

# DIAMOND

## Fiber Optic Components

### High Temperature (HT) Assemblies

#### CABLE ASSEMBLIES AND ADAPTERS

Diamond offers High Temperature (HT) fiber optic metal assemblies developed specially to withstand operating temperatures beyond the range of conventional plastic connectors over extended periods.

The HT assemblies rely upon a combination of specialized assembly techniques and materials, together with special fibers with appropriate coatings suitable for deployment in harsh environments.

Diamond HT solutions' benefits extend to temperature applications up to 150° C (302°F) for use in severe conditions within industrial, military, aerospace, oil industry, telecom, and other environments. These add up on top of traditional advantages such as immunity to electromagnetic interference, better environmental stability and enhanced remote sensing compared to traditional electronic sensors.

Diamond HT standard assemblies are available in PC and APC version with MM or SM fibers. Other configurations are available upon request.

FC, LSA (DIN), AVIM, Mini-AVIM, DMI



#### BENEFITS

- ▶ Reliable operation up to 150°C
- ▶ Low Insertion loss thanks to ACA
- ▶ Ultra high polish for High return loss

#### AVAILABLE AS

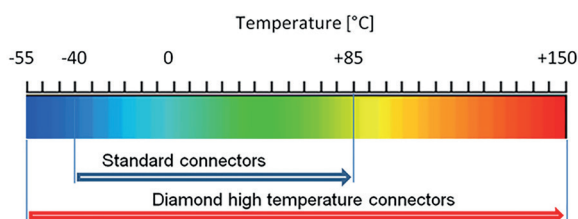
- ▶ Pigtail and patchcord on the following mechanical interfaces:
  - FC
  - LSA (DIN)
  - AVIM
  - Mini-AVIM
  - DMI

#### SPECIFICATIONS

	MULTIMODE 0° PC	SINGLE MODE 0° PC	SINGLE MODE 8° APC	UNITS	TEST CONDITIONS
Operating temperature	-55 / + 150			°C	
High temperature endurance	+ 150 / 2000			°C / h	IEC 61300-2-18; at 1550nm
Insertion Loss (IL) reference	Typ. 0.2 Max. 0.4			dB	IEC 61300-3-4; at 1550nm
Return Loss (RL)	Typ. 40	min. 50	min. 70	dB	IEC 61300-3-6; at 1550nm
Repeatability of IL	< 0.1			dB	IEC 61300-2-2; at 1550nm
Service life	500 mate / demate cycles			-	

**NOTE** Please refer to the individual data sheets for detailed specifications on individual connector types.

#### COMPARISON OF STANDARD AND HIGH TEMPERATURE CONNECTORS



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Specifications subject to change without notice

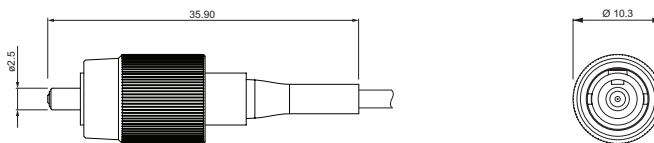
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## CONNECTOR TYPES AND DIMENSIONS

FC HT connectors (up to 1.5 mm OD tubing)

Available types: **FC HT PC/APC (Key  $\varnothing$  2.14 mm)**  
**FC HT APC (Key  $\varnothing$  2 mm)**

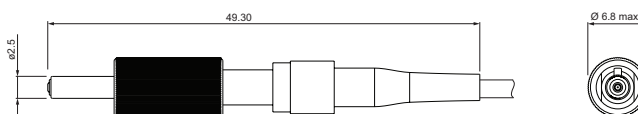
Ferrule material: Zirconia/metal insert  
 External parts: Ni-plated brass /  
 FPMX VITON-E boot



LSA (DIN) HT (up to 1.2 mm OD tubing)

Available types: **LSA (DIN) HT PC/APC**

Ferrule material: Zirconia/metal insert  
 External parts: Ni-plated brass /  
 FPMX VITON-E boot



AVIM HT connectors (up to 1.2 mm OD tubing)

Available types: **AVIM HT PC/APC**

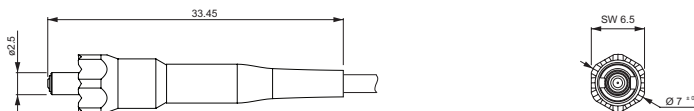
Ferrule material: Zirconia/metal insert  
 External parts: Copper-nickel alloy /  
 FPMX VITON-E boot



Mini-AVIM HT (up to 1.2 mm OD tubing)

Available types: **Mini-AVIM HT PC/APC**

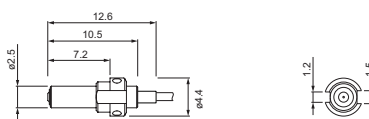
Ferrule material: Zirconia/metal insert  
 External parts: Titanium  
 FPMX VITON-E boot



DMI HT (up to 1.5 mm OD tubing)

Available types: **DMI HT PC/APC**

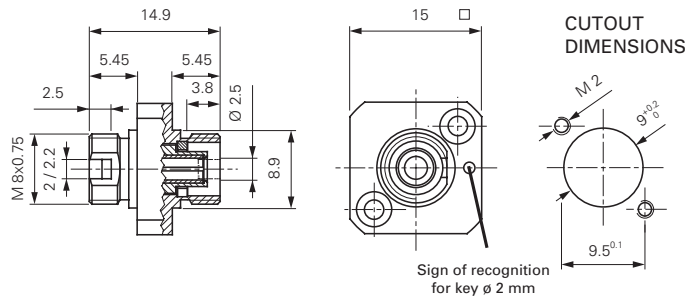
Ferrule material: Zirconia/metal insert  
 External parts: Titanium



