APPLICATION NOTE

FLEXIBLE, RELIABLE, ACCURATE. FIBER OPTIC SENSORS FOR PRECISION TEMPERATURE MEASUREMENT AND SENSING APPLICATIONS

The Opportunity

In harsh environments such as semiconductor manufacturing, power electronics, and medical imaging, accurate temperature sensing is critical. That's why Advanced Energy (AE) is a leader in offering highly reliable and precise fiber optic sensors for temperature measurement and sensing applications.

Our Solutions

Our sensors are proven and dependable when conventional sensors would fail.

The Luxtron® patented FluorOptic® technology offers a variety of options to meet the needs of many applications, from aerospace and civil engineering to oil and gas industries. These fiber optic sensors are an ideal solution for monitoring temperature and ensuring process efficiency and product quality. In addition, our WaveCapture™ Fiber Bragg Grating (FBG) sensing solutions offer a reliable, cost-effective way to monitor strain and temperature in structures and materials.

All of AE's FOT probes are immune to electromagnetic interference (EMI), making them more accurate than other measurement methods.

The Options. The Benefits. The Reason Our Probes Are Trusted.

STF Probe: This popular solution is best for general purpose liquid and surface measurement applications, including measuring PCBAs for trouble-shooting or diagnostics, as well as measuring induction coils or any surface that will be exposed to EMI. It also offers wide temperature ranges. Its jacket can withstand up to 295°C long term and just over 330°C for short-term use.

STS Probe: This probe has a thin elastomer layer over the tip, making it more delicate than other solutions. It performs best in darker environments and has a jacket with a broader temperature limit than other probes. Its last 10 cm is more rigid than the STF probe and has a very fast response, however the surface can wear over time so replaceable tips are available.

STP Probe: Instead of phosphor on the tip, the phosphor is mixed with a binder that is then adhered to the measurement surface, making it especially useful if the surface is irregularly shaped.

STB Probe: Designed for medical R&D applications, this probe's jacket is made from medical-grade Tefzel™ plastic. With an outer diameter of just 0.5 mm, it must be used with the FOC-ST extensions.

AccuProbe + AccuDisc™: With M6 threads on the outer diameter, these are perfect for hard-to-reach areas. The AccuDisc's remote sensing capabilities help with any thermal offset, resulting in a more accurate measurement.

ABOUT ADVANCED ENERGY

Advanced Energy (AE) has devoted more than four decades to perfecting power for its global customers. We design and manufacture 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.

PRECISION | POWER | PERFORMANCE | TRUST

Advanced Energy

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