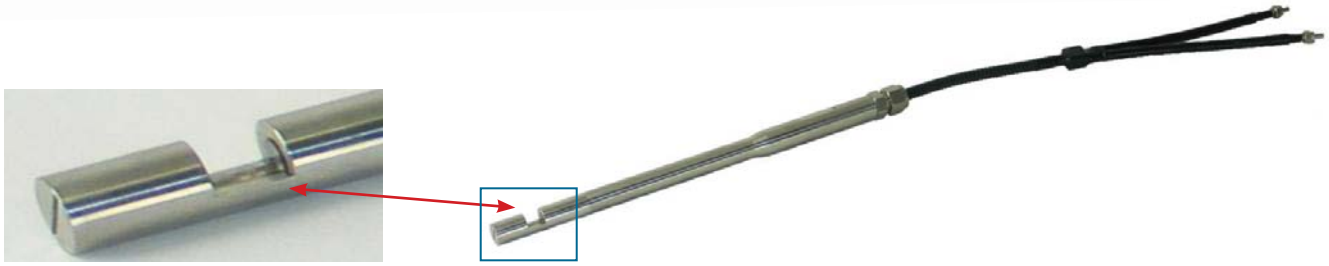
Guided Wave
Process Analytical Systems

Transflectance Single-Sided Transmission (T-SST) Probe



GUIDED WAVE'S Transflectance Single-Sided Transmission (T-SST) Probe is our newest addition to the Guided Wave line. It is our most compact fiber optic probe, with an OD of only ½ inch. Rugged and reliable, it's ideal for laboratory or batch process use with smaller diameter reactor ports, or for continuous process monitoring applications in piping. It is easily installed in a reactor or pipe through a single access port with ½" Swagelok® fittings. The T-SST Probe works with any Guided Wave spectrophotometer or photometer.

Unique Design

The T-SST probe houses incoming and outgoing optical-fibers side-by-side in a single 1/2-inch diameter stainless steel body. The tranflectance design allows for twice the pathlength in the same space as a standard probe; making it ideal for small reactors or dilute solutions. The short pigtail fibers are a part of the probe itself and may be long enough for laboratory or batch use where the analyzer is adjacent, eliminating the need to purchase additional fibers. For remote process analysis, longer fibers of a custom length may be joined with bulkhead connectors to obtain the exact length required.

Process-Resistant Construction

The T-SST Probe is designed to withstand harsh process conditions. The body of the probe is built from 316 stainless steel or, by special order, other corrosion resistant materials. The T-SST Probe's sapphire optical windows are sealed to the probe body with o-rings. These materials are unaffected by most hydrocarbons and polymers.

Wide Operating Range

The T-SST Probe is designed to operate over a wide range of pressures and temperatures:

- Temperatures to 230 °C (o-ring dependant)
- Pressures to 500 psi

This probe is available in several standard lengths and four optical pathlengths. Other probe lengths and pathlengths are available by special order.

Exceptional Light Transmission

Like other Guided Wave optical probes, the T-SST Probe provides exceptional optical performance. Typically, peak transmission exceeds 30%. That means more signal, lower measurement noise, and lower limits of detection. Of course, the T-SST Probe's optics are permanently aligned at the factory. There's no need for optical adjustments at the time of installation, nor any chance for misalignment or varying pathlengths.

