

Track Particles in Real Time Obtain Evidence for Optimization



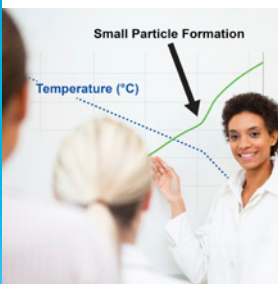
Measure Particle Size and Count

Particle size and count directly impact performance in multiphase processes including crystallization, emulsification and flocculation. By monitoring particle size and count in real time scientists can understand, optimize and scale-up processes confidently using evidence-based methods.



Understand without Sampling

Particles can change when sampled and prepared for offline analysis. By tracking changes to size and count, as particles naturally exist in process, scientists obtain process understanding safely and with no time delay – even at extremes of temperature and pressure.



Design Processes Confidently

By monitoring particles continuously, as experimental conditions are varied, it is possible to determine the influence of process parameters on particle size and count. This unique information can be used to design processes that will consistently deliver particles with optimized attributes.



Flexibility across Scales

ParticleTrack G400 combines a portable design with interchangeable probes to allow implementation at scales ranging from 5 mL to 5 L. The impact of reactor size and configuration can be investigated with a single instrument making scale-up studies more effective.



ParticleTrack™ G400

ParticleTrack G400 with FBRM® technology is a probe-based instrument that is inserted directly into laboratory reactors to track changing particle size and count in real time at full process concentrations. Particles, particle structures and droplets are monitored continuously, as experimental conditions vary, providing scientists with the evidence required to deliver consistent particles with the required attributes.

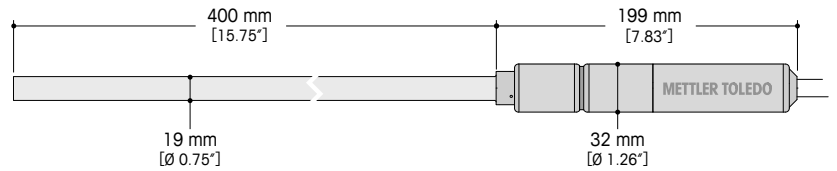
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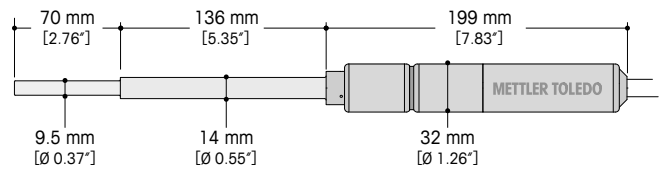
Technical Data

| | |
|--|---|
| Method of Measurement | Focused Beam Reflectance Measurement (FBRM) |
| Measurement Range | 0.5 μm to 2000 μm |
| Probe Wetted Materials | 14 mm: C22; Sapphire window (TM) 19 mm: C22; Sapphire window with Kalrez® 6375 O-rings (TM optional) |
| Probe Temp Range (purge required when operating below dew point) | 10 °C to 90 °C (standard); -10 °C to 90 °C (Kalrez O-rings and purge); -80 °C to 90 °C (TM window and purge) |
| Probe Pressure Range | 3 barg (standard); up to 100 barg (custom) |
| Probe Conduit Length | 3 m [9.8 ft] |
| Base Unit Temp Range | 5 to 35 °C |
| Base Unit Description | Laboratory Base Unit |
| Purge Requirements (operating below dew point) | Pressure: 1 barg [15 psig] Flow: 1.2 NL/min (0.042 SCFM) |
| Power | 100–240 VAC, 50/60 Hz, 1.2A |
| Certification | CE Approved, Class 1 Laser Device, Compliant with 21CFR1040.10 and 1040.11 and IEC 60825-1 |

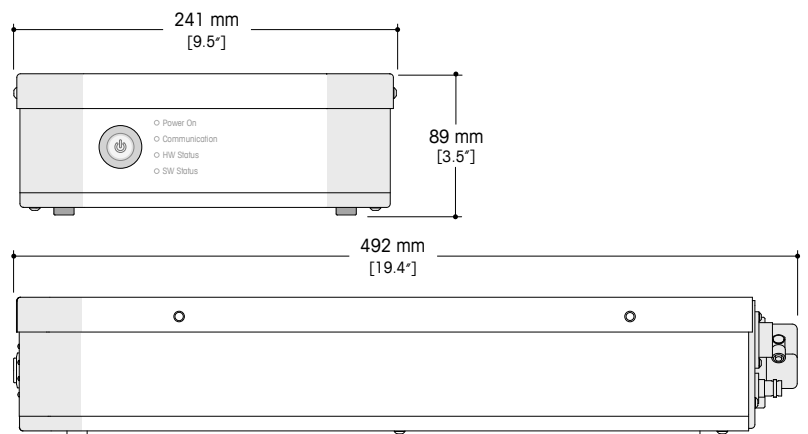
19 mm Probe Dimensions



14 mm Probe Dimensions



Base Unit Dimensions



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Subject to technical changes
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For more information