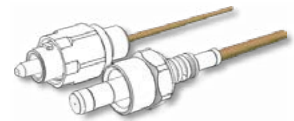


## Special Patchcords

One of the main strength of SEDI-ATI Fibres Optiques is the capability to help our customers in finding the proper solution for their application and to offer custom products and special assemblies adapted to these applications requirements.

### Vacuum

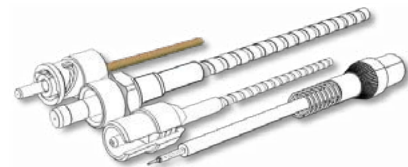
SEDI-ATI Fibres Optiques has many years experience in vacuum applications. A number of jackets, low outgassing assembly elements and stainless steel connectors are available.



Vacuum Patchcords						
Fiber	Fiber coating	Jacket	Sealing	Connectors	Vacuum	Length
Singlemode or Multimode	Polyimide (preferred)	PEEK 0.6x0.9 mm or 1.2x1.7 mm	Very low outgassing adhesive	SMA, FC stainless steel (without spring), ST stainless steel	10 <sup>-6</sup> to 10 <sup>-9</sup> mbar	Up to 20 m

### High Temperature

SEDI-ATI Fibre Optiques offers harsh environment patchcords where high temperature is the dominant parameter. Various solutions are proposed for temperatures ranging from 150 to 1000 °C.



High T° Patchcords						
T° Max	Fiber	Fiber Coating / Material	Link : Fiber/Connectors	Jacket	Connectors	Length
150 °C	Multimode : 100, 200, 320, 400, 600 µm	Polyimide	Sealing	Stainless steel 1.2x2.3 mm or 3.3x4.8 mm, PEEK 0.6x0.9 or 1.2x1.7 mm	SMA, ST metallic ferrule, Microptic	Up to 20 m, 100 m if stainless steel 3.3x4.8 mm
500 °C	Multimode : 100, 200, 400 µm	Copper	Brazing	Stainless steel 1.2x2.3 mm or 3.3x4.8 mm	SMA, ST metallic ferrule, Microptic	Up to 20 m, 100 m if stainless steel 3.3x4.8 mm
1000 °C	Multimode : 200 & 300 µm	Sapphire	Sealing	Titanium Tube 1/16"	Inox connector at one end in colder zone	2 m max.

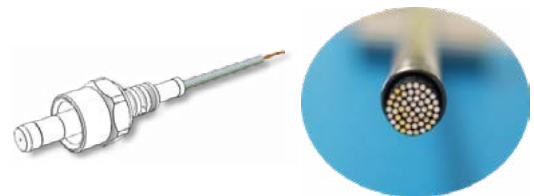
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As part of our policy of continuous product improvement, we reserve the right to change specifications at any time.

## Special Patchcords

### Low Temperature

When a fiber optic link is needed in extreme cold temperature (0.5 K to 3 K) SEDI-ATI can provide fiber assemblies compatible with cryostats. The choice of protective jackets will be optimized according to environmental constraints (laboratory or industrial).



Cryogeny Patchcords							
T° Min	Fiber	Fiber Coating	Link : Fiber/Ferrule	Jacket	Flange for cryostat enclosure	Hermeticity level	Connectors
0,5 K (-272,5 °C)	Singlemode or Multimode (Single fiber or bundle)	Polyimide	Sealing	Stainless steel tube (diameter variable according to single fiber or bundle)	according to customer (M10, KF DN16, KF DN40)	10 <sup>-8</sup> mbar.l/s	FC, ST, LC, E2000 APC, SMA, ...

Max. length in enclosure: 1.5 m

### High Voltage

When transmission equipment is operated in high voltage industrial environment, optical fibers are the right choice due to their immunity to EME (Electro Magnetic Environment). To protect the fiber, we have developed a specific cable combined with a specific connector termination process adapted to high voltage avoiding sparkling risk. These cables can be used for thyristor triggering.



High Voltage Patchcords						
Fiber	Jacket ext. diameter	Length	Color	Connectors	lloss Patchcord	lloss Cable
Multimode 200µm	2,5 mm	1 to 20 m	Orange	ST	< 1,2 dB @850 nm	< 10 dB/km

**High Voltage qualification:** 35 kV DC, with discharge current < 10 pC (after 96 h under 95 % humidity). 2 KV over 20 mm distance and increase up to 5 kV for 60 sec., without increase of discharge current

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