

PRESS RELEASE

## Advanced Energy's 4100T optical fiber thermometer improves temperature accuracy and control in advanced semiconductor processes

**With better measurement accuracy and higher read rate, the 4100T multi-channel, non-contact optical fiber thermometer enables easy upgrade from market-leading OR4000T**

**DENVER, Colo., November 23, 2021** — Advanced Energy (Nasdaq: AEIS) – a global leader in highly engineered, precision power conversion, measurement and control solutions – today introduced the Sekidenko 4100T pyrometer. A drop-in replacement for Advanced Energy's market-leading OR4000T, the 4100T optical fiber thermometer (OFT) delivers exceptional temperature measurement accuracy, a wider temperature range and simultaneous multi-channel maximum read speed for leading-edge semiconductor and adjacent thin-film applications.

“Advanced Energy's pyrometers are used by top semiconductor OEMs due to our industry-leading performance. The 4100T further extends our leadership with many enhancements beyond our industry-leading OR4000T, enabling our customers to reach unmatched levels of process control and manufacturability,” said Jeff Hebb, vice president of marketing and applications, critical sensing and control at Advanced Energy. “The feature-rich 4100T is a



‘drop-in’ replacement for OR4000T, making upgrades very convenient for our existing customers. In addition, it supports EtherCAT, serial and USB communications.”

Up to four different temperatures can be measured simultaneously using the 4100T, which reduces the number of control boxes required for multi-point control, shrinks the form factor and delivers cost-saving benefits. The high read rate of up to 1 kHz per channel enables faster thermal response for better temperature control and uniformity of leading-edge applications such as rapid thermal processing, laser annealing, atomic layer deposition and other advanced deposition technologies.

The multi-channel OFT with application-specific, configurable wavelength provides exceptional accuracy, repeatability, reliability and fast read rates for the most demanding temperature measurements. Traditional thermocouple and other contact sensor measurements are undesirable for applications where physical contact with the wafer can cause damage, contamination or measurement errors due to heat transfer effects. The 4100T measures temperature directly with  $\pm 1.5^{\circ}\text{C}$  accuracy in situ without making contact with the object of interest. In addition to eliminating these potential contact measurement issues, the 4100T is also an optimal solution for applications where the wafer is in motion or is being processed at very high temperatures or high ramp rates.

**Advanced Energy Industries, Inc.**

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For detailed product information and technical specifications, visit <https://www.advancedenergy.com/products/temperature-measurement/thermal-measurement-optical-pyrometers-power-controllers/semiconductorthin-film-pyrometers/sekidenko-4100t/>.

### **About Advanced Energy**

Advanced Energy (Nasdaq: AEIS) is a global leader in the design and manufacturing of highly engineered, precision power conversion, measurement and control solutions for mission-critical applications and processes. AE's power solutions enable customer innovation in complex applications for a wide range of industries including semiconductor equipment, industrial, manufacturing, telecommunications, data center computing and healthcare. With engineering know-how and responsive service and support around the globe, the company builds collaborative partnerships to meet technology advances, propel growth for its customers and innovate the future of power. Advanced Energy has devoted four decades to perfecting power for its global customers and is headquartered in Denver, Colorado, USA. For more information, visit [www.advancedenergy.com](http://www.advancedenergy.com).

Advanced Energy | Precision. Power. Performance.

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