*In Situ* Spectroscopy

# Expand Process Understanding

## with *In Situ* Raman Spectroscopy


### Compact Performance

ReactRaman combines best in class performance with a flexible design. The spectrometer is small, light, and thermally stable delivering outstanding results wherever it's needed - on the bench, in the fume hood, or moved to the lab next door.

### Fast, Accurate Results

Optimized for *in situ* monitoring, ReactRaman delivers precise and sensitive spectra that can be easily converted to results with One Click Analytics™. With integrated correlation tables, users can accurately profile reactions, link them directly to chemistry, and obtain the reaction understanding they need.

### Integrated Platform

ReactRaman is part of an integrated family of products, which includes ReactIR™ and EasyMax®. Designed specifically for chemical and process development, these tools are combined across the powerful iC software platform to provide unparalleled process understanding.

### Shared Expertise

ReactRaman with iC Raman 7 was designed by spectroscopy experts to make it simple for scientists to acquire high-quality data and meaningful results. One global service and support team is committed to ensuring scientists can solve challenging chemistry problems using this reliable and high-performance instrument.


## ReactRaman™

ReactRaman is a probe-based, Raman spectroscopy instrument that can monitor crystallization processes, and reveal reaction mechanisms and kinetics in single or multiphase systems. A compact base unit with a high-performance spectrometer and sampling technology is coupled with the next generation iC Raman™ 7 software. This powerful combination means that accurate results can be obtained and converted quickly into the evidence scientists need to make informed decisions.

METTLER TOLEDO

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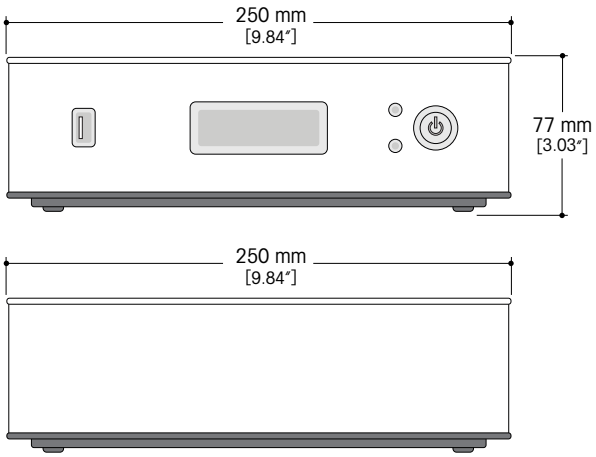
## Technical Data: Base Unit

| | |
|---|---|
| **Optical Range** | 100 to 3200 $cm^{-1}$ |
| **Excitation Wavelength** | 785 nm |
| **Excitation Power** | Max: 400 mW<br>Typical: <250mW |
| **Detector** | 2-stage TE Cooled CCD |
| **Fiber Connections** | FC/PC (both excitation and collection) |
| **Base Unit Temperature Range** | 5 °C to 35 °C |
| **Laser Classification** | Class IIIB laser. Compliant with 21 CFR 1040.10 and 1040.11 |
| **Power** | 100-240 VAC, 50/60Hz, 1.5A |
| **Probe Technology** | Fiber BallProbe® |






## Technical Data: Sampling Technology

Sampling technology is provided with the base unit and available in two configurations: fixed or interchangeable. An additional flowcell accessory is available for the interchangeable Fiber BallProbe.

| | Fixed | Interchangeable | |
|---|---|---|---|
| |  |  |  |
| | **1/2″ Fiber BallProbe** | **3/8″ Fiber BallProbe** | **Flow Cell Accessory** |
| **Probe Wetted Materials** | C-276, Sapphire, Gold | C-276, Sapphire, Gold | C-22, Sapphire, Kalrez® or Gold Seal |
| **Probe Wetted Length** | 260 mm [10.25 in] | 248 mm [9.75 in] | N/A |
| **Probe Diameter** | 12.7 mm [0.5 in] | 9.5 mm [0.375 in] | Tube Fitting: 0.125 in |
| **Probe Temperature Range** | -100 °C to 300 °C | -100 °C to 300 °C | Kalrez: -100 °C to 250 °C;<br>Gold: -100 °C to 300 °C |
| **Probe Pressure Rating** | 413 barg [6,000 psig] | 413 barg [6,000 psig] | Kalrez: 34 barg [500 psig];<br>Gold: 170 barg [2,500 psig] |
| **Probe Fiber Length** | 1.7 m [5.6 ft] | 1.7 m [5.6 ft] | N/A |

**www.mt.com/ReactRaman**

For more information

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