



FOR IMMEDIATE RELEASE:

Excelitas Introduces Ultra-Low Power DigiPyro Sensor for Battery-Operated Motion Detection Applications

PYD 2597 delivers extended battery life through low-voltage operation and wake-up mode



Pittsburgh, Pa., January 14, 2026 – [Excelitas®](#), a leading provider of advanced, life-enriching technologies that make a difference, serving global market leaders in the life sciences, advanced industrial, next-generation semiconductor and avionics sectors, today introduces the [PYD 2597 Ultra-Low Power DigiPyro®](#), a new passive infrared (PIR) sensor designed to significantly extend battery life in remote and battery-operated motion detection applications.

Expanding the DigiPyro Series, the PYD 2597 delivers ultra-low power operation with supply voltages as low as 1.4 V and current consumption of just 2 μ A at 1.8 V, making it one of the lowest-power digital PIR sensors available on the market. The device is fully integrated with two pyroelectric elements and manufactured using fully RoHS-compliant materials, supporting environmentally responsible designs without compromising performance.

Featuring Excelitas' signature wake-up mode, the PYD 2597 enables intelligent motion detection while minimizing system power draw. Its integrated Motion Detection Unit (MDU) with interrupt functionality allows systems to remain in low-power standby until motion is detected—helping designers extend battery life in smart home, security and energy-saving applications. A one-wire digital interface further simplifies system integration and reduces overall design complexity.

Key features:

- **Ultra-Low Power Consumption** – Operates from 1.4 V to 3.6 V with supply currents as low as 2 μ A at 1.8 V, maximizing battery life in wireless and remote devices.
- **Integrated Digitization** – Configurable MDU with interrupt function simplifies system design and reduces the need for external processing.
- **Robust Pyroelectric Elements** – Improved temperature stability, faster settling time and enhanced resilience to rapid temperature changes.
- **High Performance in a Compact Package** – Typical responsivity of 3.2 kV/W with low noise performance, housed in a TO-5 package with a 130° field of view.
- **Reliable Operation in Electrically Noisy Environments** – Excellent immunity to electromagnetic interference supports dependable performance in real-world applications.
- **RoHS-Compliant Design** – Fully compliant materials support sustainable product development.

The PYD 2597 is well suited for long-range motion detection, intrusion alarms, energy-saving systems, horizontal mounting designs and battery-operated devices. Compared with alternative

digital PIR sensors and camera- or radar-based motion detection technologies, Excelitas' PIR solution delivers lower power consumption, lower cost and inherent privacy advantages, while also serving as an ideal wake-up sensor for higher-power systems.

"The PYD 2597 was designed to address one of the biggest challenges in PIR-based motion detection—minimizing power consumption in always-on applications," said Hermann Karagoezoglu, Product Manager, IR Sensing at Excelitas. "Its ultra-low current operation and low-voltage capability enable efficient, battery-powered designs without compromising detection performance."

The PYD 2597 Ultra-Low Power DigiPyro sensor will be launched at SPIE [Photonics West 2026](#) (Booth #637), where attendees can learn more about the product and Excelitas' full range of imaging, sensing, detection and laser solutions. For more information about the PYD 2597 and the DigiPyro Series, please visit: <https://www.excelitas.com/product/pyd-2597-ultra-low-power-digipyro-pyrodetector>.

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About Excelitas

Excelitas is a leading provider of advanced, life-enriching technologies that make a difference, serving global market leaders in the life sciences, advanced industrial, next-generation semiconductor and avionics end markets. Headquartered in Pittsburgh, PA, USA, Excelitas is an essential partner in the design, development and manufacture of advanced technologies, offering leading-edge innovation in sensing, detection, imaging, optics and specialty illumination for customers worldwide. Excelitas is at the forefront of addressing many of the relevant megatrends impacting the world today, including precision medicine, industrial automation, artificial intelligence and connected devices (IoT).

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