

Photonic ICs for AR glasses

The future is visible



Douwe Geuzebroek
CTO



Brilliance RGB Introduction



Tim Tiek, co-founder & CEO
Automotive & semiconductor veteran



Douwe Geuzebroek, co-founder & CTO
Integrated Photonics expert

- Core team of 10 people
- Multiple representatives overseas
- Good ecosystem in the field of PIC and chip production

Brilliance revolutionizes the laser market with its ultimate Laser Chip technology, paving the way for the future of Augmented Reality.



What/Where AR and VR are now?



VR

VS.



AR

Fill Factor

≠

- Creates a virtual environment with virtual objects

- Overlays content on the real world

What/Where AR and VR are now?

VR and AR trends

2024 & 2025

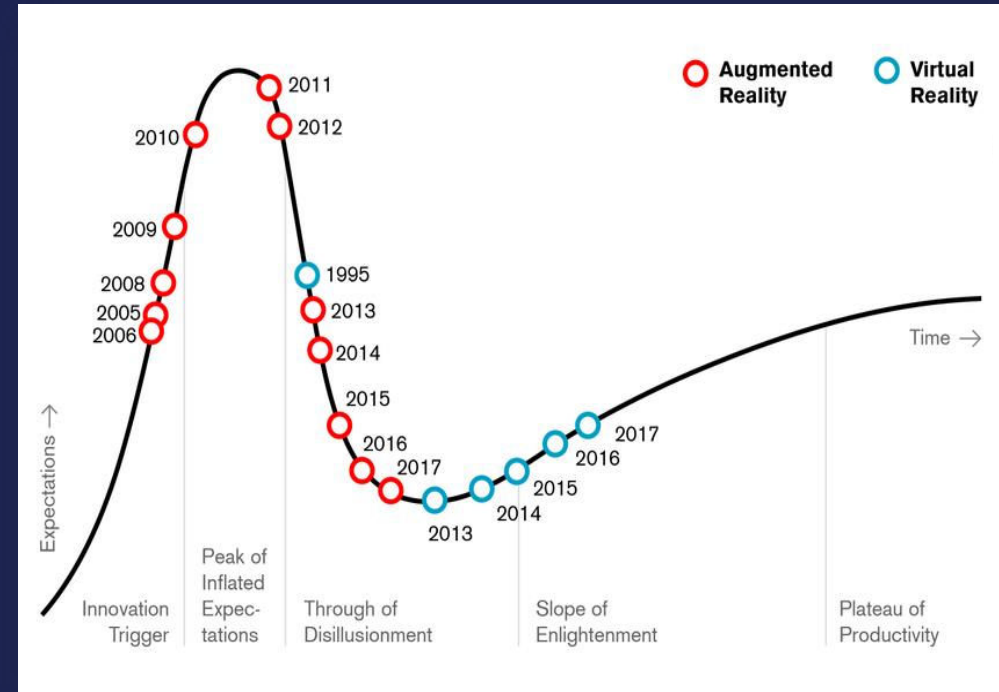
- Integration of AI in AR/VR
- Rise of AR Avatars and Virtual Beings
- 5G and Its Impact on AR/VR
- WebAR and Cross-Platform Applications
- Wearable AR/VR devices**



2006



2027+...



2018 – AR/VR are out of the Gartner Hype Cycle

source: [here](#)

Does AR and VR have a market?

