

## LT-D SERIES

### DIAMOND LIQUID TRANSMISSION FLOW CELLS

Models LT-D, LT-D-T, LT-D-P, LT-D-P-T

Durasens™ LT-D Series Diamond Liquid Transmission Cells are reliable, field tested cells suitable for analyzing liquid streams using transmission spectroscopy. The use of diamond windows and a sturdy 316 stainless steel body construction make these cells equally at home in the laboratory, pilot plant or manufacturing plant. Diamond windows provide spectral range from UV to Far IR, mechanical strength, chemical inertness and superior abrasion resistance. The pathlength is easily changed by selecting a spacer in the range from 0.015mm to 1mm thick. The demountable design makes it easy to disassemble the cell for cleaning, or for the exchange of windows and pathlength spacers. The LT-D Series cells have 7mm round clear aperture and are available in a temperature controlled version (Model LT-D-T). The temperature controlled version is a thermally insulated cell with an embedded K-type thermocouple, low voltage cartridge heaters, and a flow through cooling conduit. The unsurpassed thermal conductivity of diamond provides superior control of sample temperature. A high pressure version (Models LT-D-P, LT-D-P-T) for operation up to 1000 psi is also available.



Model LT-D

#### PRODUCT HIGHLIGHTS

- Strong, chemically inert diamond windows
- Demountable windows and spacers
- Wide choice of pathlength spacers
- Pathlength easily changed by changing the spacer
- 7mm diameter clear aperture
- Temperature controlled and high pressure models available
- Maximum temperature up to 260°C
- Compatible Automatic Temperature Controller available
- Standard sample slide plate mounting

#### SPECIFICATIONS

<b>Body Material</b>	316 Stainless Steel standard, other materials available
<b>Fittings</b>	1/16" Swagelok fittings standard, other fittings available
<b>Window Material</b>	Diamond
<b>Optical Pathlength</b>	0.015 mm - 1mm, depending on pathlength spacer
<b>Wavelength Range</b>	From UV to Far IR
<b>Max Operating Temperature</b>	200°C with Viton O-rings, 260°C with Kalrez O-rings
<b>Max Operating Pressure</b>	Up to 1000 psi

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 PROCESS ANALYTICAL SOLUTIONS

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#### ORDERING INFORMATION

MODEL	DESCRIPTION
LT-D	Diamond Liquid Transmission Cell, 7mm aperture *
LT-D-T	Temperature Controlled Diamond Liquid Transmission Cell, 7mm aperture *
LT-D-P	High Pressure Diamond Liquid Transmission Cell, 7mm aperture *
LT-D-P-T	Temperature Controlled High Pressure Diamond Liquid Transmission Cell, 7mm aperture *
ATC-024-1	Automatic Temperature Controller (110V Input, 24V Output)
ATC-024-2	Automatic Temperature Controller (220V/240V Input, 24V Output)

\* Includes two diamond windows, 316 stainless steel cell body with Swagelok™ fittings, set of PTFE spacers (specify pathlength below ), and Viton o-rings.

#### PATHLENGTH SPACERS

##### PTFE SPACERS SETS OF 10

15µm thick	TSP -015-10
25µm thick	TSP -025-10
50µm thick	TSP -050-10
100µm thick	TSP -100-10
200µm thick	TSP -200-10
500µm thick	TSP -500-10
1000µm thick	TSP -000-10

#### O-RINGS

##### MATERIAL SET OF 2

Viton	ORV - D10
Kalrez	ORK - D10