



## Press Release

# OQmented and Brilliance Partner to Advance Laser Beam Scanning Technology for Augmented Reality Applications

*The new partnership between microdisplay company OQmented and integrated laser company Brilliance aims to disrupt the manufacturing process of LBS light engines and promises further improvements regarding system size and projection quality.*

**Itzehoe, Germany, Enschede, The Netherlands, July 26, 2024** – Building Augmented Reality glasses that look and feel like normal glasses but deliver impeccable display performance at an affordable price, is a difficult endeavor. Laser beam scanning (LBS) technology, where a combined RGB laser beam hits a tiny oscillating MEMS mirror which gives rise to an image to be displayed, shows significant advantages over competing display technologies with regard to brightness, system size and power efficiency. The once rather “exotic” approach is now a given on the AR product roadmaps of the industry players.

One of the cost factors for the necessary light engines is the number of processing steps in their assembly. OQmented is developing and testing a high volume manufacturing process for next generation products: light engines are assembled on wafer level, enabling the simultaneous integration of thousands of light engines per wafer while significantly reducing the amount of processing steps. Laser expert Brilliance similarly processes its ultra compact fully integrated RGB laser chip on wafer scale. This requires extreme accuracy and makes the laser chips a perfect fit for combining them with the OQmented light engines on wafer level. Both companies share a vision of the ultimate integration level using standard semiconductor processes, enabling a path to a high volume high yield production.

Brilliance laser chips feature a very efficient RGB color combination with perfect control over color overlap, spot shape and size. Integrating them into OQmented’s light engines does not require any further optical components. This facilitates the alignment process for the wafer level integration but also further reduces the overall system size while improving its efficiency and the projections’ image quality.

“Partnering with Brilliance provides an excellent opportunity to perfecting our wafer level production process,” said Thomas von Wantoch, co-CEO and co-founder of OQmented. “Integrating their laser chips into our light engines completely on wafer level, probably saves costs of about one order of magnitude compared to conventional production processes. We are very excited about the additional possibilities that this partnership opens up.”



Tim Tiek, CEO and co-founder of Brilliance, adds: “We are thrilled to work with OQmented on creating the ultimate miniature laser projector that has it all: Highest efficiency, super brightness and optimal beam performance, offering a path to mass production using standard semiconductor processes. I am convinced this partnership will bring AR projection a significant step further and look forward to delivering our first joint development kits later this year.”

### **About OQmented**

OQmented is a deep tech company developing and selling ultra-compact LBS displays for Augmented and Mixed Reality devices and best-in-class 3D sensing solutions for mobile and stationary applications. The company offers complete solutions, including in-house developed ASICs that are highly customized and optimized to work with OQmented MEMS mirrors. The unique Lissajous scan pattern in combination with the vacuum encapsulation technology and proprietary electronics, algorithms and software enables new product categories in consumer, automotive and various other industries; the company’s extensive know-how and IP provide for numerous competitive advantages. With significant MEMS manufacturing experience, OQmented effectively designs for high-volume production. Further information can be found at [www.oqmented.com](http://www.oqmented.com).

### **About Brilliance**

Brilliance is an Integrated Photonics company developing and selling integrated multicolor lasers on photonic chips. Brilliance RGB chips combine individual laser beams into a single multicolor laser output with close to ideal optical properties, using wafer scale technology for manufacturing. The team has ~20 years of experience with integrated photonics in the visible light, complemented by vast automotive industry scaling experience. Further information can be found at <https://www.brilliancegb.com/>

### **For Press Information Contact**

Judith Woehl  
Public Relations  
OQmented  
Email: [media@oqmented.com](mailto:media@oqmented.com)