

# PRESS RELEASE

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## **POET Technologies Targets New Markets for Co-Packaged Optics and Optical Sensing Applications with *LightBar-C™* Product**

**TORONTO, Ontario, February 23, 2021** – POET Technologies Inc. (“POET” or the “Company”) (TSX Venture: PTK; OTCQX: POETF), the designer and developer of the POET Optical Interposer and Photonic Integrated Circuits (PICs) for the data center and tele-communication markets, announced that it has extended the Optical Interposer into new applications and markets with a fully-integrated, multiplexed light-source for optical computing chipsets and sensing applications, named “*LightBar-C™*”.

The POET Optical Interposer platform has been extended and validated with the intrinsic features to support Conventional Band (“C-band”) and Long Band (“L-band”) lasers that produce light in a frequency range of 1530nm to 1625nm. POET has designed, developed and demonstrated cooled lasers for the Optical Interposer platform with up to 90mW of power operating at room temperature. In addition, the Company has designed and demonstrated a Dense Wavelength Division Multiplexer (“DWDM”) embedded in the Optical Interposer waveguide layer that allows channel spacings of 200GHz, providing the high density and broadband requirements needed for high-performance optical sensing and Co-Packaged Optics (CPO) applications, such as optical computing chipsets for Artificial Intelligence.

The Company’s first product to incorporate all of these features is the POET *LightBar-C*, which includes integrated spot-size converters that minimize coupling losses and increase power efficiency of components, such as multiplexers and detectors. The product provides low-loss fiber and free-space coupling, all specifically developed for highly integrated solutions within the C-band frequencies. The *LightBar-C* also utilizes a versatile and integrated laser source with multiple wavelengths (from 2 up to 8) multiplexed in the C-Band.

The optical bandwidth in the C-band is in the “eye-safe” region, which makes it ideal for free-space sensing applications. Consequently, C-band light solutions are expected to be foundational to the next generation of LiDAR solutions where high sensitivity, high power, reduced atmospheric influence and eye safety are presumed to be essential requirements.

“The mega trends of Cloud Computing, 5G Communications and the rapid growth of Artificial Intelligence are spawning numerous applications and driving increasing volume demands for both high-performance lasers and integrated photonics solutions. These applications require a step function improvement in packaging and scalability,” commented Dr. Suresh Venkatesan, Chairman & CEO of POET Technologies. “Current photonics products are still assembled and tested using conventional and esoteric packaging technologies that ultimately limit production scalability. POET’s Optical Interposer addresses key

integration and scalability challenges with a unified wafer-scale hybrid integration platform that seamlessly merges the benefits of Planar Lightwave Circuits (PLCs) and electrical interposer functionality for co-packaging electronics and optics within a single chip-scale package.”

As with previously announced Optical Interposer-based solutions, POET’s unique method of hybrid integration enables products with small form-factors and high performance. POET’s wafer-scale hybrid integration approach simplifies the manufacturing, assembly and testing of the passively assembled optical sub-system while simultaneously maximizing power efficiency with reduced coupling losses through the complete link.

The extensibility to the C-band frequency range comprised of 15xx wavelengths of light further exemplifies the value of the Company’s hybrid platform approach, as the same fundamental Optical Interposer manufacturing process and design kits can be utilized to deliver solutions across a wide range of applications.

### **“Beyond The Press Release”**

POET Technologies goes “Beyond The Press Release” to discuss today’s news. Shareholders and other interested parties are encouraged to check back at the following link before market open on the morning of Wednesday, February 24, 2021.

<https://agoracom.com/ir/POETTechnologies/forums/discussion/topics/755832-poet-goes-beyond-the-press-release/messages/2304791#message>

### **About POET Technologies Inc.**

POET Technologies is a design and development company offering integration solutions based on the POET Optical Interposer™ a novel platform that allows the seamless integration of electronic and photonic devices into a single multi-chip module using advanced wafer-level semiconductor manufacturing techniques and packaging methods. POET’s Optical Interposer eliminates costly components and labor-intensive assembly, alignment, burn-in and testing methods employed in conventional photonics. The cost-efficient integration scheme and scalability of the POET Optical Interposer brings value to any device or system that integrates electronics and photonics, including some of the highest growth areas of computing, such as Artificial Intelligence (AI), the Internet of Things (IoT), autonomous vehicles and high-speed networking for cloud service providers and data centers. POET is headquartered in Toronto, with operations in Allentown, PA and Singapore. More information may be obtained at [www.poet-technologies.com](http://www.poet-technologies.com).

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