

THE BALLPROBE® - 0.125 in.

0.125 in. (3.2mm) diameter, for small volume and precise spatial applications with TouchRaman® immersion technology



Wetted Materials

| | |
|--------------------------|---|
| Probe Body | 0.125 in. (3.2mm) diameter Hastelloy C-276 |
| Immersion Optics | 3mm diameter UV-grade sapphire ball |
| Sealing Materials | High- temperature epoxy |

Specifications

| | |
|---|---|
| Standard Probe Length | 2 in. (50mm) |
| Probe OD (Outside Diameter) | 0.125 in. (3.175mm) |
| Clear Aperture (max. Laser Beam Waist) | 0.150 in. (3.81mm) |
| Sample Working Distance | TouchRaman (sample contacts probe lens) |
| Continuous Operating Temperature Range | -55°C to 150°C |
| Pressure Design Condition | 6,000psi (413 bar) |
| Compatible Laser Wavelengths | 500-1100nm |

The MarqMetrix® BallProbe® 0.125 in.,

is our smallest diameter TouchRaman immersion contact probe. Designed to make measurements in small-volume microwells and make highly resolved spatial measurements, this probe is constructed from Hastelloy C-276, UV grade-sapphire, and an epoxy seal with wide chemical compatibility. The probe is designed to fit into the individual wells of microwell plates, but can also be used in moderate chemical laboratory and light-process applications.



MarqMetrix BallProbe technology utilizes an exclusively sourced, high-grade spherical sapphire lens. The short focal length of the spherical optic allows for TouchRaman—where users simply touch the probe to the sample—yielding highly reproducible sampling of liquids, solids, slurries, powders and heterogeneous mixtures. The simplicity of use allows non-specialists to collect high-quality data and eliminates user-to-user variation.

This is the smallest diameter product in the MarqMetrix BallProbe product line.

For more information call:

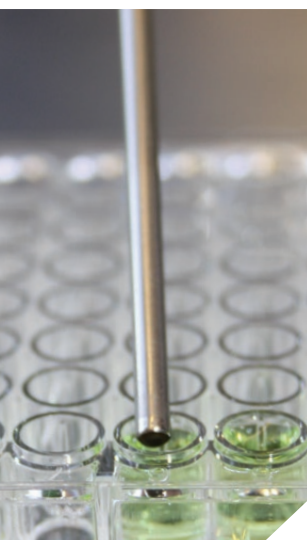
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The power of **Raman**, the simplicity of **MarqMetrix**

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Featuring a 3mm ball lens, the BallProbe—0.125 in. is compatible with standard 0.125 in. compression fittings for porting into processes. Due to the probe's small form-factor, the effective collection volume is only 3 nanoliters (nL). Raman analysis of small (uL) volumes can be performed in low volume conical vials with almost no interference from the vial. With sensitivity comparable to that of the larger BallProbes, the 0.125 in. BallProbe is perfect for analysis of small volume, difficult-to-access samples, monitoring continuous-flow and micro-batch reactors, among other applications. Newly developed, MarqMetrix now offers a disposable 0.125 in. tip for use when interrogating harmful, sensitive or biological samples where safety, sterility and contamination are critical priorities.

The utility of the BallProbe is optimized when paired with our filtered fiber-optic interface, creating the MarqMetrix Fiber BallProbe—a complete sampling solution for accurate and repeatable Raman measurements. However, any BallProbe can be purchased as a standalone product for use with existing probes or open-optic configurations.

Optical Properties

Accepts a collimated laser beam up to 4.6 mm (0.18 in.) in diameter

Made with high purity UV-grade sapphire ball lens aligned along the C-axis, eliminating response variability due to birefringence

Operating Conditions

Suitable for intermittent exposure to dilute and concentrated acids (hot & cold), bases and most organic solvents including ethanol, THF, ethyl acetate, acetone, DCM, toluene, pentane and acetonitrile

Avoid exposure to aqua regia, mixed acid, TFAA

Related Products

BallProbe - 0.25 in. diameter, a larger diameter BallProbe for more demanding process or laboratory applications

Fiber BallProbe® - filtered fiber optic interface specifically designed for the MarqMetrix BallProbe and MarqMetrix Raman All-In-One



Users simply touch the probe lens to the sample



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