

### 3.2.7 ATR Probes

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661.812



661.820

Catalogue Number	661.812-UV	661.820-UV
Prism material	Sapphire	Sapphire
Barrel material	Titanium	Stainless steel 1.4435 (316 L) or 2.4602 (Hastelloy® C-22)
Probe head seal	Epoxy glue	Kalrez® Compound 4079
Outside Ø	12.5 mm*	12.7 mm*
Total length	205 mm	266 mm
Max. immersion depth	165 mm	200 mm
Typ. transmission	UV/Vis approx. 25% in air 300 nm	UV/Vis approx. 25% in air 300 nm
Max. pressure	6 bar	15 bar
Max. temperature	150 °C	150 °C
Fibre-optic cables	Built-in, not exchangeable <b>UV/Vis-2 m**</b> 240 nm – 1100 nm (41,667 cm <sup>-1</sup> – 9,100 cm <sup>-1</sup> )	Built-in, not exchangeable <b>UV/Vis-2 m**</b> 240 nm – 1100 nm (41,667 cm <sup>-1</sup> – 9,100 cm <sup>-1</sup> )

**UV/Vis – low solarisation on request**

\*6.35 mm (1/4") outside Ø on request.

\*\*Fibre-optic cables available separately in various lengths.

**ATR means** "Attenuated Total Reflection". Light passing from a material with high refractive index (ATR crystal) to a material with lower refractive index (solution) is normally totally reflected. However, in practise, the light partially enters the solution and can be absorbed. The reflected light is therefore attenuated, causing a measurable reduction in the output signal dependent upon the absorbance of the solution.

ATR probes are suitable for situations involving the direct measurement of strongly absorbing solutions, where standard transmission probes cannot be used. The ATR probe 661.812 uses a 3-bounce sapphire ATR crystal, which is directly immersed into the solution to be measured.

