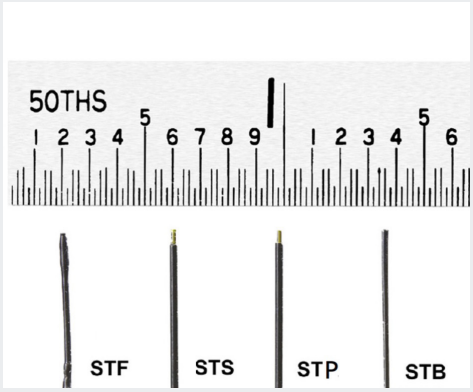
# LUXTRON® FIBER OPTIC THERMOMETRY PROBES & ACCESSORIES

Immune, Accurate, and Safe Fiber Optic Probes and Accessories for use in Harsh Environments

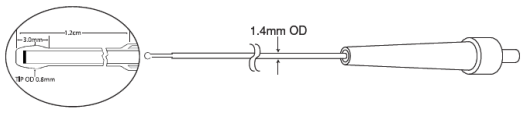
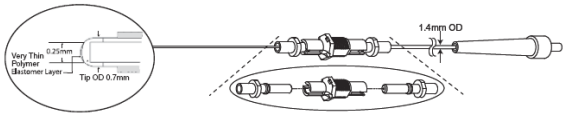
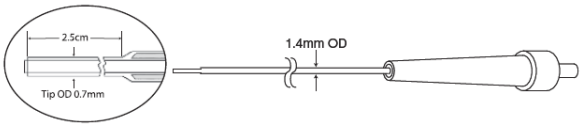
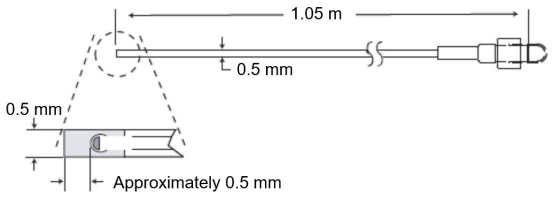
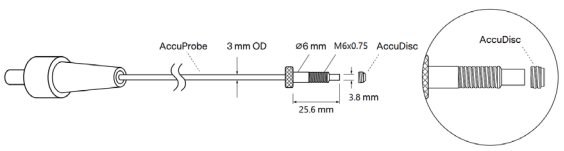



Leading the industry for more than 30 years, Advanced Energy's LumaSense line of Luxtron fiber optic thermometry probes are rugged and robust. Using Luxtron's patented technology, our FluorOptic® probes are chemically resistant and immune to electromagnetic interference. Advanced Energy's LumaSense offers probes for an array of applications and has extensive experience designing customized probes for OEM applications.

## PRODUCT HIGHLIGHTS

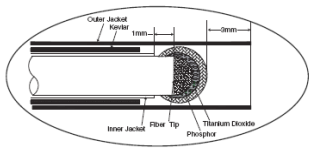
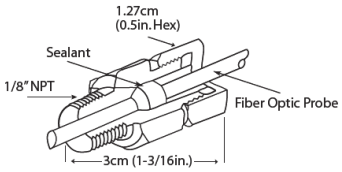
- Probes immune to a wide range of harsh environmental characteristics including but not limited to RF, MRI, microwave, induction heating, plasmas, and high voltage
- Chemically Resistant
- Non-Metallic
- Corrosion Resistant
- Safe for Flammable or Explosive Environments
- Stable and Inert Sensor