Compatible with All Guided Wave Analyzers

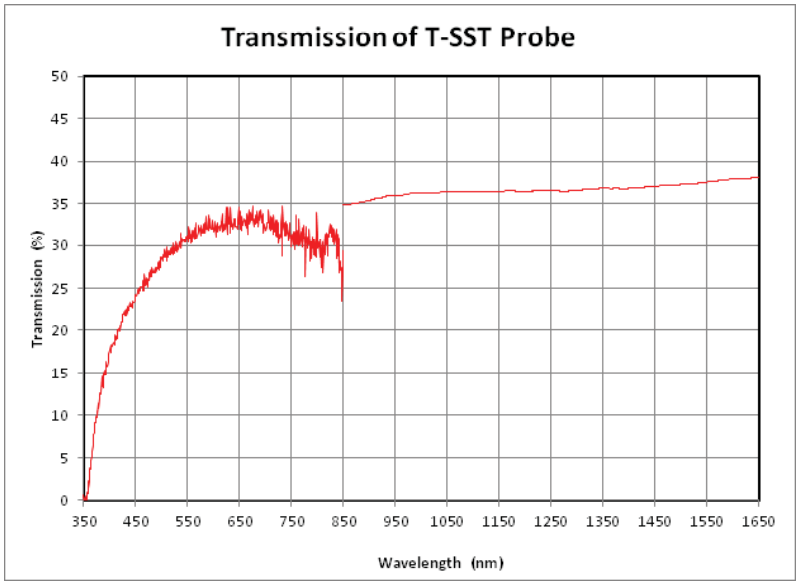
The probe, or sample interface, is a crucial component of a complete analyzer system. For optimal performance, the probe must be "optically matched" with the spectrometer and with the optical fiber that transmits the spectral data. The T-SST Probe and each of Guided Wave's other optical probes is matched to Guided Wave analyzers and fiber to achieve the highest possible performance.

Transflectance Single-Sided Transmission (T-SST) Probe

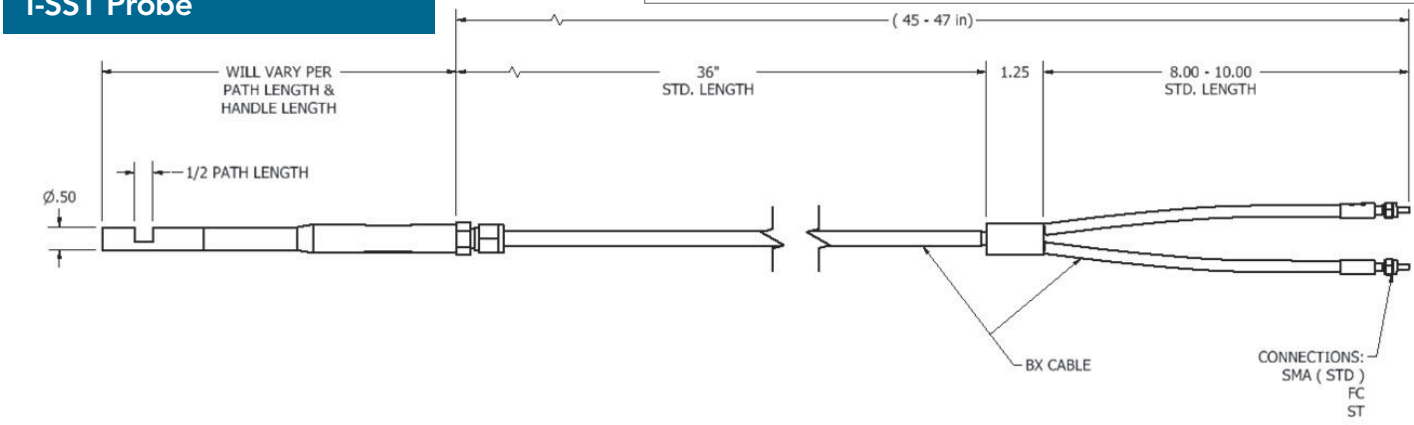
Specifications

Standard Probe Lengths (inches):	6; 8; 12; 18; 24
Pathlength (mm ± 0.075 mm):	2; 5; 10; 20
Probe Diameter (inches):	0.500 [12.7 mm]
Spectral Range:	Vis-NIR (380 – 1050 nm); NIR (600 – 2100 nm)
Fiber Diameter (µm)/Connector:	400; 500; 600 / SMA 905 standard; (FC or ST available)
Fiber Types:	Ultra Low-OH (Vis-NIR), Broadband (Vis - NIR)
Efficiency:	> 30% NIR (800-1650 nm); > 25% VIS (500 -800 nm)
Temperature range:	0 °C to 230 °C (o-ring dependent)
Pressure Range:	0 psi to 500 psi [0 -34.5 bar]
Body Material:	316L SS standard; (others available on request)
Window Material:	Sapphire
Window Seal:	o-rings (Viton, Kalrez, other materials upon request)

Typical T-SST Probe Transmission



T-SST Probe



Guided Wave
Process Analytical Systems

+1 916-638-4944 phone
+1 916-635-8458 fax

GWinfo@guided-wave.com
An Advanced Company

Literature: 1047-13-05