

# FLUOROPTIC® THERMOMETER

## m3300 Bioresearch Lab Kit

*Flexible Fiber Optic Thermometer for MR and RF Research*

### Industry Standard for Fiber Optic Thermometry

Luxtron's m3300 Bioresearch Lab Kit is a rugged fiber optic thermometer designed for demanding applications. Ideally suited for laboratory, research, and academic settings requiring precise and repeatable temperature measurements, this kit is based on Luxtron's patented Fluoroptic® technology. The EMI immunity and inherent stability of this technology eliminates the problems encountered when using conventional thermocouple or thermistor sensors in RF, microwave, and MR environments.

### Easy to Use

The m3300 Bioresearch Lab Kit includes an instrument encased in an all steel enclosure, protecting it in the harsh EMI environments. The system is easily integrated into any PC-based data acquisition system. Connection to a PC serial port serves as the communication interface to change settings and log data using standard software. Luxtron also offers an optional TrueTemp graphing and data analysis software for PCs. This m3300 kit includes a 0-10V analog output, medical grade power supply, RS-232 cable, users manual and convenient carrying case.

### 100% Non-metallic Probes

The bioresearch probe for use with the m3300 are entirely non-metallic in construction. The probes are protected in a Tefzel® jacket and are only 0.5mm in diameter. The chemically inert Fluoroptic® probes are safe in almost any environment and can be sterilized.



### Benefits

- MR Compatible
- Probes Immune to EMI, RF, MR and Microwave Interference.
- Precise Measurements from Very Small Sensor
- Rapid Response Time of 0.25 Seconds
- Minimally Invasive Probes

### Applications

- Temperature Monitoring of Animal Testing Campaigns
  - Various Probes for Surface and Immersion Monitoring
- Core Temperature Monitoring during MRI Scans
- Heat Generation Monitoring of Implanted Devices during MRI Scans

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## m3300 Bioresearch Lab Kit

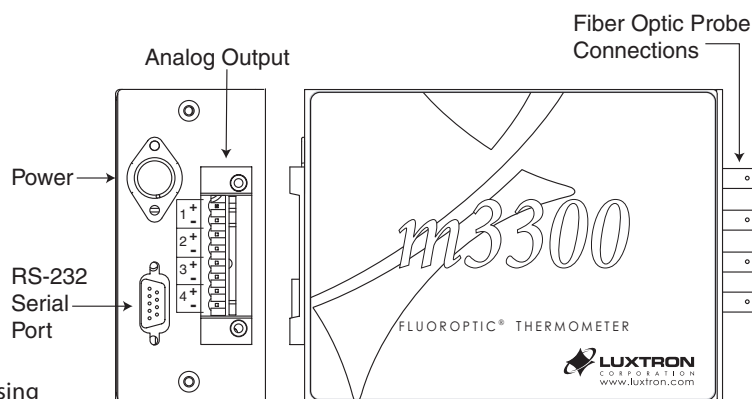
*Flexible Fiber Optic Thermometer for MR and RF Research*

### Specifications

Channels	4
Measurement Range	0 to 120°C
Electrical Interference	Immune to MR, EMI, RF, and microwave
Accuracy (Calibrated)	±0.2°C within 20° C of Calibration Point
Repeatability (Precision)	±0.5°C RMS @ 8 Samples per Measurement
Measurement Rate	1 to 4Hz per Channel, Configurable
Output Format	Selectable °C, °F and °K
Self Diagnostic	Self Diagnosis and Probe Errors Available on RS-232
Input Power	85-264 VAC (Universal medical-grade power supply included)
Serial Output	RS-232C
Analog Output	0 -10V DC
Dimensions	184mm H x 144mm W x 51mm D
Storage Temperature	-30 to +75°C
Operating Environment	0°C to 40°C, 80% RH (Max) Non-condensing

### Kit Includes

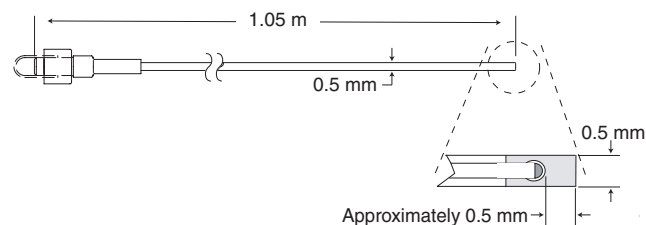
- 4-Channel Instrument
- Universal Medical Grade Power Supply  
(Input 85-264 VAC, 49-63 Hz)
- Cable for RS-232 Serial Communication
- User's Guide and Convenient Carrying Case



### Standard Probe and Extension

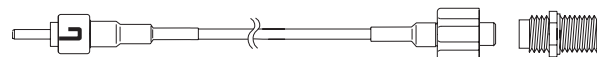
#### STB Probe

Temperature Range	0 to 120°C
Length	1 meter
Response Time	0.25 seconds in stirred liquid
Fiber Type	200µm hard clad silica fiber with Tefzel® jacket
Color	Black
Connector Type	RPC-1 molded plastic



#### FOC-ST Extension (one extension required per probe)

Lengths	2, 5, and 10 meter
Fiber Type	400µm silica fiber protected with Kevlar® and PVC
Color	Black
Connector Types	RPC-1 molded plastic to ST



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