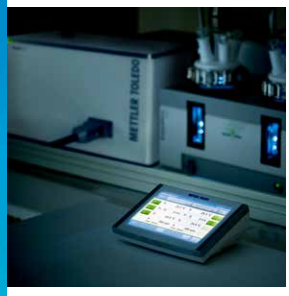
In Situ Spectroscopy

Confidence at Low Concentration

with In Situ FTIR Analysis

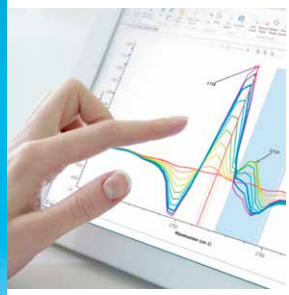
Unparalleled Sensitivity and Performance

ReactIR 701L offers best-in-class sensitivity for monitoring challenging and specialty chemistry, directly in process, down to low ppm concentration levels with stable performance guaranteed for long reactions.



Workflow Enabling Design

ReactIR 701L was designed to be easily integrated in any laboratory environment. Optimized for reaction monitoring, the high-sensitivity 48hr detector gives users the flexibility to utilize longer probe lengths and to monitor extended reactions for convenient workflow implementation.



One Click Analytics™

Designed specifically for time-resolved reaction analysis iC IR combines a peak picking algorithm with functional group intelligence to drastically reduce analysis time. Users combine knowledge of their chemistry with an automated data analysis workflow to ensure correct interpretation for every experiment.

Analysis for Biological and Chemical Processes

Research-grade in situ spectroscopy in one easy-to-use package. ReactIR 701L probe-based MidIR sampling technology gives users real-time reaction analysis under any laboratory condition to elucidate vital reaction understanding for even the most challenging reactions.

ReactIR™ 701L

ReactIR enables scientists to study reaction progression over time, providing highly specific information about initiation, endpoint, conversion, kinetics, impurity development, mechanism, and pathway. A real-time, in situ mid-infrared system, ReactIR directly follows the concentration of key reaction species as they change during the course of the reaction. This provides in-depth understanding for scientists as they improve the research and development of chemical compounds, synthetic routes, and chemical processes.

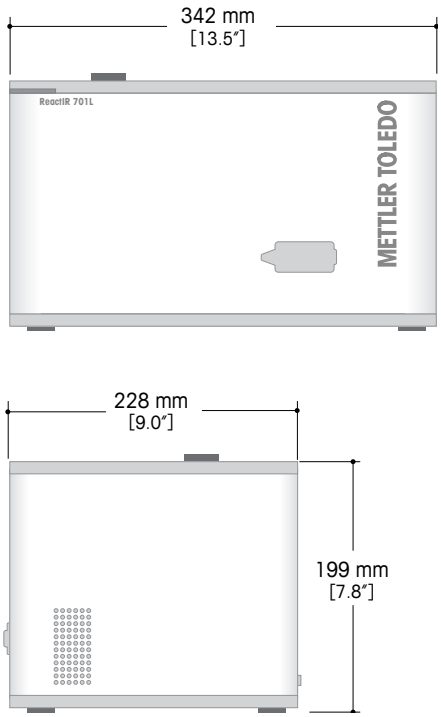
METTLER TOLEDO

High Performance, Simplified
with Real-Time In Situ Analysis

Technical Data

Optical Range	4000 cm^{-1} to 650 cm^{-1}
Probe Wetted Materials	C-22, Gold, PTFE, Diamond, Silicon
Probe Sensor	DiComp™ or SiComp™
Probe Tip Temp Range	-80 °C to 300 °C* (see below)
Probe Pressure Rating	Vacuum to 200 barg* (see below)
Field Unit Weight	7.8 kg [17.2 lb]
Field Unit Temp Range	19 °C to 25 °C (ambient operation)
Power	100-240 VAC, 50/60Hz, 1.5A (max)
Purge	No purge required
Detector	LN2
Laser Classification	Class 1 Laser Product; Compliant with 21 CFR 1040.10 and 1040.11

Base Unit Dimensions



Sampling Technology

A wide range of sampling technologies are available including FiberConduit probes, gas cells and specialized probes for high pressure and temperature reactors.

		Fiber Length			Sensor		Probe Length				
		1.0 m	1.5 m	2.0 m	DiComp	SiComp	203 mm	305 mm	457 mm	Temperature Range	Pressure Limit
	DST Series 9.5 mm AgX FiberConduit (also available in 3m and 4m DiComp configurations)		•	•	•	•		•	•	-80 °C to 180 °C	69 barg
	DST Series 6.3 mm AgX FiberCoduit		•	•	•	•	•	•		-80 °C to 180 °C	69 barg
	25.4 mm Sentinel™ (FiberConduit)	•	•	•			28.6 mm			-80 °C to 300 °C	200 barg

*Contact METTLER TOLEDO for information about special needs including custom sizing, extreme-temperature, high-pressure or hazardous area applications.

www.mt.com/ReactIR

For more information

METTLER TOLEDO Group
Automated Reactors and *In Situ* Analysis
Local contact: www.mt.com/contacts