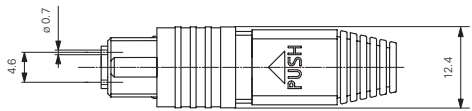


Ribbon fiber APC version

MPO-A2 Connectors (without pins)

Available types: **MPO-A2 - PC**
MPO-A2 - APC

Ferrule style: MT (Plastic)
External parts: Plastic

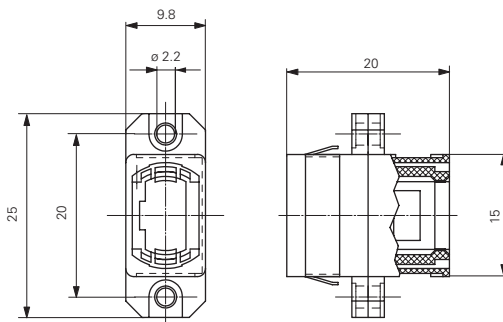


NOTE Standard body/boot colors: black/black for MM 50µm and MM 62.5 µm; green/black for SM PC and SM APC.

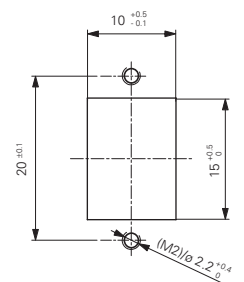
ADAPTER TYPE AND DIMENSIONS

MPO mating adapter

External parts: Plastic black



CUTOUT DIMENSIONS



Max wall thickness 1.6 mm

Suitable fiber types and dimensions:

For MPO-A1 and MPO-A2 ribbon cable version:

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

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

* Available upon request

For MPO-A1 and MPO-A2 ribbon fiber version:

4x 9/125
8x 9/125
12x 9/125

4x 50/125
8x 50/125
12x 50/125

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

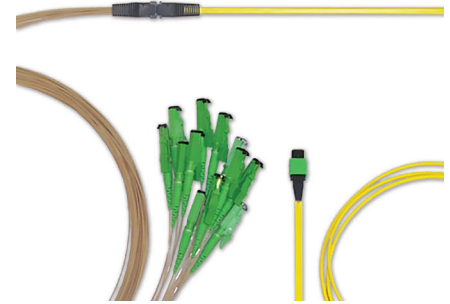
	MULTIMODE	SINGLE MODE	UNITS	TEST CONDITIONS
Insertion Loss (IL)*	max. 0.1		dB	IEC 61300-3-4; λ = 1300/1550nm
Operating temperature	-40 +85**		°C	
Storage temperature	-40 +90**		°C	

* The IL values represent the attenuation only due to the Fan-Out (Excluding contribution of connectors)

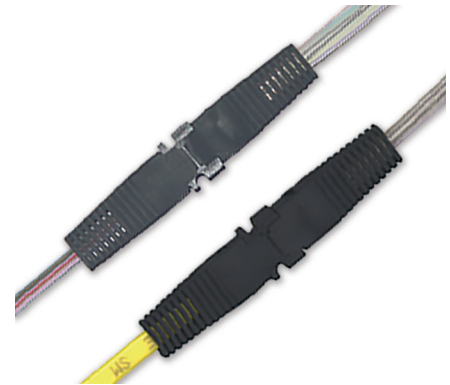
** May be further limited by cable specifications

