



Process Flow Cells

About Custom Sensors & Technology

Custom Sensors & Technology, Inc. is a full-service designer and manufacturer of photometric transmitters, fiber optic probes and flow cells, oxygen transmitters, sampling handling systems and other products for process applications. In addition, Custom Sensors & Technology offers applications assistance, product validation and other services. Their process flow cells can easily be connected to our spectrometers for spectral analysis of samples in online process applications.

Cross Process Flow Cells

The Adjustable-pathlength Cross Process Flow Cells are used in a variety of demanding online flow analysis applications in industrial gas or liquid stream environments. The 1/2" and 3/8" cells are available in various materials and have adjustable pathlengths.

The 1/2" version has a pathlength that can easily be adjusted from 0.1-2.5 cm. This version comes with two Optical Interface Couplers that collimate light and easily connect optical fiber assemblies to the flow cell, spectrometer and light source. Also available is a version that has a viewport; call for details.

The 3/8" version has a pathlength that can be adjusted from 0.1-1.5 cm. It does not include Optical Interface Couplers but they can be purchased separately. The PRO-CFC-3/8's titanium body (standard) allows the cell to be used in highly aggressive process streams such as those often encountered in pulp and paper applications.



Micro Process Flow Cells

Process-ready Micro Flow Cells are useful for online measurements in gas or liquid streams in demanding industrial environments. The cells provide extremely small pathlengths (to 0.02 mm) without restricting sample flow. Micro Flow Cells are available in 1/8" and 3/8" sizes and have adjustable pathlengths.

The PRO-MFC is a 3/8" Micro Flow Cell. The PRO-MFC-OIC is a 1/8" Micro Flow Cell that can be used in a variety of online flow analysis applications. The PRO-MFC-OIC-VP includes a quartz port that allows the user to view the setting and the sample as it flows through the cells. The PRO-MFC-S Sanitary Micro Flow Cell is designed for online flow analysis applications to 200 AU/CM and has high absorption characteristics from 200-2000 nm. Constructed of 316 stainless steel, the cell is available with outer diameters from 0.5" to 2.0".



The PRO-MFC-OIC-VP includes a viewport for viewing the sample as it flows through the cell. See a close-up of the viewport below.

Specifications

	PRO-CFC-1/2	PRO-CFC-3/8	PRO-MFC	PRO-MFC-OIC	PRO-MFC-OIC-VP	PRO-MFC-S
Pathlength:	Adjustable 0.1-2.5 cm	Adjustable 0.1-2.5 cm	Adjustable 0.02-2.0 mm	Adjustable 0.02-2.0 mm	Adjustable 0.02-2.0 mm	0.02-2.0 mm
Body & barrel:	316 stainless steel	316 stainless steel	Titanium (316 stainless steel, Hastelloy C and Monel available)	316 stainless steel	316 stainless steel	316 stainless steel; wetted body
Sample inlet/outlet:	1/2" compression fittings	3/8" compression fittings	3/8" compression fittings	1/8" compression fittings	1/8" compression fittings	1/8" compression fittings
Window materials:	Quartz (Sapphire available)	Quartz (Sapphire available)	Quartz (Sapphire available)	Quartz	Quartz	Quartz
Seals:	Viton (Chemraz and Kalrez available)	Viton (Chemraz and Kalrez available)	Viton (Chemraz, Kalrez, TFE, Buna-N available)	Viton (Chemraz, Kalrez, TFE, Buna-N available)	Viton (Chemraz, Kalrez, TFE, Buna-N available)	Sample end: B-type VCO L-Ring Face Seal Fitting; Process end: Tri-Clamp
Temperature limit:	204 °C (400 °F)	204 °C (400 °F)	121 °C (250 °F)	121 °C (250 °F)	121 °C (250 °F)	149-232 °C (300-450 °F) depending on gasket
Pressure limit:	2000 psig	2000 psig	1000 psig	250 psig	250 psig	2500 psig (137 Bar)
Fiber connections:	SMA 905	SMA 905	SMA 905	SMA 905	SMA 905	SMA 905
Wavelength range:	UV-NIR	UV-NIR	UV-NIR	UV-NIR	UV-NIR	UV-NIR