## TECHNICAL DATA

| Probes | | |
|---|---|---|
| **Type** | **Specifications** | **Diagram** |
| **STF Probe**<br><br>Exposure Temperature Range<br>Response Time<br><br>Lengths Available<br>OD<br>Minimum Bend Radius<br>Example Applications | Surface contact<br>Fast response immersion, air and liquid<br><br>0 to 295 °C<br>1.25 seconds still air<br>0.25 seconds in stirred water<br>1 m, 2 m, 5 m, or 10 m<br>1.4 mm<br>20 mm<br>-Monitoring of high voltage experiments<br>-Temperature gradient mapping of fast temperature ramps<br>-Temperature control of microwave processes |  |
| **STS Probe Kit**<br>Kit Includes<br><br>Exposure Temperature Range<br>Response Time<br>Lengths Available<br>OD<br>Mininum Bend Radius<br>Example Applications | Surface contact<br>2 m or 5 m probe and two 10 cm replacement tips<br><br>-25 to 200°C, tip < 120°C<br>< 0.2 seconds<br>2 m or 5 m<br>1.4 mm (tip OD 0.7 mm)<br>30 mm<br>Temperature monitoring of "live" electrical circuits, implant leads at precise locations or bonding surfaces |  |
| **STP Probe**<br><br>Exposure Temperature Range<br>Response Time<br>Lengths Available<br>OD<br>Minimum Bend Radius<br>Example Applications | Non-contact remote sensing<br>Phosphor and binder required (sold separately)<br><br>-25 to 330°C<br>< 0.2 seconds<br>2 m or 5 m<br>1.4 mm<br>30 mm<br>-Testing of electro-explosive devices (EEDs)<br>-Temperature monitoring of small targets |  |
| **STB Probe**<br><br>Exposure Temperature Range<br>Response Time<br>Length<br>Fiber Type<br><br>Connector Type<br>OD<br>Minimum Bend Radius<br>Example Applications | One FOC-ST extension required per probe<br><br>0 to 120°C<br>0.25 seconds<br>1 m<br>200 µm hard clad silica fiber with Tefzel® jacket<br>3RPC-1 molded plastic<br>0.5 mm<br>10 mm (long term)<br>Temperature monitoring of clinical procedures and academic research. |  |
| **AccuProbe & AccuDisc**<br><br>Exposure Temperature Range<br>Response Time<br>Length<br>OD<br>Minimum Bend Radius<br>Example Applications | Non-contact remote sensing<br><br>-50 to 100°C<br>1 second<br>2 m, 5 m, or 10 m<br>3 mm<br>16 mm<br>Testing at low temperatures or in fixed spaces. |  |

Notes:
1. Listed probe lengths are standard. Custom probe lengths available upon request.
2. Listed minimum bend radii are for short term use (<2 hrs.) unless otherwise specified.

## TECHNICAL DATA CONTINUED

| Probes | | |
|---|---|---|
| **Type** | **Specifications** | **Diagram** |
| **DipTip Probe**<br>Application<br><br>Exposure Temperature Range<br>Length<br>Response Time | <br>Monitoring Winding Hot Spot<br><br>-30 to 200°C<br>1 m to 16 m<br>2.0 seconds in stirred water |  |
| **Compression Gland Feedthrough**<br><br>Material<br>Compatible Probes<br>Temperature Range<br>Maximum Vacuum<br>Maximum Pressure<br>Sealing Gland | <br><br>304 Stainless Steel<br>STF and STR<br>-20 to 230°C<br>$5e10^{-8}$ Torr<br>3,000 psi<br>Viton |  |

| Extensions | | | |
|---|---|---|---|
| **Type** | **Exposure Temp. Range (°C)** | **Standard Lengths Available** | **Notes** |
| SST (general purpose) | -40 to 105 | 2 m, 5 m, or 10 m | -Optional use with STF, STS, and STR probes<br>-Standard jacketed extension cable for normal use |
| FOC-ST (medical) | 0 to 80 | 2 m, 5 m, or 10 m | Required extension cable for use with STB general probe |
| Single Fiber | 0 to 80 | 1 m to 50 m | Used with DipTip Rugged Probes |
| Four Fiber | -25 to 100 | | |

## ABOUT ADVANCED ENERGY

Advanced Energy (AE) has devoted more than four decades to perfecting power for its global customers. AE designs and manufactures highly engineered, precision power conversion, measurement and control solutions for mission-critical applications and processes.

Our products enable customer innovation in complex applications for a wide range of industries including semiconductor equipment, industrial, manufacturing, telecommunications, data center computing, and medical. With deep applications know-how and responsive service and support across the globe, we build collaborative partnerships to meet rapid technological developments, propel growth for our customers, and innovate the future of power.

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