

## BAC100B Raman Probe

Raman Accessory



The BAC100B series Raman probe is a versatile sampling interface for use with our portable Raman instruments. It is identical to the BAC102 series except without the trigger. The probe can be brought directly to the sample and make contact with either the sample or the packaging of the sample via a detachable distance regulator that ensures proper focusing while minimizing contamination to the lens material.

Different versions of the probe with varying optical lenses allow for measurements down to  $65\text{cm}^{-1}$  Raman shift ( $100\text{cm}^{-1}$  for 1064 nm version). The standard fiber length of 1.5m includes flexible fiber coupling, internal support and durable protective PVC jacket. The excitation fiber has a  $105\text{ }\mu\text{m}$  core diameter and is FC/PC terminated. The collection fibers for the high throughput models (HT) have a  $300\text{ }\mu\text{m}$  core collection fiber and are FC/PC terminated, while standard models have a  $200\text{ }\mu\text{m}$  core and are SMA 905 terminated.

The standard shaft is 304SS with a flat quartz window and spot size of  $85\text{ }\mu\text{m}$ . Custom probes can be constructed with dimensions, material and working distance to suit your application needs. For unpressurized immersion measurements, Kalrez O-ring sealed shafts RIS100-FS (fused silica window) and RIS100-SA (sapphire window) are available. For high pressure and high temperature immersion measurements, RIS101 type shafts can be used.

### Features:

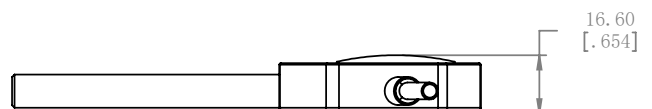
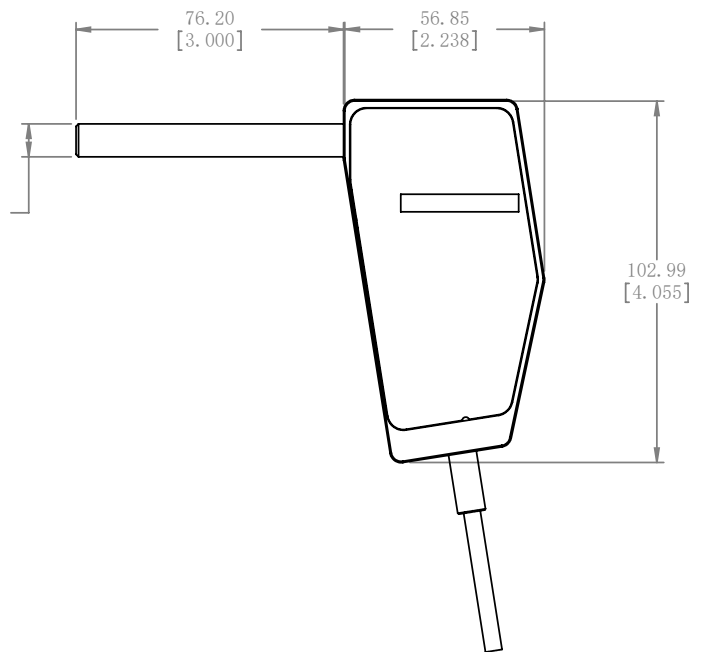
- State-of-the-art packaging
- Optimized optical design
- High throughput options
- Excellent long-term stability
- Range down to  $65\text{ cm}^{-1}$
- User-replaceable shaft

### Dimensions:

Probe (mm[in]):



$\varnothing 9.42$   
[.371]



16.60  
[.654]

## Specifications:

Excitation wavelength	532 nm, 785 nm or 1064 nm
Raman cut-off	65 cm <sup>-1</sup> for 532 and 785 models (i-Raman Plus)* 150 cm <sup>-1</sup> for 532, 532-HT, 785, and 785-HT models 100 cm <sup>-1</sup> for 1064, and 1064-HT models
Rayleigh rejection	OD6 (OD8 optional)
Shaft material	304 SS
Shaft length	3" (76.2 mm)
Shaft diameter	0.371" (9.42 mm)
Working distance <sup>1</sup>	5.4 mm for 532 nm models 5.5 mm for 785 nm models 5.9 mm for 1064 nm models
Laser spot diameter at focal plane	85 μm
Maximum operating temperature (probe shaft and body) <sup>2</sup>	80°C
Storage temperature <sup>2</sup>	-10°C – 60°C
Humidity	10-85%, non-condensing
Shaft window material	quartz
Seal material (shaft tip)	Epoxy sealed
Fiber length	1.5 m
Excitation fiber	105 μm core; FC/PC terminated
Collection fiber	200 μm core, SMA 905 terminated for standard models; 300 μm core, FC/PC terminated for HT models.

### Notes:

- 1) Working distance is defined as the distance from the focal point in air to the end surface of the shaft.
  - 2) The probe body and shaft are not sealed. To prevent irreversible damage caused by condensation on internal optic surfaces, do not subject any part of the probe to a temperature below the dew point. If needed, use a purged probe.
- \*cut-on start from 65 (up to 70) cm<sup>-1</sup>