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## BluGlass enters collaboration with US lighting company, Luminus

### Key Points

- BluGlass and Luminus to collaborate on high performance LED devices for projector LEDs
- Luminus is an international leader in the development of leading-edge LED technology for high performance, high value LEDs - including industrial, medical, horticulture and entertainment applications
- The collaboration is to evaluate BluGlass' cascade LED technology and demonstrate LED projector applications

Australian semiconductor technology developer BluGlass Limited (ASX: BLG) and California-based LED innovator, Luminus, have entered into a non-exclusive collaboration agreement to co-develop cascade LEDs for the rapidly growing entertainment, display and projector application markets.

Luminus is keen to exploit the performance potential of BluGlass' tunnel junction technology, developed using the Company's unique remote plasma chemical vapour deposition (RPCVD) capabilities, to further improve their advanced projector lighting technologies.

Projectors require ultra-high-performance LEDs and could benefit from the smaller form factor, higher performance (intensity) and lower cost benefits that RPCVD-enabled cascade LEDs potentially offer. Projectors are also heat-sensitive devices, ideally operated at lower current densities to achieve peak efficiencies - a key benefit enabled by cascade LEDs. Traditional LEDs suffer from efficiency droop as current density is raised to drive higher light output intensities, resulting in significant performance losses in the form of heat.

Luminus is an industry leader in developing leading-edge LED technology for high performance, high value LEDs in industrial, medical, horticulture and entertainment applications. Luminus works hand-in-hand with the automotive, display and projection industries' most innovative companies to illuminate everything from heads-up displays to projection systems for the next generation of vehicles and consumer technologies.

BluGlass is developing and commercialising a unique platform semiconductor technology called RPCVD. RPCVD is a low-temperature, ammonia-free alternative to traditional manufacturing technologies. RPCVD offers electronics manufacturers a number of performance advantages; including higher performing, lower cost devices. The Company recently demonstrated a technical breakthrough with its patented 'active as grown' RPCVD tunnel junctions for LED wafers. These tunnel junctions provide a solution for the industry-wide challenge of efficiency droop, by combining multiple LEDs in a single vertical LED stack – with the potential to generate greater light output for less power.

The two companies will work together to combine their unique technology advantages to demonstrate high performance LEDs for the entertainment, display and projection markets. Each party will bear their own costs for the initial trials. The purpose of the collaboration will be to evaluate RPCVD tunnel junctions and demonstrate cascade LED performance in these markets.

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"Luminus is very excited to work closely together with BluGlass to further enhance our technology for our ultra-high-performance LED specialty lighting markets" said Decai Sun, CEO of Luminus Devices. "This will give our customers more design flexibility to create even more unique and differentiated products".

Giles Bourne, CEO and Managing Director of BluGlass added "BluGlass is continuing to work with the world's leading innovators, that are developing the next generation of lighting technologies in high-growth, high value markets. We are excited to announce this collaboration with Luminus to further develop the unique advantages of RPCVD tunnel junctions for projection applications. This market represents a strong fit for our unique technology".

This announcement has been approved for release by the Board.

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#### About Luminus Devices, Inc.

Luminus, Inc. develops and markets solid-state lighting solutions (SSL) to help its customers migrate from conventional lamp technologies to long-life and energy-efficient LED illumination. Combining technology originated from the Massachusetts Institute of Technology (MIT) with innovation from Silicon Valley, Luminus offers a comprehensive range of LED solutions for global lighting markets as well as high-output specialty lighting solutions for performance-driven markets including consumer displays, entertainment lighting and medical applications. Luminus is headquartered in Sunnyvale, California.

**For additional information** please visit [www.luminus.com](http://www.luminus.com)

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#### About BluGlass

BluGlass Limited (ASX: BLG) is a global leader commercialising a breakthrough technology using Remote Plasma Chemical Vapour Deposition (RPCVD) for the manufacture of high-performance LEDs and other devices. BluGlass has invented a new process using RPCVD to grow advanced materials such as gallium nitride (GaN) and indium gallium nitride (InGaN). These materials are crucial to the production of high-efficiency devices such as power electronics and high-brightness (LEDs) used in next-generation vehicle lighting, virtual reality systems and device backlighting.

The RPCVD technology, because of its low temperature and flexible nature, offers many potential benefits over existing technologies including higher efficiency, lower cost, substrate flexibility (including GaN on silicon), and scalability.

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