O-Ring Single Sided Transmission Probe

GUIDED WAVE recommends the use of the O-Ring Single Sided Transmission Probe or O-SST, when an in-process fiber optic probe is needed in a corrosive process stream containing strong acids, bases, or cyanides. The O-SST performs similarly to our more popular gold alloy sealed SST probe, but uses polymer o-rings to seal the sapphire windows. Like the SST probe, the O-SST has high optical throughput for low noise in-line spectroscopy of complex solutions. Inline probes eliminate costly and problematic fast loops and sample systems. The O-SST is available in several convenient pathlengths, probe lengths, o-ring materials and most common chemically resistant stainless steel alloys.

O-SST Probe Features

- Corrosion resistant construction
- Rugged design
- O-ring process seals
- Sealed against ambient moisture infiltration
- High optical throughput for low noise spectroscopy
- Collimated beam for accurate absorbance measurements
- Vibration resistant design

Process-Resistant Construction

The O-SST Probe is designed to withstand corrosive processes especially those containing nitric acid or cyanides that normally attack our gold alloy sealed SST probe. The body of the probe is built from 316 stainless steel (standard, however, several other alloys are available by special order). The probe's sapphire optical windows are sealed to the probe body with polymer o-rings chosen to be compatible with your process. For assistance with choosing the best o-ring material, please consult the DuPont Elastomers website. The probe can be dismantled for periodic o-ring service, although we recommend that this be done at Guided Wave to ensure optimum performance.

On request, the O-SST can be supplied welded to an ANSI or DIN process flange. Like our other probes, the O-SST is sealed against ambient moisture infiltration.

Operating Range and Configurations

The operating range of the O-SST Probe will be determined primarily by the choice of o-ring material. The maximum operating temperature and pressure are 250°C and 1000 psi. This probe is available in five standard lengths, nine optical pathlengths, and UV, visible and NIR versions. Other probe lengths and pathlengths are available by special order.

Exceptional Light Transmission

Like other Guided Wave optical probes, the O-SST Probe provides exceptional optical performance. Typically, peak transmission exceeds 40%. That means more signal, lower measurement noise, and lower limits of detection.

Compatible with All Guided Wave Analyzers

The probe, or sample interface, is a crucial component of a complete analyzer system. For optimal performance, the probe must be "optically matched" with the spectrophotometer and with the optical fiber that transmits the spectral data. The O-SST Probe (and each of Guided Wave's optical probes) is matched to Guided Wave's analyzers and fiber to achieve the highest possible performance.

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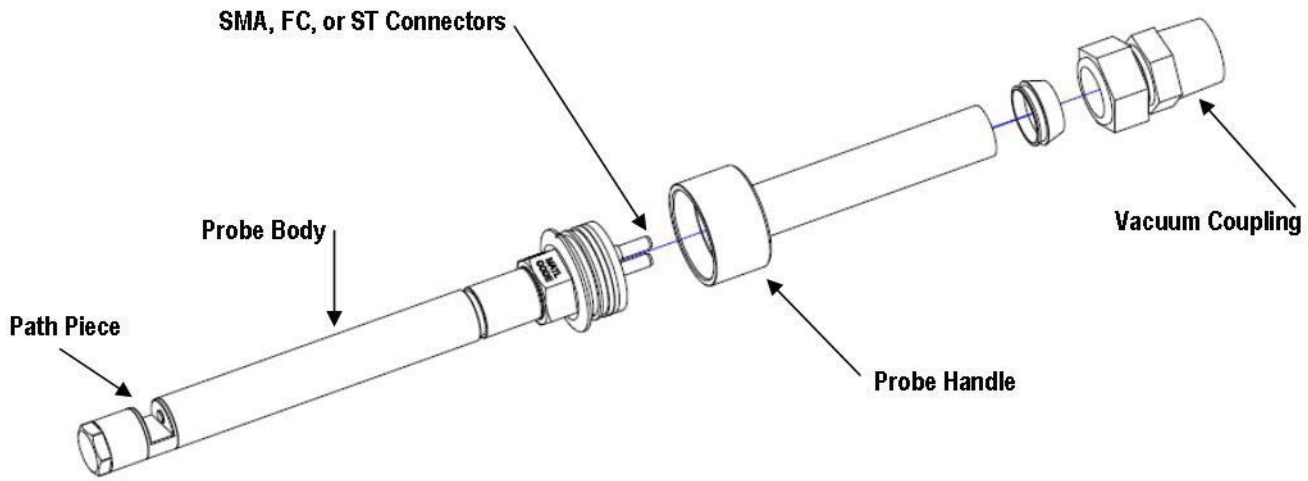
Specifications

Standard Probe Lengths (inches):	8; 12; 18; 24; 30 (other lengths available on request)
Pathlength (mm ± 0.075 mm):	1; 2; 5; 10; 15; 20; 30; 40; 50 (other lengths available on request)
Probe Diameter (inches):	1.000 ± 0.005 [25.4 mm ± 0.13 mm]
Spectral Range:	UV-Vis (225 – 600 nm); Vis-NIR (380 – 1100 nm); NIR (800 – 2100 nm)
Optics:	Fused silica (UV-Vis); BK7 (Vis-NIR)
Fiber Diameter (µm)/Connector:	400; 500; 600 / SMA 905; FC; ST
Fiber Types:	Deep UV (UV-Vis); Low-OH or Ultra Low-OH (Vis-NIR)
Optical Efficiency (%T):	> 30% for pathlengths ≤ 20 mm
Temperature range:	Determined by o-ring material but not to exceed –25 °C to 250 °C
Pressure Range:	0 psi to 1000 psi [0 – 69 bar]
Body Material:	SS316 standard; Hastelloy, Titanium, and Carpenter 20 available on request
Window Material:	Sapphire (Vis-NIR) or Fused Silica (UV)
Window Seal:	Polymer o-ring material of your choice with a Durometer of 70 Shore A or greater including: Kal-Rez® 7075 Kal-Rez® 6375 Kal-Rez® 4079 Viton EPDM Silicone



Guided Wave
+1 916-638-4944 phone
+1 916-635-8458 fax
GWinfo@guided-wave.com
An Advanced Company

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