

THE PROCESS ELITE BALLPROBE® 0.125

with TouchRaman™ immersion technology



Wetted Materials

1/8" Probe Body (OD)	Hastelloy C-276
Immersion Optics	3.00 mm diameter UV-grade sapphire ball
Sealing Materials	High temperature epoxy

Specifications

Standard Probe Length	2" or 4"
Probe OD	0.125" (3.175 mm)
Probe Wall Thickness	0.020" (.508 mm)
Clear Aperture (max. laser beam waist)	0.150" (3.81 mm)
Sample Working Distance	TouchRaman™ (sample contacts probe lens) to 200 µm standoff
Continuous Operating Temperature Range	-55 to 200°C
Pressure Certification	6,000 psi (413 bar)
Compatible Laser Wavelengths	400-1500 nm

This is the smallest diameter product in the MarqMetrix® Process Elite BallProbe® family.

The MarqMetrix® Process Elite BallProbe® 0.125

is a robust TouchRaman™ immersion contact probe utilizing a spherical sapphire ball lens interface. Our patented optics, exclusively sourced, high-grade sapphire lens and precision manufacturing allow for greatly reduced sampling variation, extreme durability and remarkable ease-of-use in an elegant and simple design.



The short focal length enabled by 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.

Each probe incorporates a high-precision 3 mm UV-grade sapphire ball lens and an internal beam forming lens set. The spherical optic is affixed to high-performance Hastelloy housing using a proprietary epoxy, providing a reliable high pressure and high temperature seal with exceptional chemical resistance.

For more information call:

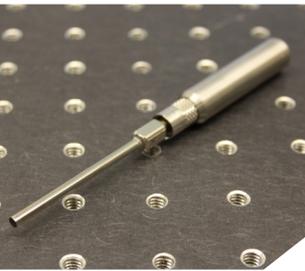
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U.S. Patent No. 6,977,729 BS

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Featuring a 3mm ball lens, the Process Elite BallProbe® 0.125 is compatible with standard 1/8" compression fittings and provides a reduced focal length of 200 micrometers (μm). Due to the probe's small form-factor, the effective collection volume is only 3 nanoliters (nL).

Raman analysis of small (μL) volumes can be performed in low volume conical vials with almost no interference from the vial. Combined with the great sensitivity (as high as that of the larger ballprobes), the 0.125" probe is perfect for analysis of small volume, difficult-to-access samples, monitoring continuous-flow and micro-batch reactors, as well as other applications. Newly developed, MarqMetrix now offers a disposable tip for use when interrogating harmful, sensitive or biological samples where safety, sterility and contamination are critical priorities.

The Process Elite BallProbe® can be used with fiber optic probes that have a collimated excitation beam co-linear with the collection path.

Optical Properties

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

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

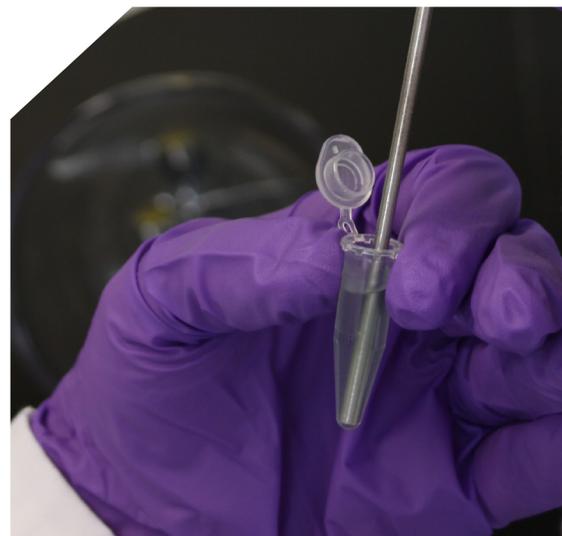
Operating Conditions

Suitable for continuous 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 prolonged exposure to aqua regia



Users simply touch the probe lens to the sample



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