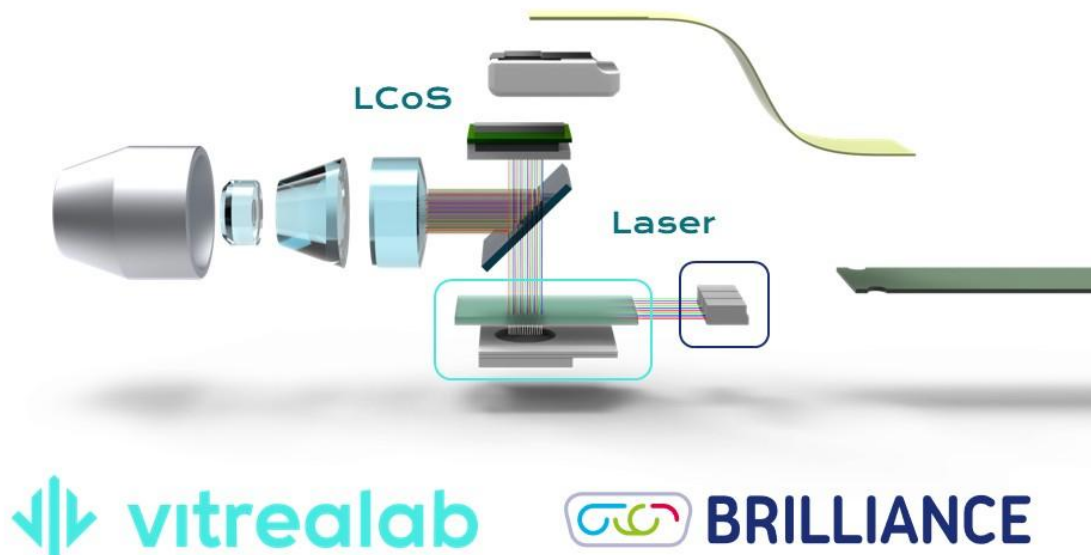


# Vitreallab and Brilliance Announce Strategic Partnership to Advance Game-Changing Laser-LCoS-Based AR Display Technology

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**Vitreallab GmbH**, a developer of Photonic Integrated Circuits (PICs) for laser-LCoS-based AR light engines, and **Brilliance B.V.**, a manufacturer of compact and efficient RGB laserchips for AR smart glasses, announced today a strategic cooperation to explore new approaches in laser illumination for augmented reality (AR). The collaboration is aimed at creating more compact, efficient, and high-performance display systems for the next generation of AR smart glasses and related applications.



At the technical core of this cooperation lies the integration of Brilliance's proprietary RGB laserchip *Neptune* into Vitrealab's *Quantum Light Chip*. Brilliance's laser diode coupling technology ensures efficient injection of coherent light into miniature optical systems while maintaining stability and polarization. At the same time, it reduces the number of optical elements. Vitrealab's PIC technology then guides this laser light with minimal losses, distributing it into arrays of beams with highly uniform intensity, precise divergence angles, and excellent beam quality. This combination makes it possible to preserve polarization throughout the system, which is critical for efficient LCoS modulation, while also achieving superior brightness and optical uniformity across the display field.

The result is a laser illumination source that addresses one of the key bottlenecks in AR optics: how to achieve wide fields of view, high brightness, and low power consumption in a form factor small enough to fit into lightweight smart glasses. The approach is inherently scalable, as both laser diodes and photonic integrated circuits can be manufactured in volume, making this technology a strong candidate for future consumer-grade AR products.

“In response to customer requests for smaller light engines, we decided to pursue a compact design and join forces with Brilliance,” said Dr. Jonas Zeuner, CTO of Vitrealab. “This joint technical solution is highly customizable and will allow our partners to significantly enhance their light sources and optimize the design specifications of existing LCoS light engines.”

“Vitrealab’s innovations in light-engine technology complement our mission to deliver high-quality and compact RGB laser solutions for AR glasses,” said Tim Tiek, CEO of Brilliance. “This cooperation gives us the opportunity to accelerate development and bring practical, efficient display systems to market.”

The cooperation will include joint research and development, prototype demonstrations, and coordinated commercialization efforts. While the primary focus is AR smart glasses, the technology has broader relevance for automotive head-up displays, portable projection, and other compact optical applications. By joining forces, Vitrealab and Brilliance are not only extending the technical boundaries of solid-state illumination but also paving the way for scalable, real-world products that can bring AR into everyday use.

## **About Vitrealab GmbH**

Vitrealab GmbH is a Vienna-based Deeptech company driving innovation in Photonic Integrated Circuits (PIC) for laser-based display technologies. Its proprietary Quantum Light Chip delivers new levels of brightness, efficiency, and optical quality for AR systems. Originating from the University of Vienna, the team combines decades of experience in photonics research, laser integration, and system architecture to translate academic advances into industrial solutions. With dedicated manufacturing equipment and proprietary direct laser writing techniques, Vitrealab develops and fabricates its own photonic devices, ensuring precision, reproducibility, and rapid development cycles. This vertical integration enables seamless scaling from prototype to mass production, supporting both flexibility in design and consistency in performance.

## **About Brilliance B.V.**

Brilliance B.V. is a Dutch DeepTech company manufacturing laserchips for AR by using cutting-edge photonic technologies. Leveraging a patented silicon-nitride-based platform and laser integration techniques, the company delivers innovative solutions for next-generation light engines and optical systems. With over 20 years of expertise ranging from PIC design to automotive industry, manufacturing and high-volume scaling. Brilliance combines technical excellence with scalable, high-quality, and cost-effective volume production capabilities. Brilliance's mission is to redefine the standards of photonic integration and empower transformative advancements in AR, consumer electronics, and beyond.

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