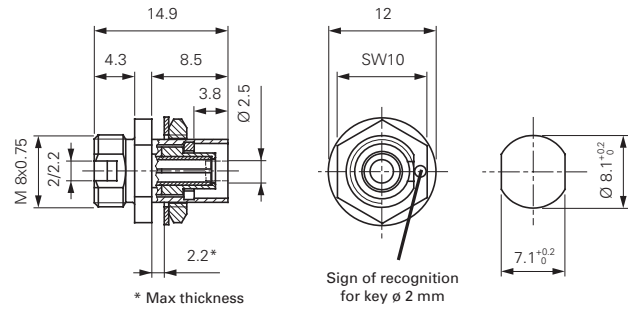
ADAPTER TYPES AND DIMENSIONS

FC mating adapters

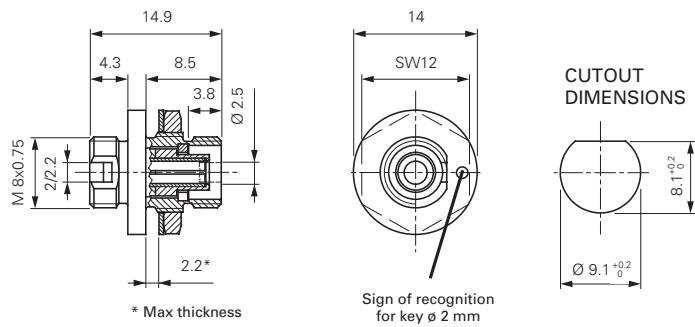
Square flange



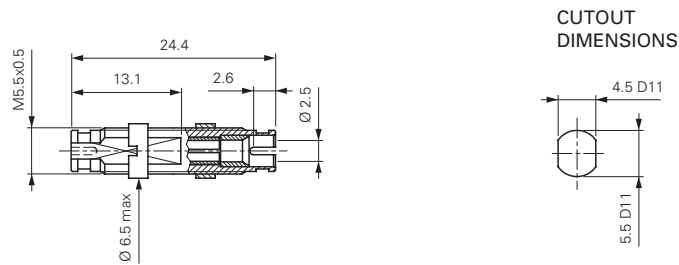
Hexagonal flange



Round flange

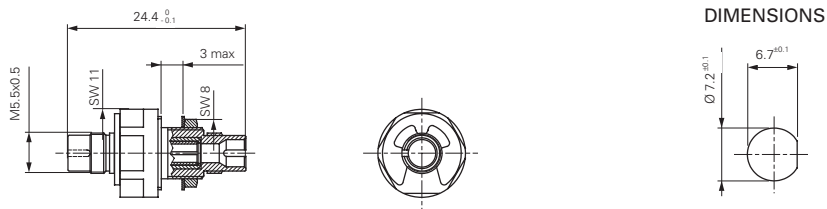


LSA (DIN) / AVIM mating adapter

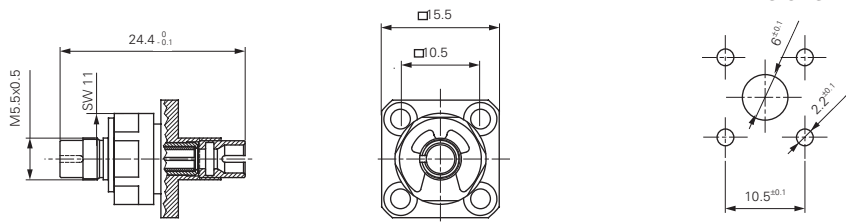


AVIM / LSA (DIN) mating adapter

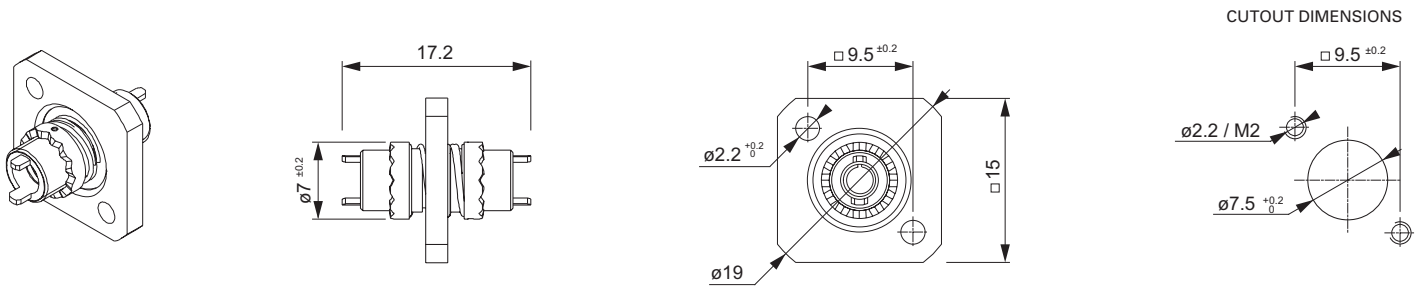
Hexagonal flange



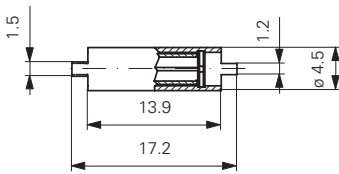
Square flange



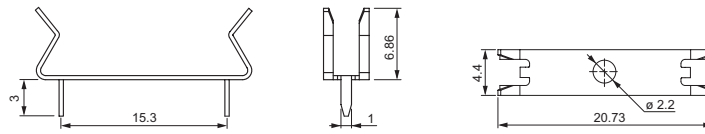
Mini-AVIM mating adapter



DMI mating adapter



DMI mating adapter clip



**NOTE** For tools and instruction information, please see individual P/N list on individual connector types.

**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.