

TreLytics Flow Cell

Product Description

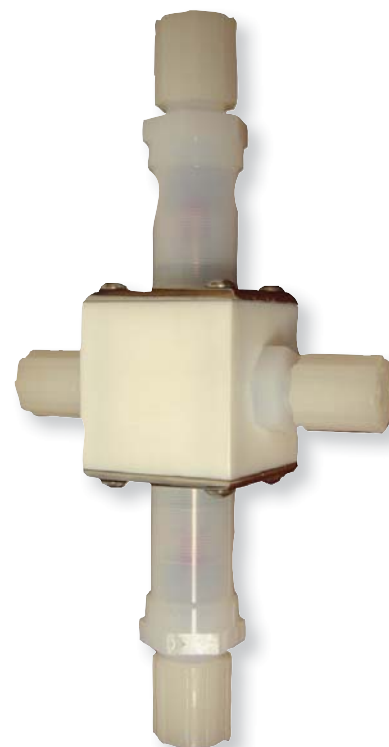
THE TRELYTICS FLOW CELL was specifically designed to be used in highly corrosive or metal intolerant sample streams. Only smooth PTFE, quartz or sapphire surfaces contact the process stream making it inert to process. Dual containment is provided for the fiber optic cables to prevent corrosion and/or damage. The optical support is constructed out of chemically resistant stainless steel which provides a rigid, stable optical path ensuring high repeatability. We provide an option for a 4 mm temperature probe fitting that goes directly into the FluentChem allowing for the most accurate readings.

Features

Compatibility - The FluentChem can be used in virtually any analytical instrument requiring a fluid sample path. It is fully compatible with any fiber optic system configured with SMA 905 connectors with a numerical aperture of 0.22 NA. However, operating with fibers having a core diameter of 400 um to 600 um is ideal for optimizing performance. To obtain the best performance, the flow cell should be matched with the optical capabilities of both the detector and the fiber optic cable before using.

Inline, In Situ Operation - A key feature of the FluentChem flow cell is the ability to mount it in an inline application. This translates into immediate readings of the fluid at the point of use, not in the recirculation loop or in a bypass loop. With the ability to accommodate up to 3/4" flare or NPT fittings, the insertion into the inline process stream is very straightforward. To achieve the best in analytical results, we recommend you use the TreLytics concentration monitors which incorporate the FluentChem flow cell.

Repeatability - To maintain the spectral path length, stainless steel rods are inserted into the FluentChem body so the precision optics and windows are held securely in place. The rods prevent changes in the path length during periods of thermal expansion and contraction of the PTFE ensuring the accuracy of the stream measurement. The stainless steel rods also prevent changes due to cold flow properties associated with PTFE.



Process Resistance - The FluentChem flow cell maintains its accuracy even when acidic, basic and streams containing peroxides or halogenated compounds are present. The FluentChem design, where no metal parts come in contact with the liquid stream, is perfect for semiconductor fab etching and cleaning, where even parts per billion of metal contamination can create process problems. The FluentChem flow cell provides an inert to system solution.

Operating Range - The TreLytics Flow Cell runs at moderate pressures and temperatures, The upper limits are:

- Temperatures up to 150 degrees C
- Pressure up to 100 psi
- Standard path lengths are 1, 2, 5, 10 and 20 mm. Other path lengths are configurable.

Let There be Light – High optical performance exists with the TreLytics FluentChem flow cell, with typical light transmission exceeding 50%. This results in:

- Lower measurement noise
- The ability to detect at lower limits
- More available signal

Specifications

Wetted Materials	PTFE, Quartz or Sapphire
Windows	Sapphire, Quartz
Non-wetter Metallic Parts	316 SS
Path Lengths	1, 2, 5, 10 and 20 mm, others configurable as specified
Maximum Pressure	100 psi
Spectral Range	900 – 1700 nm with other ranges available
Light Transmission	>50%
Fiber Optic Cables	configurable with all standard fiber optic cables
Termination	SMA 905
Pipe Connection	as large as 3/4" flare or NPT (includes 1/4", 3/8", 1/2" and 3/4")

Mounting Specifications

Back Mounted 2 ¼ -20 threaded inserts