AR & VR Forecasts By Industry

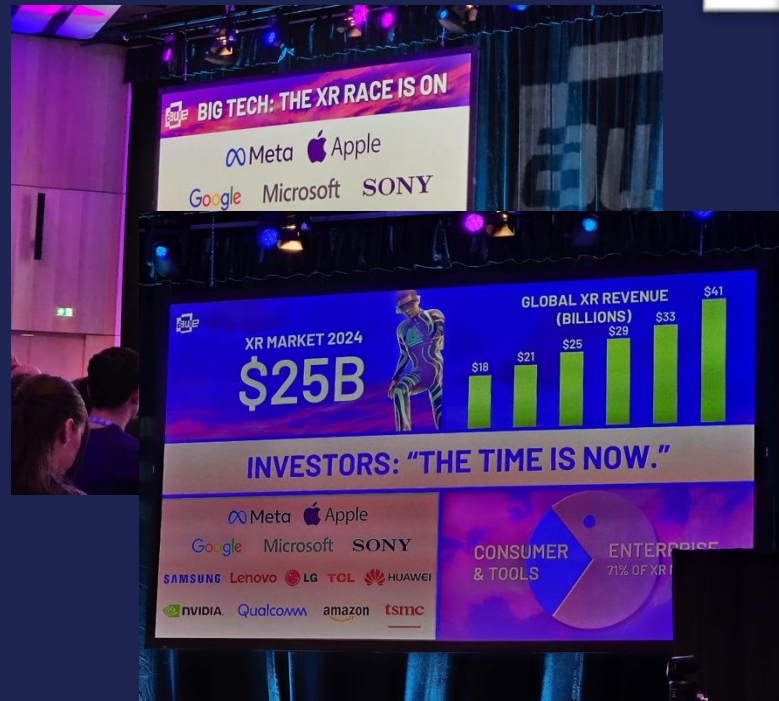
Education and Training

Retail and E-Commerce

Healthcare and Medical Training

Manufacturing and Engineering

Entertainment and Gaming



Augmented Reality (AR) and Virtual Reality (VR) Market Set for Explosive Growth and a Robust 25.74% CAGR through 2033

AR and VR Smart Glasses Market Expected to Garner USD 55.6 Billion by 2032

11-12-2024 09:58 AM CET | IT, New Media & Software
Press release from: Market Research Future (MRF)

The AR and VR Smart Glasses Market was valued at USD 16.6 billion in 2023 and is

AI EFFECT

Zuckerberg's metaverse is finally showing signs of life, but it's not from VR

PUBLISHED THU, OCT 10 2024-9:00 AM EDT | UPDATED MON, OCT 14 2024-11:42 AM EDT

Salvador Rodriguez @SAL19 Jonathan Vanian @JONATHAN-VANIAN-8704432/

KEY POINTS • The company formerly known as Facebook appears to have found its footing in virtual and augmented reality through smart glasses.

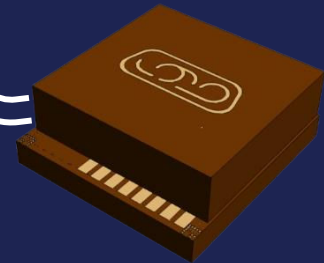
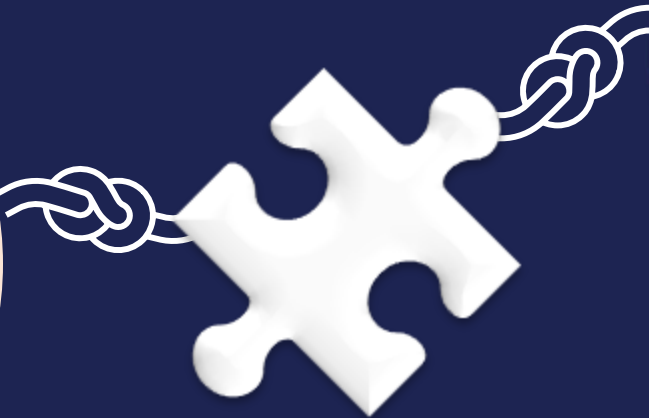
AWE Viena 2024



What is the missing piece in AR?

Size and style determine comfort* & market acceptance

Miniaturization is essential!

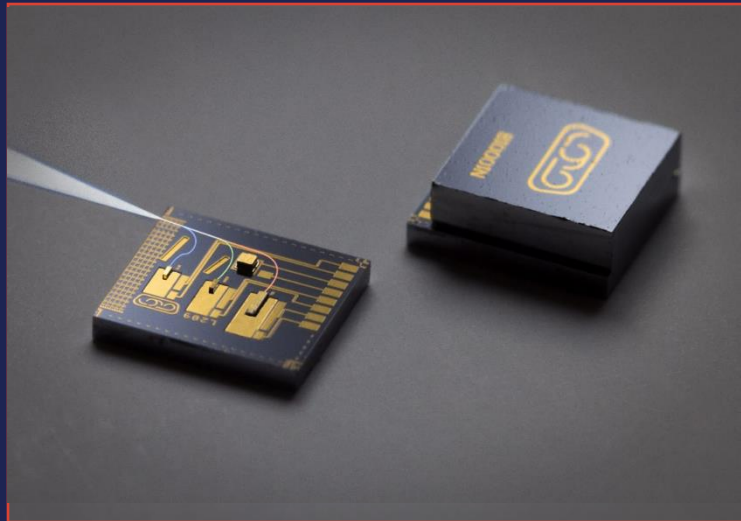


Why is the 'normal' user still not acquainted with AR or VR technology?



