

Medical Fiber Probe Assembly

Product Description

Due to their flexibility, compact size, lightweight, and high sensitivity, optical fibers are widely used in medical applications. The unique properties of fused silica enable efficient laser transmission. Among laser-based medical fiber assemblies, reflective spectral detection probes are particularly common. These typically consist of 2 visible-light band fibers—one for light source illumination and the other for reflected spectrum collection. As medical diagnostic and testing consumables, these components are extensively used in medical detection and examination equipment.

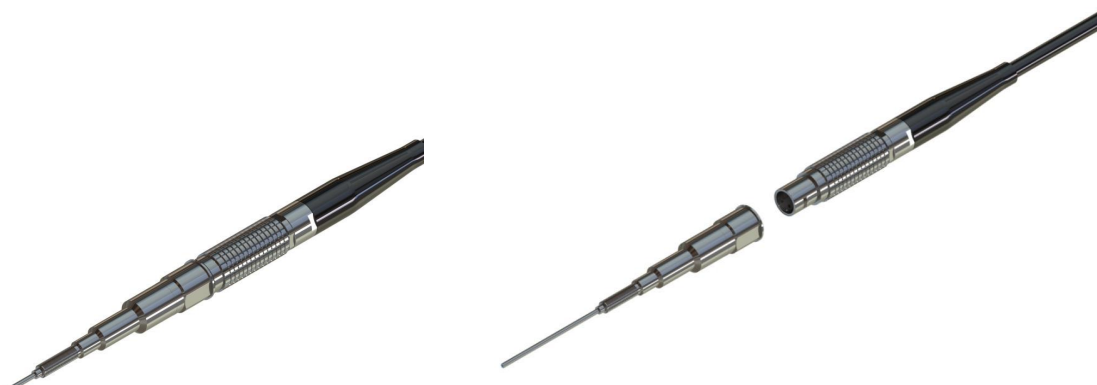
Key Features

- Medical-Grade Stainless Steel Probe: Fully metal structure with antibacterial properties.
- Quick-Connect Design: Features a push-pull self-locking mechanism for easy probe replacement.
- Keyed Alignment: Blind-mating and anti-misinsertion functionality.
- Compact Design: Maximum diameter <13 mm for ergonomic handling.
- Standard Connector Options: Branch ends compatible with ST/FC/SMA905 connectors.
- Customizable Fibers: Supports tailored wavelength bands and core diameters (including large-core fibers).
- Durable Interface: Stable, long-lasting equipment connection; only the probe tip requires replacement, significantly reducing operational costs.

Applications

- Industrial: Foundries, steel plants
- Power Systems: Electrical equipment monitoring
- Sensing: Temperature/high-temperature sensors
- Spectral Analysis: Detection and diagnostics
- High-Temperature Instruments: Ruggedized devices





Technical Specifications

Category	Specifications
Insertion Loss	$\leq 0.6\text{dB}$
Operating Wavelength	Supports 200-2000 nm
Fiber Core Diameter	125-2000um
Insertion Times	> 1500 times
Operating Temperature	$-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$
Connector Material	304 or 316L
Protection Rating	IP67

