

Reflection Probes for Powders and Thick Fluids



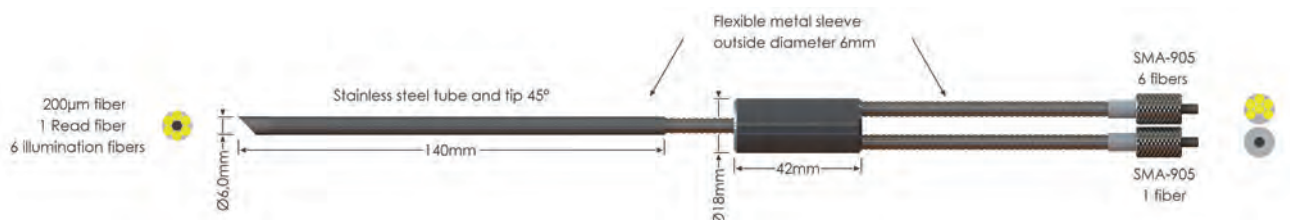
For effective measurement of reflection in powders and thick fluids, Avantes offers this specially designed series of reflection probes. The probes allow the user to simply dip the probe into the powder or thick fluids to do the measurements.

The illumination leg of the probe is connected to a light source and carries light

to the sample via a bundle of six fibers. At the probe tip, a 45 degree fused silica window illuminates the sample and collects the indirect reflections which are carried by a single fiber to the spectrometer. The 45 degree angle of the probe prevents the measurements of direct back reflection from the window, thus improving the dynamic range of your measurement.

Technical Data

Fibers	7 fibers 200 μ m core, 6 light-fibers, 1 read fiber, N.A. = 0.22. Standard 2 meter length
Wavelength range	200-2500 nm (UV/VIS/NIR)
Connectors	SMA-905 connectors (2x)
Probe end	Stainless steel 316 cylinder, 140 mm long x 6.0 mm diameter. The probe end contains a 5 mm diam. x 1 mm thick fused silica window. Waterproof. 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, O.D. 5.0 mm) outer jacket. The jacketing also gives stress relieve.
Temperature	-30°C to 100°C. (-HT version 200°C)
Pressure	Probe head 10 bar @ 25°C
Bending	Minimum bend radius: Short term (few seconds) 20 mm, long term: 120 mm



Ordering Information

FCR-7UVIR200-2-45-BX/ME* • Reflection probe for powders and turbid fluids

* please specify jacket material

Options

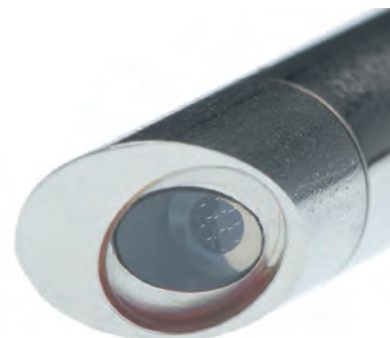
-HT • High Temperature version (up to 200°C)

Did you know
Avantes is specialized
in custom made
fiber-optic cables?

1/2" Industrial Reflection Probes for Powders and Thick Fluids

For industrial applications that need reflection measured in thick liquids or powders, this probe is the ideal choice. The stainless steel cylinder and probe end make it withstand extreme situations. The tip is exchangeable and waterproof. Optionally PEEK or Hastelloy® C276 can be used as tip material.

The light enters from the light source through six bundled fibers to the probe end, where it lights the material to be analyzed through a sapphire window angled at 45 degrees. This angle prevents any light to be reflected from the window. The light is selectively reflected through the seventh fiber in the probe. This fiber leads to the connected spectrometer.



Technical Data

Fibers	7 fibers 200 µm core, 6 light-fibers, 1 read fiber, N.A. = 0.22, standard 2 meter length
Wavelength Range	200-2500 nm (UV/VIS/NIR)
Connectors	SMA-905 connectors (2x)
Probe End	Stainless steel cylinder, 120 mm long x 12.7 mm (1/2") diameter. The probe end contains a ca. 10 mm diam. x 1 mm thick sapphire window. The probe tip is exchangeable and waterproof. Optionally -PK for PEEK or -HY for Hastelloy® C276
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	-40 °C to 100 °C. (-HT version 200°C)
Pressure	Probe head 10 bar @ 25°C
Bending	Minimum bend radius: Short term (few seconds) 20 mm, long term: 120 mm

Ordering Information

FCR-7UVIR200-2-45-IND	• 1/2" Reflection probe for powders and turbid fluids
FCR-TIP45	• 1/2" Replacement tip with sapphire window for UV/VIS/NIR

**PHOTO
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www.phototechnica.co.jp
フォトテクニカ株式会社

〒336-0017 埼玉県さいたま市南区南浦和 2-18-2
TEL: 048-871-0067 FAX: 048-871-0068
e-mail: voc@phototechnica.co.jp

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MEMBER OF THE NYNOMIC GROUP