Accelovant's Kristonium™ Fiber Optic Sensors Achieve Unprecedented Reliability in Extreme Environments

Field data demonstrating long stability to 450°C, transforming temperature monitoring for semiconductor manufacturing and critical power

VANCOUVER, BRITISH COLUMBIA, CANADA, June 27, 2025 /EINPresswire.com/ -- Accelovant, an innovative developer of fiber-optic sensing solutions for semiconductor, industrial, IoT, manufacturing, Power, and data center markets, unveiled today revolutionary field data confirming its Kristonium™ based fiber optic temperature sensors deliver up to 10 years of continuous operation to 450°C - a paradigm shift for industries reliant on extreme temperature measurements in harsh environments. This milestone addresses the critical limitations of conventional fiber optic sensors, which can drift-fail at 450°C or require replacement every 90 days in high-heat applications like semiconductor fabrication.

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>
> *Ondrej Mecl*

The Extreme-Temperature Barrier Shattered

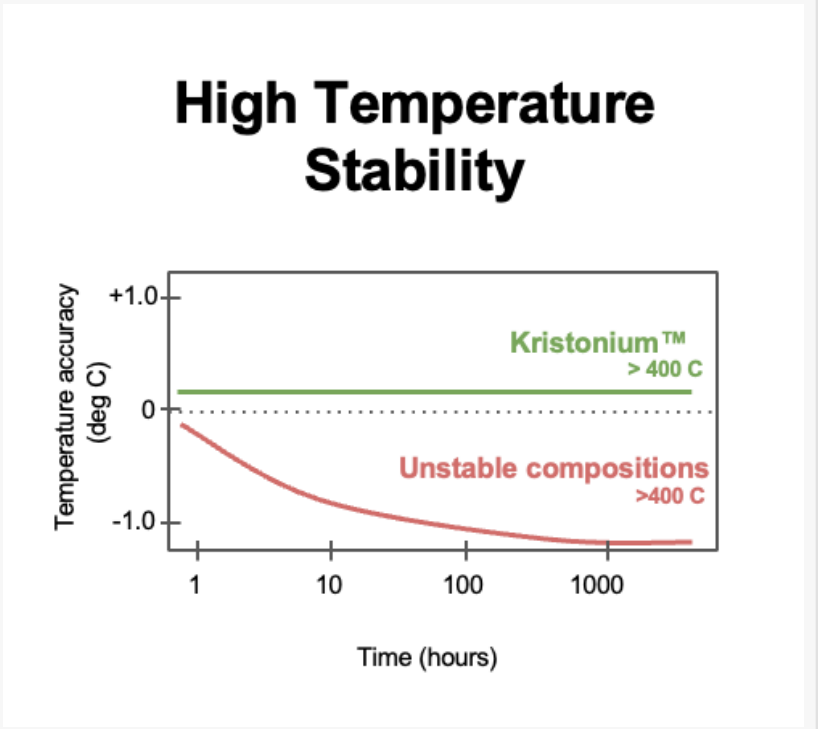
Fiber optic sensors are indispensable for their immunity to electromagnetic interference, high-voltage, and RF conditions. Legacy sensors can degrade rapidly above 300°C, suffering irreversible accuracy loss. Kristonium™, Accelovant’s patented sensor systems eliminate these failures, enabling unmatched service life in semiconductor processes, and higher uptime in critical power hotspot applications such as switch gear and AI data centers.

Industry Validation

"Kristonium isn’t incremental—it’s foundational," stated Ondrej Mecl, Accelovant Chief Solutions Officer. "Where legacy sensors drift catastrophically at 450°C, our sensors drift less than 0.05°C. This eliminates the need for calibration, reduces downtime and service intervals, and reduces life cycle cost of Accelovant sensors.”

Independent verification underscores performance leadership

Accelerating adoption by top-tier semiconductor equipment manufacturers is now validated through rigorous comparative testing, with client data confirming Accelovant sensors deliver unmatched thermal stability at extreme temperatures—both in absolute performance and against competing solutions.



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Accelovant's innovation has received international recognition by both customers and industry experts. Frost & Sullivan recognized Accelovant with the 2023 New Product Innovation Award for setting new standards in RF/EM-immune fiber-optic temperature measurement in semiconductor wafer fabrication.

About Accelovant:
Headquartered in North Vancouver, British Columbia, Accelovant a leader in the technology, design and manufacture of fiber-optic sensing solutions for semiconductor, industrial, IoT, medical, and data center markets. With a vertically integrated approach that combines materials science mastery with deep domain expertise, Accelovant delivers measurement solutions that increase yields, decrease costs, and provides exceptional domain and product support. Details are available at www.accelovant.com.

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