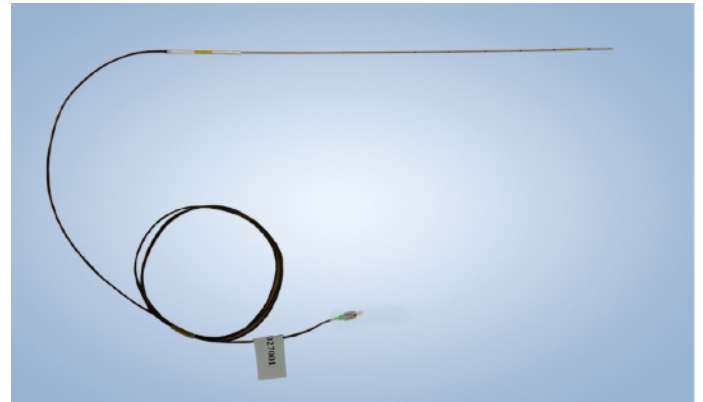


## Description

The T890 is a Gold coated fiber based Fiber Bragg Grating (FBG) Array, packaged into a virtually frictionless Inconel 625 tube, with a ceramic transition to a high temperature rated protected fiber pigtail. These daisy-chained FBG sensors are ultra-small and are designed for use in distributed, quasi-distributed, and multi-sensing-point applications with the added requirement of minimal intrusion.

The T890 optical temperature sensing probe consists of up to 40 Fiber Bragg Grating sensing elements embedded in Gold coated fibers. Optional Copper, Aluminum, Polyimide, and Acrylate coatings available, depending on the desired temperature rating. Inconel tube hermetic sealing (capping) service is available upon request. Sensing probe length limitations apply.



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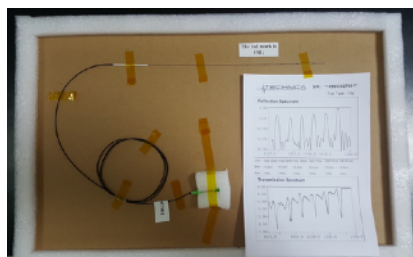
## Key Features

**Temperature linearity.** The precision FBG structure and top quality single mode Gold coated fiber used in producing the T890 yield a simple transducer configuration of high resolution, linearity, and measurement repeatability.

**Customizable Multi-Point Sensing.** Well suited for projects that include the need to monitor many points, as the T890 is a ready to deploy sensing probe available in customer defined distances between FBGs, and featuring a flexible number of FBGs to match the requests of our customers, with a maximum sensing probe length of 25m, not including the pigtail. Standard connectors termination or spliced to specialty cables.

**Reliable high-temperature measurements.** The T890 was designed for projects that require both the availability of high-temperature resistant FBG sensors and stable operation for highly accurate measurements over the long-term. The probe design makes handling and installation very easy. Fastening methods are by simple mounting brackets, by steel tube bonding, laying, inserting, or embedding.

**Proven field performance.** The T890 High-Temperature Multipoint FBG Sensing Probes are a commercial product manufactured in increasing volumes worldwide with practically no returns since initial release. The world leading sensing probe lengths and outer diameters available combined with proprietary ceramic transition and hermetic sealing technology make the T890 a valuable sensing product that extends the range of high-temperature applications addressable by FBG based optical sensors.



Parameter	Specifications
FBG Center Wavelengths / Tolerance	1460 to 1620 nm, +/-1 nm; 980, 1060, 1310 nm, other
FBG Reflection (FWHM)	0.15 nm to 2.0 nm; other opt.
FBG Reflectivity %	>20%; other options
FBG Length	1 mm - 10 mm
FBG SLSR	10 dB; other options
Sensor Response Time	1 second
Maximum Temperature Rating Options	Up to +300°C, Polyimide Up to +400°C, Aluminum Up to +550°C, Copper Up to +800°C, Gold Up to +1,000°C, Gold+
Fiber Coating	Gold is Standard. Polyimide, Copper, and Aluminum options
Fiber Type	Single-Mode 9/125/145um
Sensor Configurations	Sealed-tip multipoint probe, open array, terminated cable
Sensing Probe Diameter (OD), Length	1mm Standard, other options from 0.45mm to 3mm OD, 1m standard, other options from 0.01m to 25m
Pigtail Length, Bend Radius, Protection, Connector	1 m, >17mm, Fiber Braid, FC/APC, other options

## Applications in Industrial, Energy, Engine Testing, and various R&D Programs

Technica undertakes a rigorous development process before products release. The company is also firmly committed to continuous improvements after release to insure performance to the highest standards, hence, specifications are subject to update without notice.

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