

Reflection/Backscattering Probe

Our Reflection Probes are ideal for measuring diffuse or specular reflectance from solid surfaces or backscattering and fluorescence in solutions and powders. Probes are available in lab-grade (R-series) and premium-grade (QR-series) versions. Choose from nearly 40 standard options or customize a probe by selecting different lengths and other features.

Standard Reflection/Backscattering Probe			Fiber Bundle	Probe Ferrule		Jacketing				
Wavelength Range	Item Code	Core Diameter	6 illumination fibers around 1 read fiber	6.35 mm OD x 76.2 mm	3.18 mm OD x 74.3 mm	Silicone monocoil	Stainless-steel BX	Zip tube blue PVDF	LTBR	STBR
VIS-NIR Low OH content 400-2100 nm	QR200-7-VIS-NIR R200-7-VIS-NIR	200 µm	X X	X X		X		X	8 cm	4 cm
	QR400-7-VIS-NIR R400-7-VIS-NIR QR400-7-VIS-BX R400-7-VIS-BX	400 µm	X X X X	X X X X		X	X X	X X X	16 cm	8 cm
	QR600-7-NIR-VIS R600-7-NIR-VIS	600 µm	X X		X X	X		X	24 cm	12 cm
UV-VIS High OH Content 300-1100 nm	QR200-7-UV-VIS R200-7-UV-VIS	200 µm	X X	X X		X		X	8 cm	4 cm
	QR400-7-UV-VIS R400-7-UV-VIS QR400-7-VIS-BX R400-7-VIS-BX	400 µm	X X X X	X X X X		X	X X	X	16 cm	8 cm
	QR600-7-UV-VIS R600-7-UV-VIS	600 µm	X X		X X	X		X X	24 cm	12 cm
UV/SR-VIS High OH content 200-1100 nm	QR200-7-SR R200-7-SR	200 µm	X X	X X		X		X	8 cm	2 cm
	QR300-7-SR R300-7-SR	300 µm	X X	X X		X		X	12 cm	6 cm
	QR400-7-SR R400-7-SR QR400-7-SR-BX R400-7-SR-BX	400 µm	X X X X	X X X X		X	X X	X	16 cm	8 cm
	QR600-7-SR R600-7-SR	600 µm	X X		X			X X	24 cm	12 cm
UV-VIS XSR Solarization-resistant 180-900 nm	QR230-7-XSR	230 µm	X	X		X			4.6 cm	2.3 cm
	QR450-7-XSR	450 µm	X	X		X			9.0 cm	4.5 cm

Our most typical reflection probe design has a tightly packed 6-around-1 fiber bundle to ensure parallel orientation of the fibers. Reflection probes couple to our spectrometers and light sources to measure reflection and fluorescence from



solid surfaces or backscattering and fluorescence in liquids and powders. Sample applications include color and appearance measurements of solid surfaces such as filters and biological samples and backscattering measurements of milk, bulk powders and dyes.

Also, we offer a 200 µm reflection probe in the same 6-around-1 design, but with a 76.2 mm PEEK ferrule for applications (such as corrosive environments) where non-metallic probes are necessary.

Item Code: RP200-7-UV-VIS



Reflection/Backscattering Probes

Reflection/Backscattering Probes with Reference Leg (to monitor illumination)

Wavelength Range	Item Code	Core Diameter	Fiber Bundle	Probe Ferrule		Jacketing			
			6 illumination fibers around 1 read	6.35 mm OD	3.18 mm OD	Silicone monocoil	Zip tube blue PVDF	LTBR	STBR
VIS-NIR Low OH content 400-2100 nm	QR200-7-REF-VIS-NIR R200-7-REF-VIS-NIR	200 µm	X X	X X		X	X	8 cm	4 cm
UV-VIS High OH Content 300-1100 nm	QR200-7-REF-UV-VIS R200-7-REF-UV-VIS	200 µm	X X	X X		X	X	8 cm	4 cm

Reflection/Backscattering Probes for Expanded Wavelength Coverage

UV-VIS and VIS-NIR 300-1100 nm & 400-2100 nm	QR200-12-MIXED R200-12-MIXED	200 µm	6 UV-VIS & 6 VIS-NIR illumination fibers around 1 UV-VIS & 1 VIS-NIR fibers	X X		X	X	8 cm	4 cm
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Angled Probes for Solutions & Powders

VIS-NIR Low OH content 400-2100 nm	QR200-7-ANGLE-VIS R200-7-ANGLE-VIS	200 µm	X X	X X		X	X	8 cm	4 cm
	QR400-7-ANGLE-VIS R400-7-ANGLE-VIS	400 µm	X X	X X		X	X	16 cm	8 cm
UV-VIS High OH Content 300-1100 nm	QR200-7-ANGLE-UV R200-7-ANGLE-UV	200 µm	X X	X X		X	X	8 cm	4 cm
	QR400-7-ANGLE-UV R400-7-ANGLE-UV	400 µm	X X	X X		X	X	16 cm	8 cm

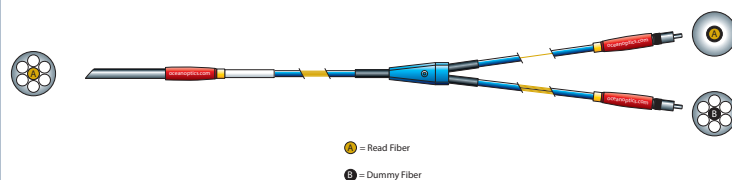


Reflection/Backscattering Probes for Expanded Wavelength Coverage

The QR200-12-MIXED has 14 fibers -- six UV-VIS and six VIS-NIR illumination fibers, plus one UV-VIS and one VIS-NIR read fiber (see bundle photo at left). It couples easily to a dual-channel spectrometer in which each channel is set for a different wavelength range.

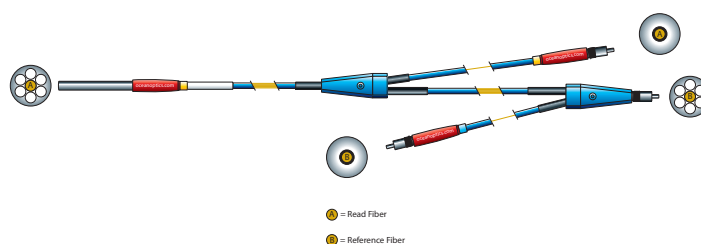
Item Code: R200-MIXED

Angled Reflection Probe



Our Angled Reflection Probes have a 6-around-1 fiber design with a 30° window to remove specular effects when the probe is immersed in liquids or powders.

Reflection Probe With Reference Leg



In this design, an additional fiber leg is added to the probe to monitor an illumination or reference source. This is useful where the changing output of the source needs continuous monitoring.