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

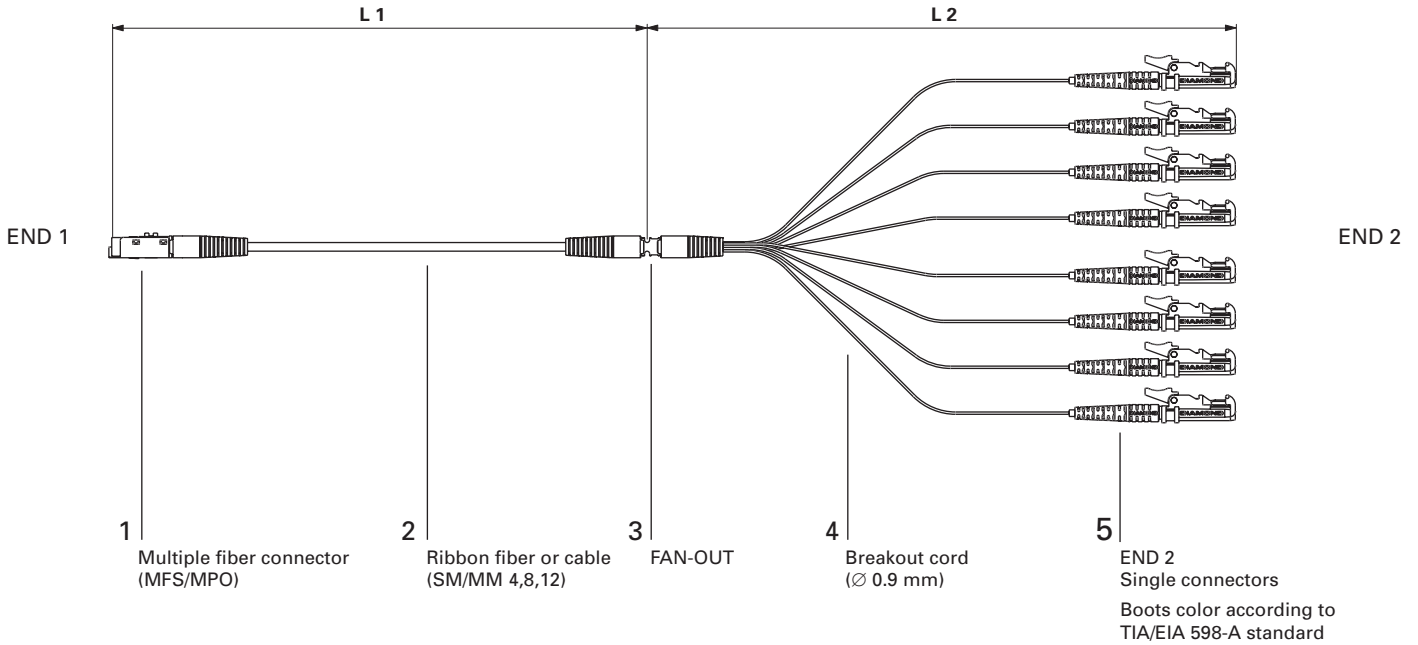


Fan-Out cord

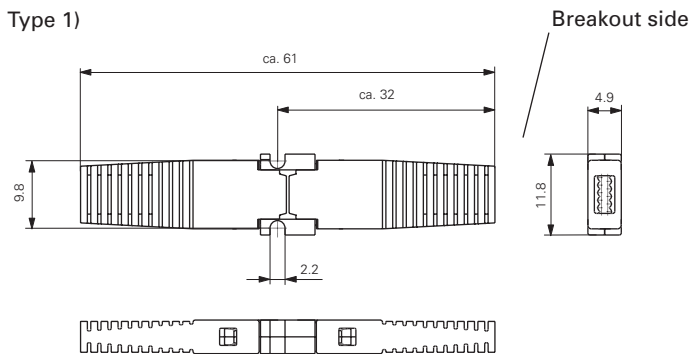


Ribbon fiber and ribbon cable Fan-Out cords

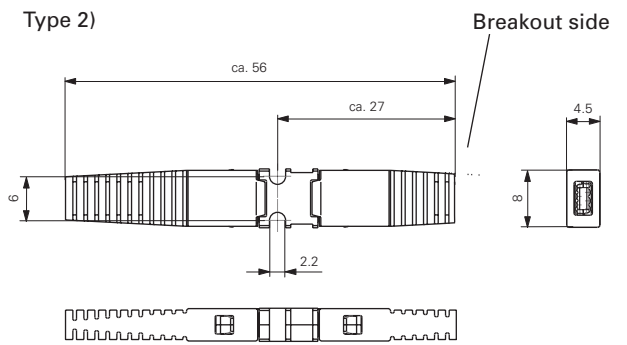
FAN-OUT CORD TYPICAL CONFIGURATION



FAN-OUT TYPES AND DIMENSIONS



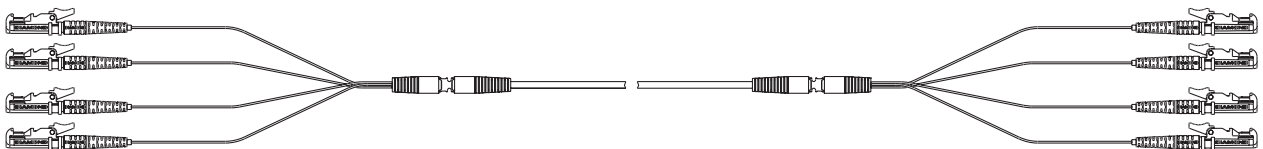
Suitable for 12 x ribbon fiber or cable and 8 x ribbon cable



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 contact your nearest local Diamond representative or fill in the contact form available on the www.diamond-fo.com website.