

Flexible Fiber Optic Thermometer for R&D Environments

Field Proven Fiber Optic Sensors

The FOT Lab Kit is a 4-channel fiber optic thermometry system that allows users to measure temperature where conventional sensors fail. LumaSense Technologies' patented technology, known as Fluoroptic® Thermometry (FOT), offers probes that are totally immune to electromagnetic interference (EMI) and entirely non-metallic in construction. These qualities make FOT instruments perfectly suited for measuring temperature in harsh environments often encountered during research, such as high voltages and strong radio frequencies (RF).

Flexible, Easy to Use

The FOT Lab Kit includes a Fluoroptic® thermometer shielded in a metal enclosure, universal power supply, RS-232 cable, users manual and compact carrying case.

Data is logged with any terminal program (such as Microsoft Windows® Hyperterminal) or with the optional TrueTemp graphing and data capture PC software. The FOT Lab Kit interfaces with data acquisition devices through the analog output (0-10VDC or 4-20mA) or the RS-232 digital port.

Compatible with Every Application

A wide variety of probe configurations (immersion, surface and remote) are available for specific measurement applications. Available probes are shown in the Probe and Accessories data sheet. These unique fiber optic probes are non-metallic, electrically non-conductive and immune to electromagnetic interference and voltages that adversely affect thermocouples, thermistors and RTDs.

Applications

- Temperature Control and Monitoring of Semiconductor RF Process Chambers
- Temperature Control and Monitoring of Dielectric (RF and Microwave) Heating Processes
- Heat Generation Monitoring of Live Integrated Circuits



Benefits

- Probes immune to Electro-magnetic Interference (EMI):
 - RF
 - MRI
 - Microwave
 - High Voltage
- Customer Chosen Calibration Point
- Flexible Programming Parameters for R&D
 - Measurement Rate
 - Samples per Measurement
 - Output Format
- Set It and Forget It ... Stable and Inert Sensor

Luxtron FOT Lab Kit

Specifications

Channels	4
Measurement Range	-100 to 330°C
Electrical Interference	Probe Immune to EMI (RF, Magnetic and Microwave)
Accuracy (Calibrated)	±0.5°C within 50°C of calibration temperature ±0.2°C within 20°C of calibration temperature ±0.1°C @ calibration temperature
Repeatability (Precision)	0.5°C RMS @ 8 Samples per Measurement
Output Resolution	0.01°C
Measurement Rate	Max 4 Hz for a single Channel, Configurable
Output Format	Selectable °C, °F and K
Self Diagnostic	Self Diagnosis and Probe Errors Available on RS-232
Input Power	100-240VAC Universal Power Supply Included
Serial Output	RS-232C
Analog Output	0-10V or 4-20mA
Dimensions	171.5 W x 107.6 H x 50.8 D (mm)
Storage Temperature	-30 to +75°C
Operating Environment	10°C to 50°C, 80% RH (Max) Non-condensing

Kit Includes

- 4-Channel Instrument
- Universal Power Supply (100-240VAC)
- Cable for RS-232 Serial Communication
- User's Guide
- Quick Start Guide

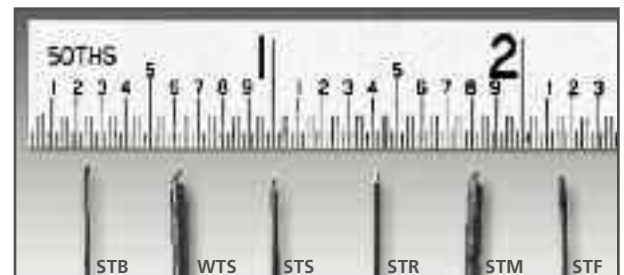
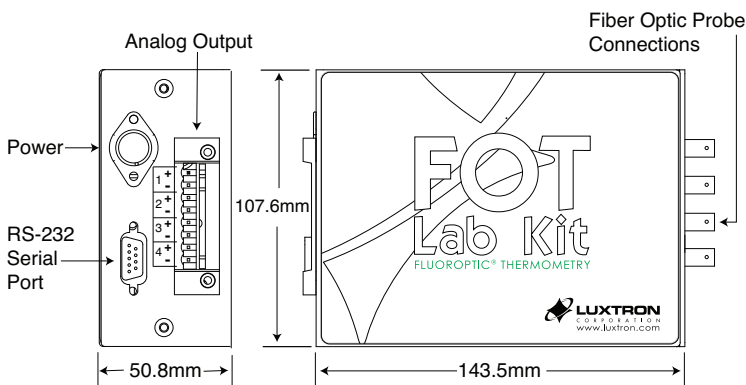
Available Accessories

- Fiber Optic Extension Cables
- Vacuum Feedthroughs
- TrueTemp™ Data Acquisition and Graphing Software
- Lab View Drivers

Compatible Probes*

Type	Temperature Range	Application
STF	0 to 295°C	Fast Response
STR	-25 to 330°C	Remote Sensing
STS	-25 to 200°C	Surface Contact
STB	0 to 120°C	Medical
STM	-25 to 250°C	General Immersion
WTS	-30 to 200°C	Electric Power

* For more information and probe specifications see Probes and Accessories data sheet.



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