



FOR IMMEDIATE RELEASE:

Excelitas Introduces C30683-1550 Series InGaAs APD Modules for High-Speed, Low-Light Detection

New integrated APD and TIA modules deliver up to 450 MHz bandwidth for LiDAR, sensing and analytical instrumentation



PITTSBURGH, Pa., April 16, 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 end markets, today introduced the [C30683-1550 Series](#), a new family of InGaAs avalanche photodiode (APD) modules with integrated transimpedance amplifiers (TIA), designed for high-speed, extreme low-light detection applications.

The C30683-1550 Series integrates a high-performance InGaAs APD with a low-noise TIA in a hermetically sealed TO-8 package, enabling reliable, low-noise operation in demanding environments. Optimized for detection across the 1100 to 1700 nm wavelength range, the modules support high-speed signal acquisition and free-space optical communication.

The series includes two models—C30683-1550-R08DH and C30683-1550-R2BH—offering bandwidths up to 450 MHz and low noise equivalent power (NEP) as low as 250 fW/ $\sqrt{\text{Hz}}$, enabling improved sensitivity and faster response in low-light conditions.

“The C30683-1550 Series expands our portfolio of high-performance photodetectors with a solution that combines speed, sensitivity and integration,” said Richard Simons, Program Director for Photon Detection, Excelitas. “By integrating the APD with a low-noise TIA in a compact package, we are helping customers simplify system design while achieving the performance required for advanced sensing applications.”

Designed to maintain stable performance across varying operating conditions, the C30683-1550 Series features an integrated thermistor for temperature compensation of the high-voltage supply, supporting consistent responsivity in precision applications.

Key features and benefits include:

- High system bandwidth up to 450 MHz for high-speed detection
- Low noise equivalent power (NEP) of 250 fW/ $\sqrt{\text{Hz}}$ for enhanced sensitivity
- High responsivity of 120 kV/W at 1550 nm
- Integrated APD and first gain stage to simplify system design

The C30683-1550 Series is well suited for applications including LiDAR and range finding, distributed temperature sensing (DTS), confocal microscopy and analytical instrumentation. Customization options are available, including bandwidth and gain optimization, alternative APDs and FC-connectorized packaging, enabling flexibility for specific design requirements.

The C30683-1550 Series will be on display at [SPIE Defense + Security](#) (April 28–30, 2026, Oxon Hill, MD) and [Sensors Converge](#) (May 5–7, 2026, Santa Clara, CA), presented together with the recently launched [C30683-900-R5DH silicon APDs](#). For more information, visit www.excelitas.com.

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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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