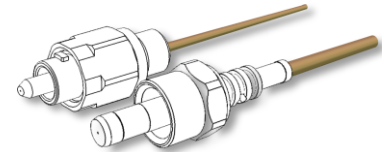




One of the main strength of SEDI-ATI Fibres Optiques is the capability to help our customers in finding the proper solution for their application and to offer custom products and special assemblies adapted to these applications requirements.

Vacuum:

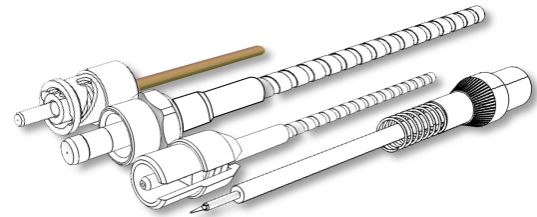
SEDI-ATI Fibres Optiques has many years experience in vacuum applications. A number of jackets, low outgassing assembly elements and stainless steel connectors are available.



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

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.

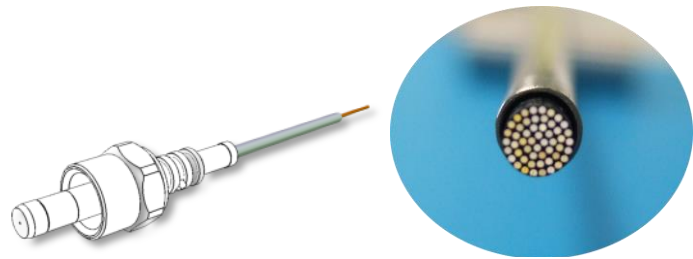


| High T° Patchcords | | | | | | |
|--------------------|---|--------------------------|-------------------------|---|---|---|
| T° Max | Fiber | Fiber Coating / Material | Link : Fiber/Connectors | Jacket | Connectors | Length |
| 150°C | Multimode : 100, 200, 320, 400, 600µm | Polyimide | Sealing |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



Low Temperature:

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



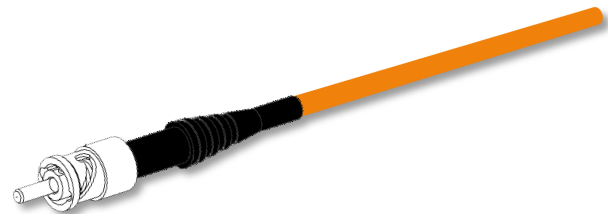
| Cryogeny Patchcords | | | | | | | |
|---------------------------|--|---------------|----------------------|--|---|---------------------------|--------------------------------|
| T° Min | Fiber | Fiber Coating | Link : Fiber/Ferrule | Jacket | Flange for cryostat enclosure | Hermeticity level | Connectors |
| 0,5K (-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 ⁻⁸ mbar.l/s | SMA,FC, ST, E2000 APC, LC, ... |

Max. Length in enclosure: 1.5m

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 sparking risk.

These cables can be used for thyristor triggering.



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

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