

DIAMOND

Fiber Optic Components

CABLE ASSEMBLIES AND ADAPTERS

In order to ensure the highest technical performance and to provide an optimum solution for high density packaging, DIAMOND has developed the Diamond Micro Interface (DMI) connection system.

Thanks to its minimal space requirement, this system is an ideal solution for Printed Circuit Board (PCB) applications as well as a high quality interface between active and passive components of fiber optic installations. As such it has been used to replace splices, in some applications, improving the modularity at a low height budget impact.

DMI connectors are based on standard $\varnothing 2.5$ mm ferrules and are designed to operate with multimode and single mode fibers, 0° PC as well as 8° APC polished. Furthermore the DMI is also available as PM (Polarization Maintaining) interface.

FEATURES AND BENEFITS

- ▶ Minimum space requirement (footprint of 4.5 x 21 mm)
- ▶ Consistent high performance solution
- ▶ Available in PC, APC and PM termination
- ▶ Available in PS on custom request due to laser safety issues
- ▶ Standard active fiber core aligned DIAMOND $\varnothing 2.5$ mm ferrule
- ▶ Easy installation by use of standard clip-on system.
- ▶ DMI assembly tool is available.

AVAILABLE AS

- ▶ Terminated connector

SPECIFICATIONS

STANDARD	MULTIMODE 0° PC	SINGLE MODE 0° PC	SINGLE MODE 8° APC	UNITS	TEST CONDITIONS
Insertion Loss (IL) Random	typ. 0.2 max. 0.4	typ. 0.15 max. 0.4	typ. 0.15 max. 0.4	dB	IEC 61300-3-4; $\lambda = 1300/1550$ nm
Return Loss (RL)	min. 40	min. 50	min. 70*	dB	IEC 61300-3-6; $\lambda = 1300/1550$ nm
Low IL Version					
Insertion Loss (IL) Random	-	typ. 0.1 max. 0.25	typ. 0.1 max. 0.25	dB	IEC 61300-3-4; $\lambda = 1300/1550$ nm
Return Loss (RL)	-	min. 50	min. 75*	dB	IEC 61300-3-6; $\lambda = 1300/1550$ nm
Repeatability of IL	max. ± 0.05			dB	IEC 61300-2-2; $\lambda = 1300/1550$ nm
Service life	500 mate/demate cycles				
Operating temperature	-40/+85**			$^\circ\text{C}$	

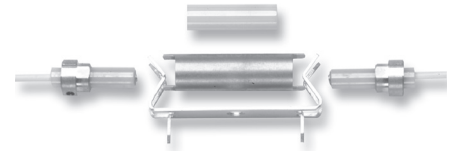
* Measured with high precision reflectometer

** May be further limited by fiber specifications

DMI

(Diamond Micro Interface)

SINGLE MODE PC/APC
MULTIMODE PC



DMI components



DMI assembled

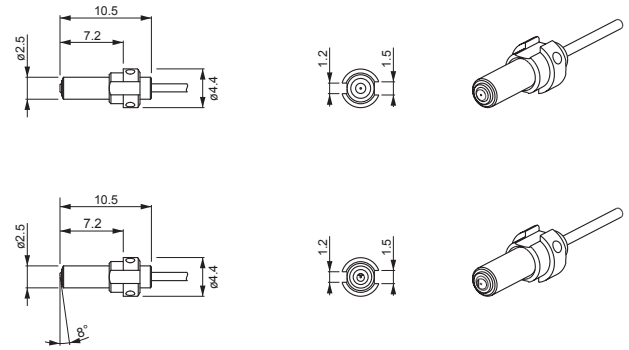


CONNECTOR TYPES AND DIMENSIONS

DMI connectors on 900 μm fiber, without boot

Available types: **DMI - PC**
DMI - APC
DMI - PC Low IL
DMI - APC Low IL

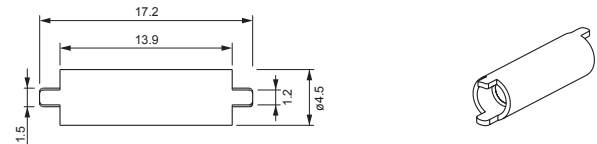
Ferrule material: Zirconia/metal insert
 External parts: Metal



ADAPTER TYPES AND DIMENSIONS

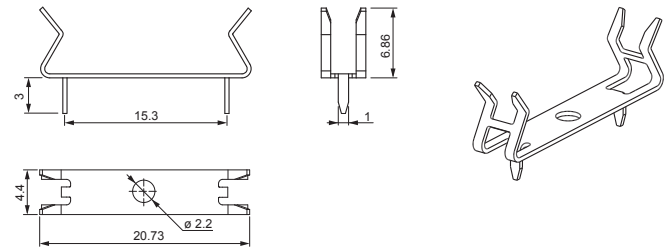
DMI mating adapters

External parts: Metal
 Mating sleeve: Zirconia
 Cap colors: Black for MM 0° PC
 Blue for SM 0° PC
 Green for SM 8° APC

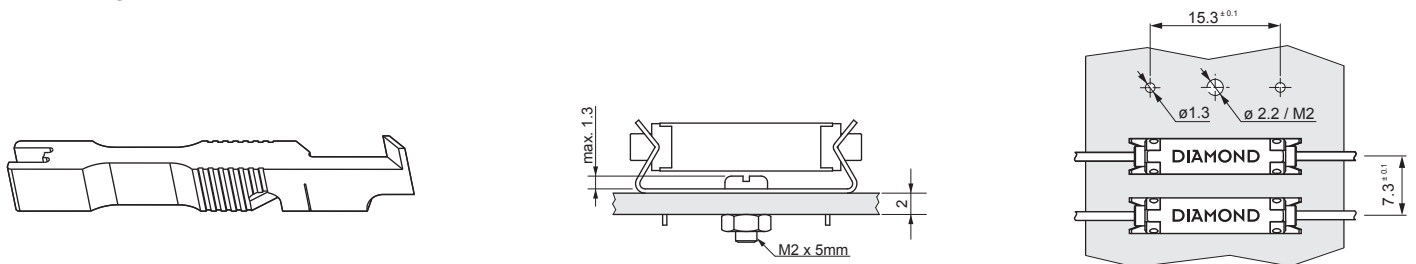


DMI mating adapters clip

External parts: Metal (Cu Be2; tinned solderable)



Mounting tool and instructions:



For further information about mounting instructions, please refer to the DMI Part number list

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.