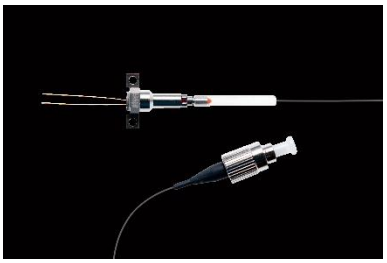
FOR IMMEDIATE RELEASE:

Excelitas Launches C30733EQC-3 InGaAs Avalanche Photodiode for Distributed Fiber Sensing Applications

New APD delivers high gain and fast recovery time for enhanced sensitivity and improved detection of Raman-scattered signals in optical fibers



Pittsburgh, Pa., December 17, 2025 – 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 announced the C30733EQC-3 InGaAs Avalanche Photodiode (APD). As the latest addition to Excelitas' C30733 Series, the new APD delivers high gain of up to 100 and fast recovery time at wavelengths exceeding 1550 nm with cutting-edge noise and bandwidth performance, enabling superior sensitivity and timing in high-frequency distributed fiber sensing.

Designed to support demanding applications such as fiber sensing, Distributed Temperature Sensing (DTS), Distributed Acoustic Sensing (DAS), Distributed Optical Fiber Sensing (DOFS) and strain measurements, the C30733EQC-3 enhances detection of weak Raman-scattered signals at wavelengths exceeding 1550 nm. Its high gain capability significantly improves sensitivity and dynamic range over long distances, while faster recovery time enables accurate detection of rapid transient events, supporting longer sensing ranges, improved spatial resolution and higher overall measurement accuracy.

"With the C30733EQC-3, we focused on delivering what fiber sensing designers need most: high gain and fast recovery without compromising noise performance," said Richard Simons, Program Director at Excelitas. "By enabling gain up to 100 and faster signal recovery, this APD allows engineers to detect extremely low-level backscatter signals with greater precision and timing accuracy, supporting the next generation of high-performance distributed fiber sensing and OTDR systems."

The C30733EQC-3 features a broad spectral response from 1000–1700 nm for operation across key telecom O, E, S, C and L bands. Combined with a small 30 µm active area and typical bandwidth of 2 GHz, the device delivers fast transient signal detection and precise spatial resolution required for time-critical fiber-optic measurements in high-loss and long-distance sensing environments.

Key product features:

- **High gain of up to 100**: Enhances sensitivity to weak backscattered and Raman-scattered signals, extending sensing range and improving dynamic range in high-loss fiber links.
- **Fast recovery time (>1550 nm)**: Enables accurate detection of rapid transient events and improves timing resolution for high-frequency DOFS, DTS and DAS applications.

- **Spectral response of 1000–1700 nm**: Enables multi-wavelength operation across O, E, S, C and L telecom bands.
- **High quantum efficiency (75% between 1100–1550 nm)**: Improves sensitivity in Raman-based sensing and OTDR systems.
- **Typical bandwidth of 2 GHz**: Supports high-frequency signal detection and fast system response.
- **Low dark noise (0.3 pA/√Hz at gain M=40) and dark current (0.5 nA at gain M=40):** Allows high-gain operation without compromising accuracy.
- **Low NEP (down to 8 fW/√Hz at gain M=40)**: Improves detection of extremely weak optical signals.
- **Small 30 µm active area**: Enables precise spatial resolution in distributed fiber sensing arrays.

Excelitas will debut the C30733EQC-3 InGaAs APD January 20 – 22, 2026 at SPIE Photonics West 2026 in San Francisco, CA in Booth #637. For additional information, visit: https://www.excelitas.com/product/c30733-ingaas-avalanche-photodiodes-series.

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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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