

MEDIA ADVISORY

April 15, 2020

**Excelitas Technologies to Deliver Silicon Avalanche Photodiode Presentation
at the SPIE Defense + Commercial Sensing Digital Forum**

WHO: [Excelitas Technologies® Corp.](#), a global technology leader delivering innovative, customized photonic solutions, will present a session entitled, “Excess Noise Factor of Front and Back Illuminated Silicon Avalanche Photodiodes,” during the [SPIE Defense + Commercial Sensing Digital Forum](#), April 27 – May 1, 2020.

WHAT: The Digital Forum session will discuss the impact of a silicon avalanche photodiode (APD) structure and light detection wavelength on excess noise factor (ENF). It will review the McIntyre APD theory developing the gain and ENF equations to model and predict an APDs performance from 400 to 1000 nm whether it is front or back-illuminated.

The research conducted for the session features a review of different commercially-produced APDs for LIDAR and other applications. APDs with different junction profiles found the characterization of ENF to match McIntyre’s theory for experimental k-factors (ratio of the hole impact ionization rate to that of electrons) ranging from roughly 0.05 to 0.008. The session will describe the experimental setup used to measure and highlight the differences between the studied structures. It will also provide participants with guidance for selecting the proper APD for achieving the best signal to noise ratio based on application requirements.

Session presenter Philippe Bérard, Ph.D., Senior Member of Technical Staff at Excelitas, will respond to posted questions about his presentation throughout the event, and is available by phone to provide updates on Excelitas’ APD solutions.

WHEN: Digital Forum: April 27 – May 1, 2020

WHERE: All presentations will be included in the [SPIE Digital Library](#), organized by conference proceedings section, and available through search. After the week of the live Digital Forum, presentations will continue to be available to subscribers and subscribing institutions to the SPIE Digital Library.

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About Excelitas Technologies

Excelitas Technologies® Corp. is a photonics technology leader focused on delivering innovative, high-performance, market-driven solutions to meet the lighting, optronics, detection and optical technology needs of our OEM customers. Serving a vast array of applications across biomedical, scientific, safety, security, consumer products, semiconductor, industrial manufacturing, defense and aerospace sectors, Excelitas stands committed to enabling our customers’ success in their end-markets. Our photonics team consists of 7,000 professionals working across North America, Europe and Asia, to serve customers worldwide. Connect with Excelitas on [Facebook](#), [LinkedIn](#) and [Twitter](#).



Visit <http://www.excelitas.com> for more information.

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