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20 February 2025

BluGlass receives $120k order for specialised GaN laser bar products from repeat customer

Highlights

- Receives A$120,000 order from repeat customer for highly specialised gallium nitride (GaN) laser products from a leading US research university
- Follows successful demonstration of performance improvements over commercially available laser diode bars
- BluGlass' laser bars have demonstrated superior coherence and phase locking in high-power blue laser arrays, performance advantages critical to advancing defence, communications, and imaging technologies.

Global semiconductor developer, BluGlass Limited, pioneering advanced visible lasers for the quantum, defence, and biotech markets has received a A$120,000 order for semi-custom Gallium Nitride (GaN) laser diode bar products, from the College of Optics and Photonics (CREOL), University of Central Florida, and a repeat customer[1].

The order follows the university's successful demonstration of significant performance improvements using BluGlass' specialised GaN laser bars in a Coherent Beam Combining (CBC) array. BluGlass' semi-custom designs have shown superior coherence and phase locking in high-power blue laser arrays, demonstrating improved performance and precision, compared to commercially available laser bars[2]. The CBC configuration merges light emitted from an array of broad linewidth multi-mode lasers into a high-power single-mode, narrow linewidth, coherent beam.

This coherent beam combining technique allows the customer to produce powerful, high-quality blue laser beams that maintain superior beam quality, phase stability, and narrow line widths - critical for next-generation technologies, including underwater and aviation LiDAR systems that map the seafloor or monitor clear air turbulence, advanced space research and communications, and ultra-sensitive quantum sensors.

CEO Jim Haden said: "This repeat order validates the exceptional performance of our custom GaN laser technology, demonstrating our ability to help customers solve critical challenges and pioneer next-generation visible laser applications. High-power coherent GaN lasers can transform defence and dual-use capabilities from secure underwater communications and imaging, and clear-air turbulence monitoring in atmospheric LiDAR, to countermeasures and jamming systems that disrupt enemy optics with high-intensity beams.

"These performance advantages help position the Company for future growth, and building on this success, we will leverage our partnership with this leading university to pursue critical defence applications that require the superior coherence, stability, and precision of BluGlass' GaN lasers."

This announcement has been approved for release by the BluGlass Board.

1. As previously announced to the market on 19 September 2023 - '*BluGlass receives custom laser order from repeat customer'*
2. ACS Publication, *"Coherence and Phase-Locking in High-power, Broad-Area, Highly Heterogeneous Blue Diode Arrays."*

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About BluGlass

BluGlass Limited (ASX:BLG) is a leading supplier of GaN laser diode products to the global photonics industry, focused on the industrial, defence, bio-medical, and scientific markets.

Listed on the ASX, BluGlass is one of just a handful of end-to-end GaN laser manufacturers globally. Its operations in Australia and the US offer cutting-edge, custom laser diode development and manufacturing, from small-batch custom lasers to medium and high-volume off-the-shelf products.

Its proprietary low temperature, low hydrogen, remote plasma chemical vapour deposition (RPCVD) manufacturing technology and novel device architectures are internationally recognised, and provide the potential to create brighter, better performing lasers to power the devices of tomorrow.