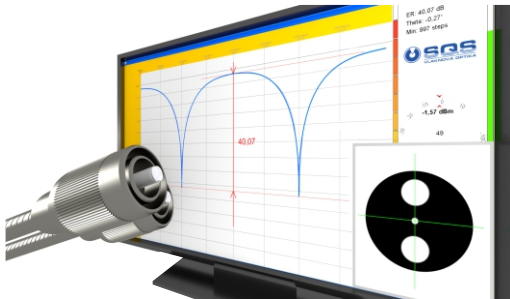




High ER Polarization Maintaining Patchcords in wavelength range from 405 to 1620 nm



- High value of PER (up to 35dB @ 1550nm)
- Active fiber alignment to connector's key
- Precise optical lengths of patchcords
- Expanding core diameter at the end of fiber
- PM patchcords with MPO or Fiber Array on request
- End face antireflection coating on request

SQS Vláknoová optika a.s. is producer of high quality polarization maintaining patchcords with high extinction ratio (PER) within wavelength range from 405 up to 1620nm. Higher values of ER is achieved because of sophisticated process of active PM fiber alignment inside of connector and unique method of bonding PM fiber to the ferrule with minimal additional stress induced by adhesive. Active alignment metode allow us to guarantee minimal angle misalignment between axis of connector's key and real axis of PM fiber. FO components meet IEC standards.

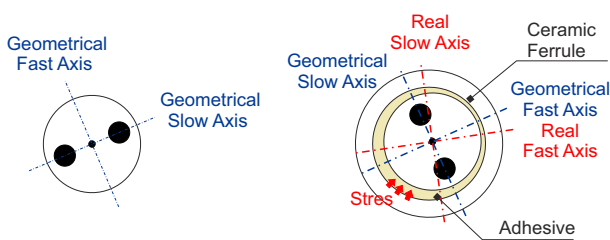
PM Connectors

| Design Type : | 405 | 460 | 630 | 780 | 980 | 1310 | 1550 |
|--|------------------------|-----------|-----------|-----------|------------|-------------|-------------|
| Wavelength Range [nm] : | 400 - 680 | 460 - 630 | 630 - 780 | 780 - 980 | 980 - 1300 | 1280 - 1340 | 1490 - 1620 |
| Insertion Loss IL (max) [dB] : | 1.8 | 1.5 | 1.2 | 0.8 | 0.6 | 0.5 | 0.4 |
| Insertion Loss IL (typ) [dB] : | 1.5 | 1.2 | 0.9 | 0.5 | 0.4 | 0.3 | 0.2 |
| Extinction Ratio (min) [dB] : | 20 | 20, 25 | 20, 25 | 20, 25 | 20, 25, 30 | 20, 25, 30 | 20, 25, 30 |
| Core/Cladding Size : | 3/125 | 3/125 | 4/125 | 5/125 | 6/125 | 9/125 | 10/125 |
| Return Loss RL (UPC ver.) [dB] : | > 50 (typical 55) | | | | | | |
| Return Loss RL (APC ver.) [dB] : | > 60 (typical 68) | | | | | | |
| Angle Misalignment Θ (Real axis) [°]: | ± 2.5 or ± 1.5 | | | | | | |
| Repeatability (500 matings) : | $\pm 0,2$ | | | | | | |
| Connector type : | FC, SC, MU, LC | | | | | | |
| Operating Temperature [°C] : | - 20 to 70 | | | | | | |
| Storage Temperature [°C] : | - 40 to 80 | | | | | | |

PM Connectors FKK/UPC

| | |
|--|--|
| Connector : | Modified FC Connector for Ultra high PER |
| IL (typ) [dB] : | 0,2 (@ 1310 nm) |
| PER [dB] : | > 35 |
| Angle Misalignment Θ (Real axis) [°]: | $\pm 1,5 / \pm 0,8$ |
| Applications : | High speed detectors, sensor technique |

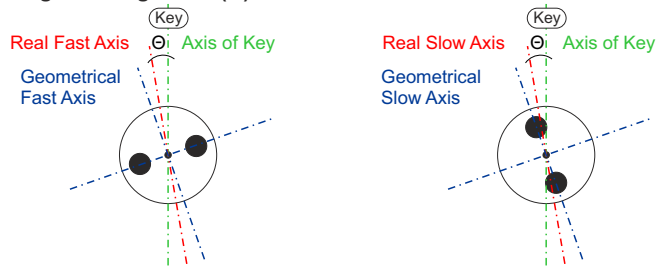
Real vs. Geometrical axis of PM fiber



Picture 1

Picture 2

Angle misalignment (Θ)



Picture 3

Picture 4

Geometric axis (fast and slow) are given by stressors inside fiber where direction of stressors is identical with slow axis (picture 1). The real axis appears if we apply adhesive inappropriately and start to stress fiber core additionally (picture 2).

Angle misalignment Θ inform us how precisely is connector assembled on PM fiber. It means what is maximum angle between real axis of glued fiber and axis of connector's key. Angle misalignment affects total PER during mating two PM connectors.

SQS FKK PM Adapter



FKK Adapter with Armored PM FC Patchcord



FC with Buffered Fiber or Loose Tube

