



# Vacuum Fiber Optic Patchcords

## For Ultra-High Vacuum Applications



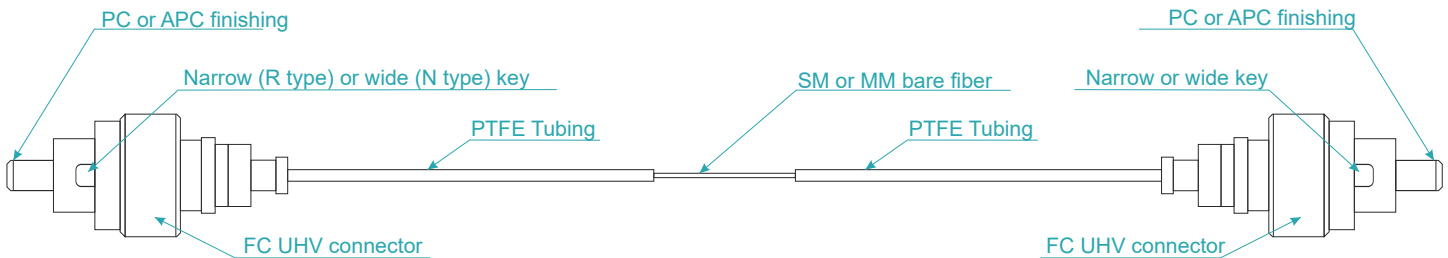
- Excellent optical parameters
- UHV compatible patchcords/adapters
- Precise optical length on request
- UHV FO feedthrough on request
- In SM and MM version

SQS VláknoVá optika a.s. is producer of FO patchcords/jumpers suitable for UHV environment and can be used in Vacuum up to  $10^{-12}$  mbar Process of assembling UHV patchcords needs UHV compatible process of gluing as well as UHV connectors and bare fiber protected by loose tube. All mentioned patchcords can be mated in UHV FC adapters which are also part of our offer as well as UHV compatible fiber optic feedthroughs with pigtail or adapter interface.

### FO Patchcords - Parameters

|                                 | SM                           | MM                           |
|---------------------------------|------------------------------|------------------------------|
| Wavelengths                     | 1310 / 1550 nm               | 850 / 1310 nm                |
| Insertion loss IL (max/typ):    | 0,3 / 0,22 dB                | 0,3 / 0,2 dB                 |
| Return loss (UPC) IL (min/typ): | > 55 / > 50 dB               | > 25 dB / > 40 dB            |
| Return loss (APC) IL (min/typ): | > 68 / > 60 dB               | NA                           |
| Repeatability - 500 matings:    | +/- 0,1 dB                   | +/- 0,1 dB                   |
| Core/Cladding/Coating           | 9/125/155 (G.652D)           | 50/125/155 (OM2)             |
| Connector                       | FC/PC or APC (N or R type)   | FC/PC (N or R type)          |
| Connector - Material            | Stainless steel (1,4305)     | Stainless steel (1,4305)     |
| Ferrule - Material              | Zirconia Ferrule             | Zirconia Ferrule             |
| Tubing 900um                    | Perforated PTFE (on request) | Perforated PTFE (on request) |
| Operating temperature           | -40 +85 °C                   | -40 +85 °C                   |

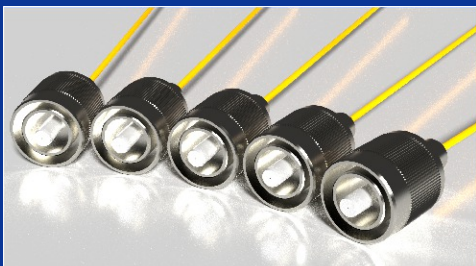
### UHV patchcord with loose tube protection behind connectors



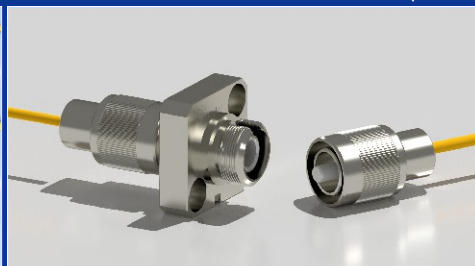
### The Adapter Design

|                             |  |                     |                 |                   |
|-----------------------------|--|---------------------|-----------------|-------------------|
| Adapter Interface for conn. | FC/PC or FC/APC  | narrow - narrow key | wide - wide key | narrow - wide key |
| Key Hole                    | N type ( 2,15 - 2,20 mm ) or R type ( 2,05 - 2,10 mm ) |                     |                 |                   |
| Material - body             | Stainless steel ( 1,4301 )                             |                     |                 |                   |
| Material - sleeve           | Zirconia sleeve  |                     |                 |                   |
| Flange                      | Full flange (rectangle)                                |                     |                 |                   |
| Laser marking of flange     | On request   |                     |                 |                   |

FC/PC and APC UHV Connectors



FC/PC UHV Connectors with FC UHV Adapter



UHV FO feedthrough with 19 channels

