

PHYSIK INSTRUMENTE

PI – Photonics NL Precisibeurs 2025

Photonics
enabling precision

INNOVATION
DRIVES THE WORLD.

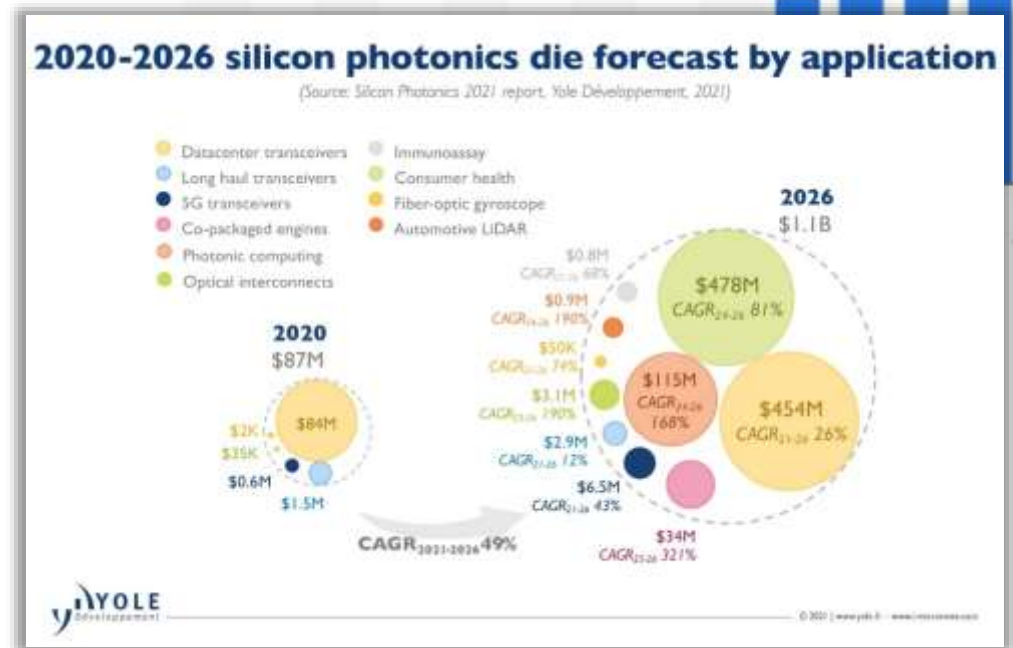
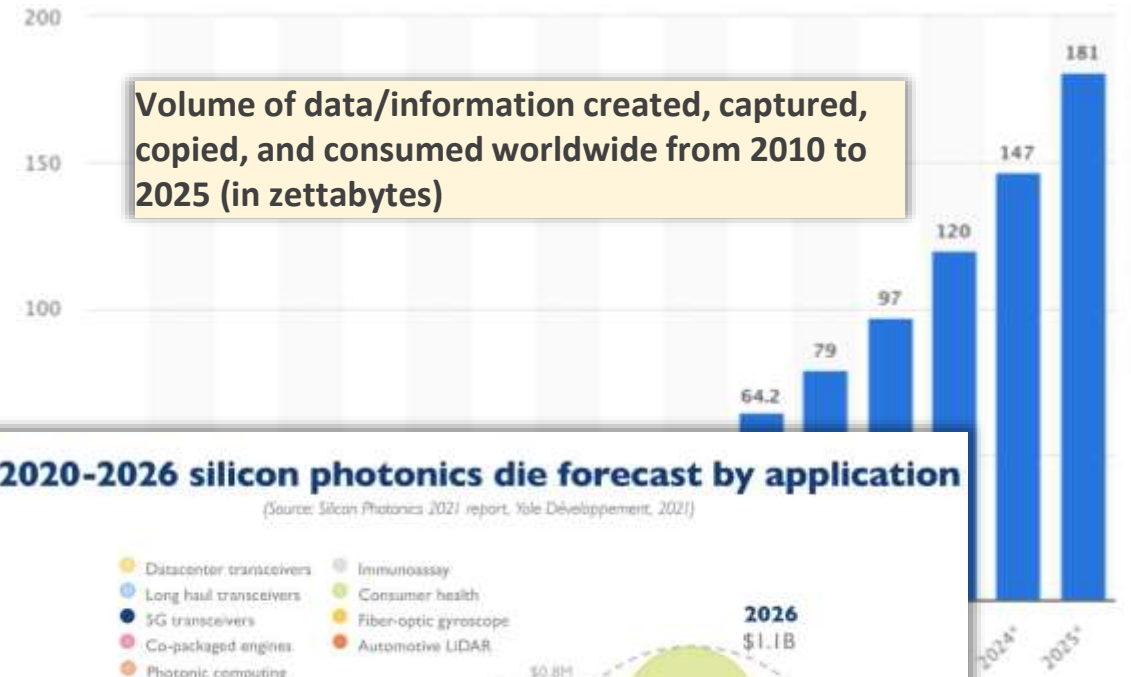
WE DRIVE
INNOVATION.

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Photonics & Alignment Systems FAE
Netherlands
13.11.2025

Photonics enabling precision

Definition, Importance, