# Reflection Probes with Multiple Legs

For some measurements, a reflection probe is needed that can be coupled to two spectrometers and a light source. A good example is a reflection measurement in the UV/VIS and NIR range. For these situations, Avantes offers our reflection probes with multiple legs.

The light from a light source is coupled into a fiber bundle, consisting out of 17 illumination fibers which transport the light to the end of the probe. The reflected light is uniformly reflected into the two read fibers, each of which is connected to a spectrometer.

For measurements under a 90° angle, the FCR-90-Option has been developed. It is an adapter with a mirror mounted at 45° and can be easily mounted to the tip of these reflection probes.

To accurately focus a small measurement spot from a higher distance, the FCR-COL adjustable US/VIS/NIR collimating/focusing lens is available and can be mounted to the tip of these probes.

## Technical Data

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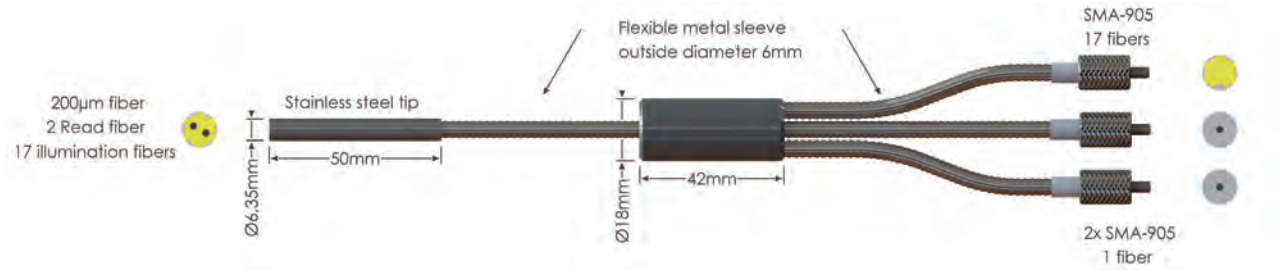
| **Fibers** | 19 fibers 200 µm core, 17 light-fibers, 2 read fibers in 2 separate legs, N.A.= 0.22. Standard 2 m length, splitting point in the middle. |
| **Wavelength range** | 200-2500 nm (UV/VIS/NIR) |
| **Connectors** | SMA-905 connectors (3x) |
| **Probe end** | Stainless steel 316 cylinder, 50 mm long x 6.35 mm diameter. Optionally –PK for PEEK or –HY for Hastelloy® C276 (on request) |
| **Jacketing** | The optical fibers are protected by a silicon inner tube and a flexible stainless steel (BX, O.D. 6.0 mm) or chrome plated brass (ME, 5.0 mm) outer jacket. The jacketing also gives stress relieve. |
| **Temperature** | -30ºC to 100ºC. (-HT version 200ºC) |
| **Pressure** | Probe head 50 bar @ 25ºC |
| **Bending** | Minimum bend radius: Short term (few seconds) 20 mm, long term: 120 mm |




## Ordering Information

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| **FCR-19UVIR200-2-BX/ME*** | • Reflection probe UV/VIS/NIR, 17 x 200 µm UV/VIS/NIR illumination fibers, 2 read UV/VIS/NIR fibers in separate legs, 2 m length, 3 SMA term. |
| **FCR-90-Option** | • 90º Reflection add-on reflector for use with all ¼" reflection probes |
| **FCR-COL** | • Adjustable UV/VIS/NIR Collimating/focusing lens FCR probes |

* please specify jacket material

## Options

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| **-HT** | • High Temperature version (up to 200ºC) |