* Visual, social, and wearable comfort

Brilliance RGB solution:



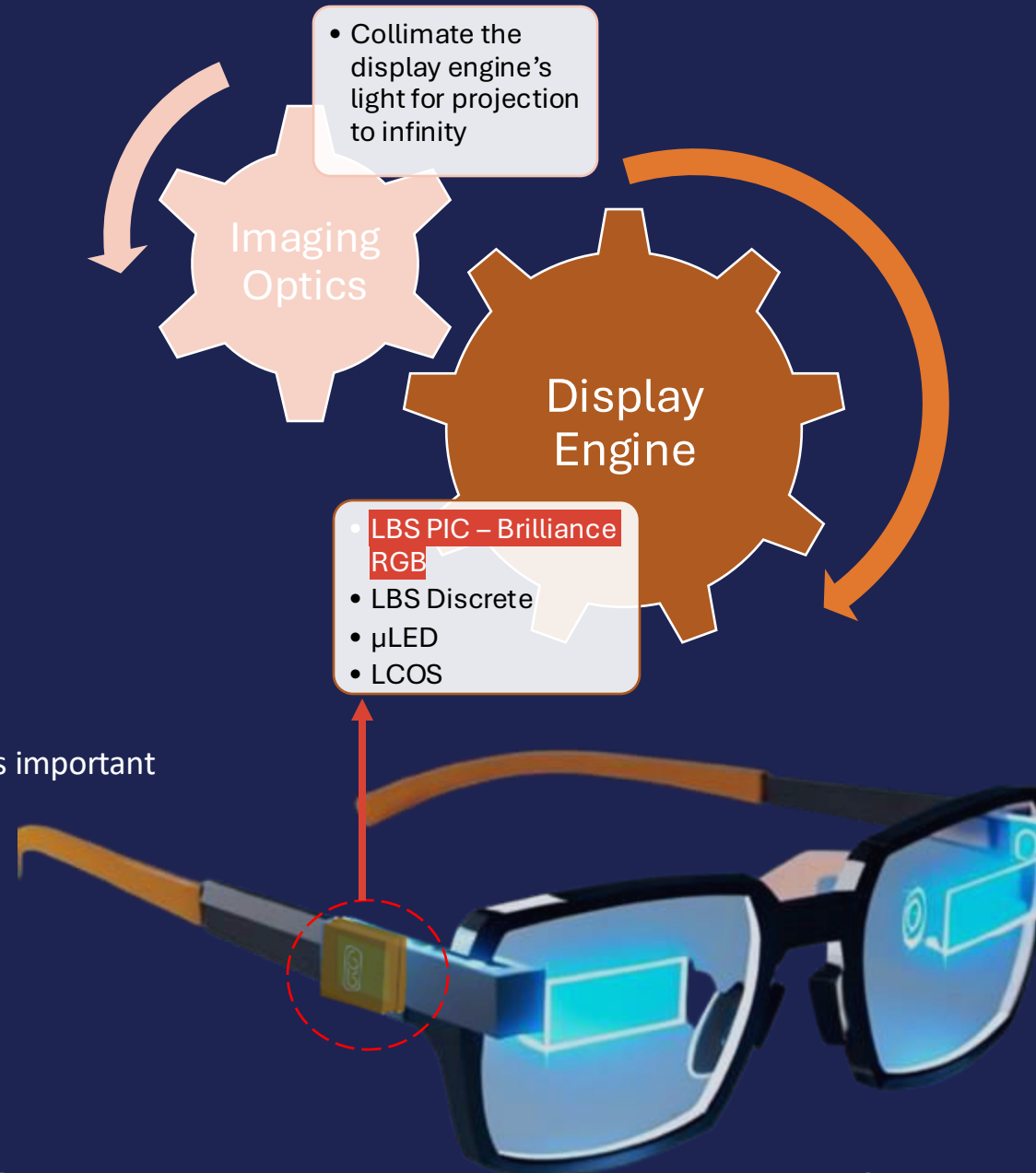
Neptune chip – 2nd generation hardware

Brilliance RGB

Acts in the beginning of the optical chain with LBS PIC display

The display engine defines important parameters such as:

- Pixel density
- Luminance
- Color purity
- ...



Why using PIC?

