

LT-R SERIES

RAPID FLOW LIQUID TRANSMISSION CELLS

Models LT-R13, LT-R13-F, LT-R13-T, LT-R13-F-T

Durasens™ LT-R Rapid Flow Liquid Transmission Cells are designed to monitor liquid streams in process environments using transmission spectroscopy. The patent pending design of the cells allows for the high unimpeded flow of sample thus ensuring that the sample analyzed in the cell is the timely representation of the sample in the process line or reaction vessel. The rapid flow design also ensures that the cell does not get clogged by particulates in the process stream.

The spectroscopic sensitivity of the cells can be easily tailored to a particular application by selecting the pathlength spacer that optimizes the spectroscopic measurement. The cells can be used with FTIR spectrometers or with UV-VIS-NIR spectrometers depending on the choice of optical windows. LT-R Series cells can be mounted directly in the sample compartment (Model LT-R13) or coupled to spectrometers with fiber optics (Model LT-R13-F). Both models are available in a temperature controlled version.



Model LT-R13

PRODUCT HIGHLIGHTS

- Rapid unimpeded flow of sample
- Demountable windows and spacers
- Wide choice of window materials and pathlength spacers
- Pathlength easily changed by changing the spacer
- 7mm diameter clear aperture
- Temperature controlled models available
- Maximum temperature up to 260°C
- Compatible Automatic Temperature Controller available
- Choice of slide plate mounting or SMA interface for fiber optics

SPECIFICATIONS

Body Material	316 Stainless Steel standard, other materials available
Fittings	1/4" Swagelok fittings standard, other fittings available
Window Material	Al ₂ O ₃ , CaF ₂ , SiO ₂ , ZnS, ZnSe, ZrO ₂ , and others
Optical Pathlength	0.25mm - 8mm, depending on pathlength spacer
Wavelength Range	From UV to Far IR, depending on window material
Max Operating Temperature	200°C with Viton O-rings, 260°C with Kalrez O-rings
Max Operating Pressure	Up to 1000 psi

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 PROCESS ANALYTICAL SOLUTIONS

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ORDERING INFORMATION

MODEL	DESCRIPTION
LT-R13	Rapid Flow Liquid Transmission Cell, Slide Plate Mounting, 7mm aperture *
LT-R13-T	Temperature Controlled Rapid Flow Liquid Transmission Cell, Slide Plate Mounting, 7mm aperture *
LT-R13-F	Rapid Flow Liquid Transmission Cell, SMA Interfaced, 7mm aperture *
LT-R13-F-T	Temperature Controlled Rapid Flow Liquid Transmission Cell, SMA Interfaced, 7mm aperture *
ATC-024-1	Automatic Temperature Controller (110V Input, 24V Output)
ATC-024-2	Automatic Temperature Controller (220V/240V Input, 24V Output)

* Includes 316 stainless steel cell body with Swagelok™ fittings, set of 2 stainless steel spacers (specify pathlength below), Viton o-rings and window mounting hardware.

Windows are not included. Order windows separately (two per cell required).

WINDOWS

MATERIAL	7MM APERTURE
Al ₂ O ₃	WAO-13-6-B
CaF ₂	WCF-13-6-B
SiO ₂	WSO-13-6-B
ZnS	WZS-13-6-B
ZnSe	WZSE-13-6-B
ZrO ₂	WZO-13-6-B

PATHLENGTH SPACERS

PATHLENGTH (MM)	STAINLESS STEEL SPACERS (SET OF 2)
0.25	SSP -025-13B
0.50	SSP -050-13B
1.00	SSP -100-13B
2.00	SSP -200-13B
3.00	SSP -300-13B
5.00	SSP -500-13B
8.00	SSP -800-13B

O-RINGS

MATERIAL	OUTER O-RINGS	INNER O-RINGS
Viton	ORV -016	ORV -11-1
Kalrez	ORK -016	ORK -11-1