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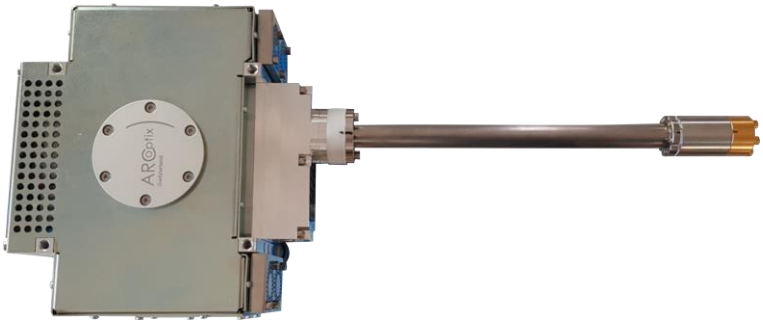
ARCOPTIX LIQUID CELL MODULE



Assembly consisting of the FTIR-OEM010-120-4TE, OEM-PART-CMP and OEM-PART-LCX (left)



Close up view of the OEM-PART-LCX (right)

The ARCoptix liquid cell module (OEM-PART-LCX) has been originally developed for application in high performance liquid chromatography (HPLC). However, the application range is much broader - it can be used as a standalone transmission cell for liquid or even high pressure gases. The OEM-PART-LCX is a high pressure, chemically and heat resistant cell for liquids spectroscopy. The cell has been tested to function up to 210 Bars and 180°C. The cell's body is made of L316 stainless steel (Hastelloy available on request). The optical path length can be set in the range 0.5mm-3.0mm. The wetted surfaces are: gold, sapphire (as a standard), stainless steel (or Hastelloy) and carbon. The choice of these materials makes it particularly suitable for spectroscopy in the transmission windows of organic solvents. The cell can be installed on a tubular extender, and thus it can be inserted inside a thermostat (for example directly next to an HPLC cell) avoiding the re-mixing of the separated mixtures. The spectral range is determined by the used detector of the FTIR and by the window of the cell. The standard model is operating in the wavelength range of 2 to 6 microns (limited by the sapphire window). For other applications it can be extended to 2-12 microns.

Specifications

Product code	OEM-PART-LCX
Path length	0.5 to 3 mm (chosen and fixed)
Internal volume	< 15 µL
Total transmission	<90% (with air inside)
Internal temperature [°C]	20-180
Mirrors	gold coating
Window material	Sapphire
Transmission range [µm]	2-6 (Sapphire)
Liquid inlet/outlet	Waters compatible fitting with 1/16" capillaries
Power requirement	35 W @ 110-230 VAC or 12 VDC
Dimensions [mm]	73x25Ø (without extender)

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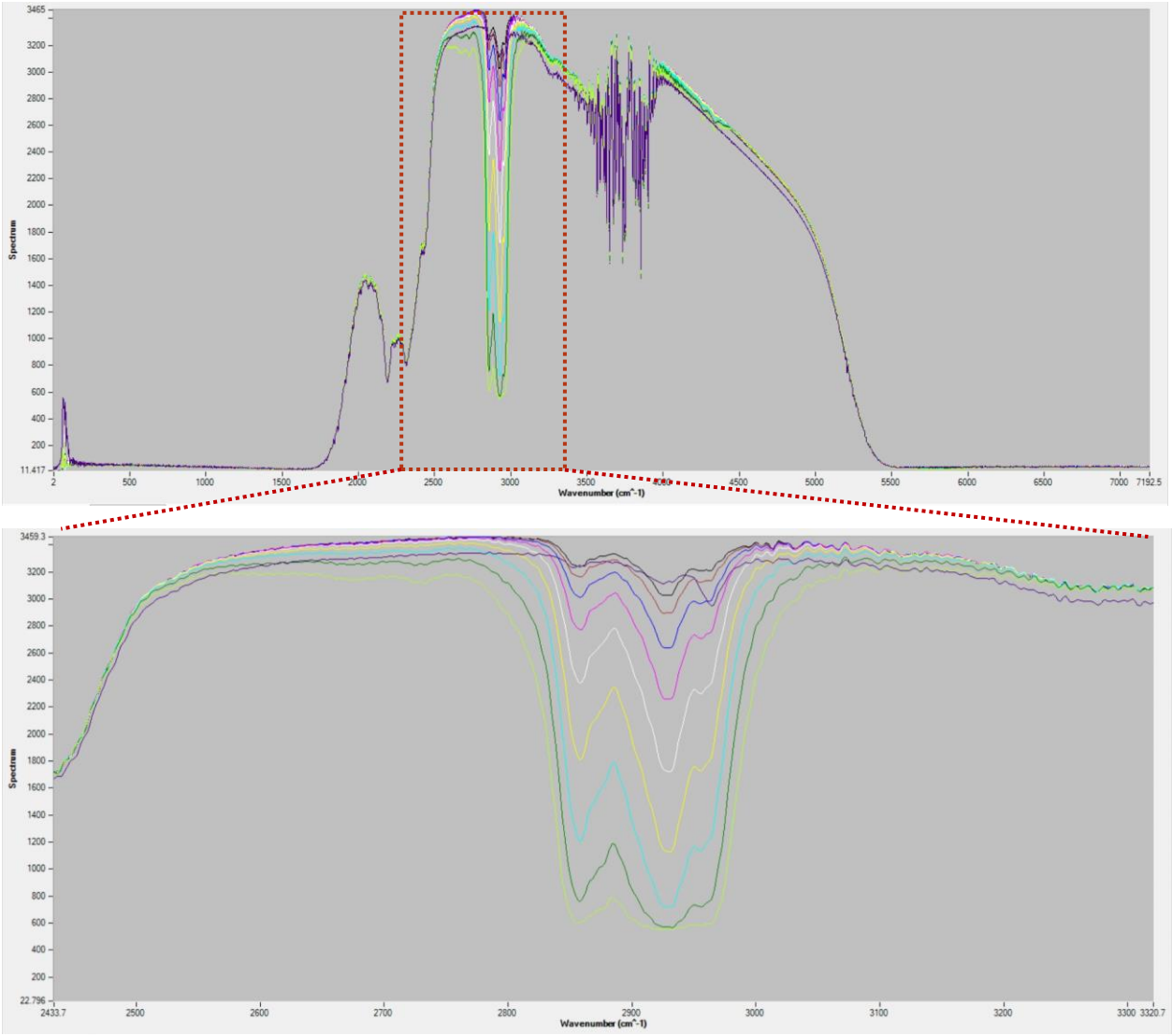
Measurement example

The pictures below shows a dilution sequence of mineral oil (10’000 ppm to 78 ppm) in a 2,2,3,3 Tetrachlorohexafluorobutane solvent with an optical path of 1.5 mm.



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