

# Reflection Probes (Standard)



To obtain spectral information of the diffuse, or specular materials, reflection probes are used. The light from a light source is sent through six illumination fibers to the sample and the reflection is measured by a 7<sup>th</sup> fiber in the center of the reflection probe tip. The 7<sup>th</sup> fiber is coupled to a spectrometer configured to the appropriate wavelength range of interest. More illumination fibers can be added to get more energy from the light source and therefore increase the reflection signal level.

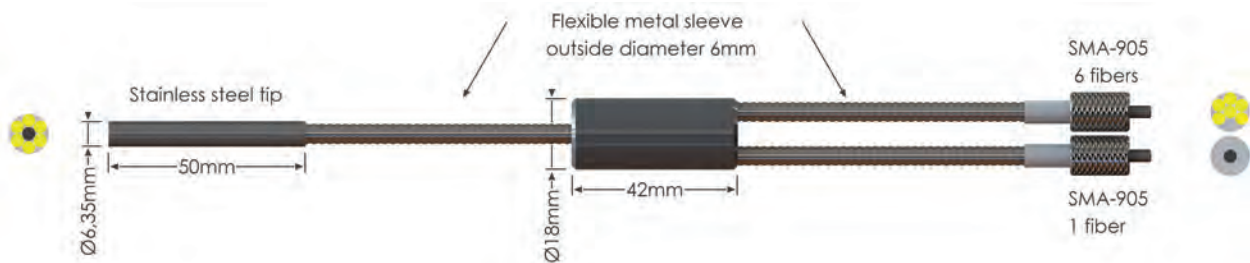
For measurements under an angle of 90°,

the FCR-90-Option was developed. It's a special adapter with a mirror positioned at 45° and can be easily mounted on the tip of Avantes standard reflection probes.

The FCR-COL is an adjustable UV/VIS/ NIR collimating and focusing lens which enables focusing the measurement spot at an extended distance.

## Technical Data

<b>Fibers</b>	7 fibers 200 mm or 400 mm core, 6 light-fibers, 1 read fiber, N.A.= 0.22. Standard 2 m length, splitting point in the middle.
<b>Wavelength range</b>	200-2500 nm (UV/VIS/NIR)
<b>Connectors</b>	SMA-905 connectors (2x)
<b>Probe end</b>	Stainless steel 316 cylinder, 50 mm long x 6.35 mm diameter. Optionally -PK for PEEK or -HY for Hastelloy® C276 (on request)
<b>Jacketing</b>	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, O.D. 5.0 mm) outer jacket. The jacketing also gives stress relieve.
<b>Temperature</b>	-30°C to 100°C. (-HT version 200 °C)
<b>Pressure</b>	Probe head 50 bar @ 25 °C
<b>Bending</b>	Minimum bend radius: Short term (few seconds) 20-40 mm, long term: 120 -240 mm



## Ordering Information

<b>FCR-7UVIR200-2-BX/ME*</b>	• Reflection probe, 7 x 200 μm broadband fibers, 2 m length, SMA term.
<b>FCR-7UVIR400-2-BX/ME*</b>	• Reflection probe, 7 x 400 μm broadband fibers, 2 m length, SMA term.
<b>FCR-90-Option</b>	• 90° Reflection add-on reflector for use with all 1/4" reflection probes
<b>FCR-COL</b>	• Adjustable UV/VIS/NIR Collimating/focusing lens for FCR probes

\* please specify jacket material

## Options

<b>-HT</b>	• High Temperature version (up to 200°C)
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