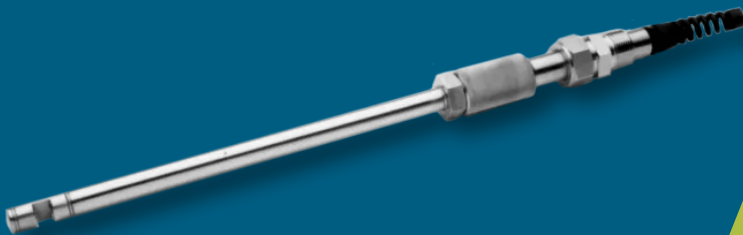


PRODUCT DATASHEET

Single-Sided Transmission (SST™) Process Probe

Compatible with UV-VIS and NIR Analyzers



More signal

Less noise

Lower detection limits

- For process streams containing liquid hydrocarbons and water
- For use in pipelines and reactors
- Corrosion-resistant construction
- Patented rugged, reliable design
- Sealed against ambient moisture infiltration

Single-Sided Transmission (SST) Process Probe

The GUIDED WAVE Single-Sided Transmission (SST™) Probe has been a market leader for over 25 years. It is the most widely copied probe design in the industry. Rugged and reliable, it's ideal for continuous process monitoring applications. Easily installed in a pipe or reactor through a single access port, the SST Probe is compatible with any analyzer and many other analyzer brands. Optional accessories make it easy to adapt the SST Probe to different kinds of process installations.

A Simple, Serviceable Design

The SST Probe is a convenient, compact, rugged sample interface that is easy to install and even easier to service. This unique, compact design (U.S. Patent #6,043,895) houses incoming and outgoing optical fibers side-by-side in a single 3/4-inch, or 1-inch stainless steel body. To clean the SST Probe simply remove it from the process and wipe the sapphire windows with a clean, soft cloth. The SST Probe can be mounted to the connection in several ways. A flange can be welded to the SST Probe for connection to the process access port. Alternatively, the optional Probe Servicing Extractor Mechanism may be used to facilitate installation and removal of the process probe so that it may be cleaned without disrupting the process.

Process-Resistant Construction

The SST Probe is designed to withstand harsh process conditions. It is constructed from 316L stainless steel. It can also be made from other materials depending upon specific application requirements, such as Hastelloy C-276. The SST Probe's sapphire optical windows are sealed to the probe body with proprietary gold alloy brazing. These materials are unaffected by most hydrocarbons and polymers. For extremely corrosive process streams, use the O-Ring SST Probe instead. Additionally, Our special construction techniques also make the probe insensitive to most process pipe vibrations.

Dual Seal for Added Safety

Perhaps the most crucial aspect of any online sample interface design is the sealing approach. Since process fluid streams will be under pressure and the composition is often hazardous leaks are unacceptable. Additionally, moisture infiltration from the external environment adversely affects performance too. Our brand utilizes multiple o-ring seals that effectively address both issues. This protects the expensive internal optics.

Exceptional Light Transmission

Like all our sample interfaces, the SST Probe provides exceptional optical performance. Internal optics result in a collimated light beam for consistently accurate measurements. Typically, peak transmission exceeds 30%. That means more signal, less noise, and lower detection limits for the measurement. The optics on the SST Probe are permanently aligned at the factory. As a result, there is no need for any optical adjustments in the field. Additionally, there is no chance for optical misalignment to occur under normal processing conditions or during servicing.

Pathlengths and Operating Range

The SST Probe is available in six standard pathlengths (2; 5; 10; 15, 20; and 50 mm), and in UV-VIS and NIR versions. It operates over the following temperature and pressure ranges:

- Temperature: -196 °C to 300 °C
- Pressure: 0 psi to 2000 psi [0 – 138 bar] higher pressures available on request

Optically Matched with All Our Analyzers and Compatible with Most Other Spectrometer Brands

The sample interface is a crucial component of a complete fiber optic-based analyzer system. For maximum performance, the probe or flow cell must be optically matched with both the analyzer (spectrometer) and the fiber that transmits the spectral signal. All our sample interfaces, analyzers, and fiber optic cables are optically matched, so when used in combination they achieve the highest possible consistency and performance. The SST Probe is also manufactured to facilitate full integration with any fiber optic system configured with SMA 905 connectors. This includes FT-NIR analyzers. When choosing a sample interface for an FT-NIR analyzer the current fiber core size must be taken into consideration. The SST Probe design works best when the size of the internal and external fiber core match.

One of the primary advantages of UV-VIS and NIR process spectroscopy is the utilization of intrinsically safe fiber optic cables to remotely locate the analyzer relative to the sample interface (probe or flow cell) installed in the process. Get the full power of this technology and choose the SST Probe along with one of our optically matched analyzers and process grade fiber optic cables – *for control you can measure!*

Optional SST Probe Accessories

The SST Probe is available with optional accessories for easy adaptation to different process installation configurations.

- Custom flanged probes: Facilitates direct installation of the process probe onto a T junction
- Probe Servicing Extractor Mechanism: Facilitates installation of the process probe so that it may be cleaned without disrupting the process:
 - Rapid safe extraction of the in-line probe from pressurized process streams
 - Mounts to a gate valve via 2-inch Class 300 raised face flange
 - Teflon “V” ring packing glands standard

Specifications	
Probe Length	12; 18; 24; 30; 36; (inches) other lengths available on request
Optical Pathlength	2; 5; 10; 15; 20; 50 (mm) other lengths available on request
Spectral Range	UV-VIS (230 – 800 nm); NIR (800- 2100 nm)
Fiber Connector	400; 500; 600 μ m / SMA 905; FC
Optical Efficiency	>30% for pathlengths < 20 mm
Temperature Range	-196 °C to 300 °C
Pressure Range	0 psi to 2000 psi [0 – 138 bar] higher pressures available on request
Body Material	SS316L standard (SS304, SS316, Hastelloy, Monel, Titanium, and Nickel available on request)
Window Seal	Proprietary gold alloy brazing
Mounting	Swaged fittings, custom flanges; extractor assembly mechanism option
Probe Diameter	0.750 inch [19 mm]; 1.000 inch [25.4 mm] (larger diameter recommended for probes \geq 24 inches long)

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REVOLUTIONIZING MEASUREMENT

EVERYWHERE