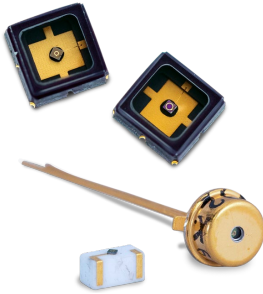




FOR IMMEDIATE RELEASE:

Excelitas Technologies Unveils Enhanced InGaAs Avalanche Photodiodes for Use in Range-Finding and LiDAR Systems

New APD design enables increased range from the same laser output power



Pittsburgh, Pa., November 12, 2024 – [Excelitas Technologies® Corp.](#), the leading provider of advanced, life-enriching technologies that make a difference, serving global market leaders in the life sciences, advanced industrial, next-generation semiconductor, aerospace and defense end markets, today announced an enhanced version of its [C30645 / C30662 InGaAs Avalanche Photodiodes \(APDs\)](#). The re-engineered diodes leverage improvements in Excelitas' III/V wafer growth and processing architecture to enable cutting-edge noise

specifications. The new design provides customers with better Signal-to-Noise-Ratios (SNR), and therefore, increased range from the same laser output power.

Additional benefits of the enhanced architecture include:

- Increased range for LiDAR, laser scanners and range finders
- High volume SMD packages
- Improved SNR for optical time-domain reflectometer (OTDR)
- Space-qualified optical communication systems

“We added a low noise option to the C30645 and C30662 Series APDs to enable improved system-level performance for a wide range of applications,” said Richard Simons, Product Manager – Photon Detection at Excelitas. “The increased SNR allows better discrimination of the signal from noise, which in turn, helps OEM customers achieve better accuracy, longer range and reduced power requirements.”

Excelitas' C30645 and C30662 Series APDs are high-speed, large-area InGaAs/InP avalanche photodiodes that provide large quantum efficiency (QE), high responsivity and low noise in the spectral range between 1000 nm and 1700 nm. The enhanced diodes are optimized at wavelengths of 1300 nm and 1550 nm, making them suitable for use in eye-safe laser range-finding and LiDAR systems. To allow for easy integration into high volume applications, the APDs are supplied in a hermetically sealed TO-18 package, on a ceramic carrier, or in a ceramic surface mount package.

Recognizing that different applications have different performance requirements, Excelitas offers a wide range of customization of these photodiodes to meet design challenges. Responsivity and noise screening, custom device testing and incorporating band pass filters are among the application-specific solutions available.



Excelitas will showcase the enhanced C30645 and C30662 InGaAs APDs at [Electronica 2024](#) in Hall B3, booth #303, November 12-15 in München, Germany. For additional information, visit <https://www.excelitas.com/product-category/high-performance-ingaas-apds>.

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About Excelitas Technologies

Excelitas is the leading provider of advanced, life-enriching technologies that make a difference, serving global market leaders in the life sciences, advanced industrial, next-generation semiconductor, aerospace and defense end markets. Headquartered in Pittsburgh, PA, USA, Excelitas is an essential partner in the design, development and manufacture of photonic technologies, offering leading-edge innovation in sensing, detection, imaging, optics and specialty illumination for customers worldwide.

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