PIC allows:



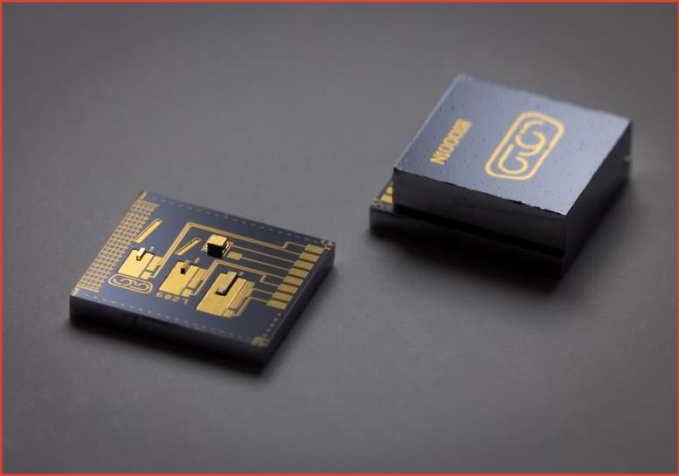
- Compactness
- Enhanced reliability
- Wafer packaging
- Reducing costs

oost  A

Home Nieuws Sport Het Prikbord |

NIEUWS

Millions of euros for the development of photonic chips in Twente: "This will allow you to detect cancer, for example"



Brilliance RGB Neptune

Acts in the beginning of the optical chain with LBS PIC display

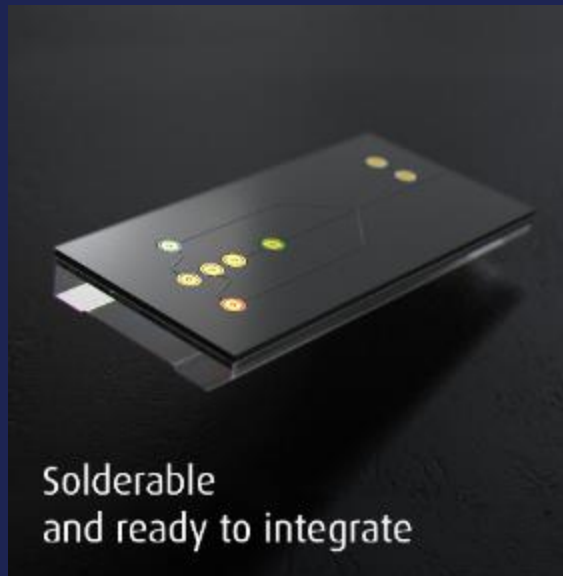
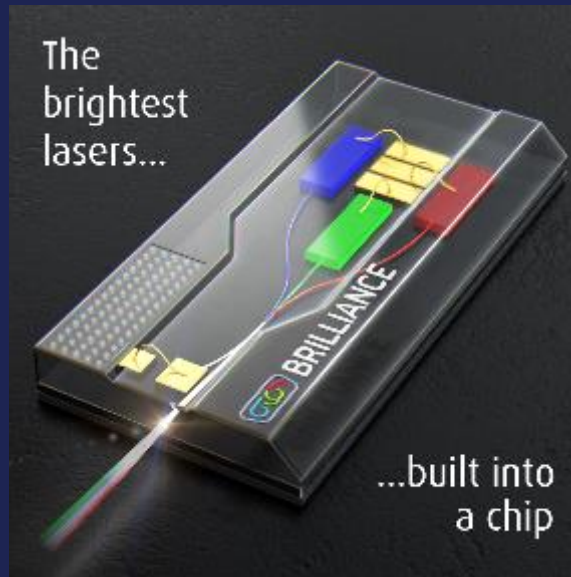
Bring in the PICs!



Brilliance RGB LBS PIC

Laser Light Engine for LBS:

- Small form factor
- Flip chip lasers
- SiN waveguides
- Mode optimization



Miniaturization!

Final Remarks

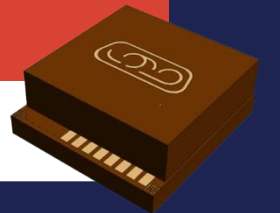
- From initial hype to practical, segmented markets.
- Trends like AI integration, 5G, and wearable advancements show transformative potential.

AR and VR evolution



- Leading the development of smarter, more accessible wearable devices.
- Bridging the gap between innovation and everyday usability.

Brilliance RGB role





Thank you for your attention!

We are hiring!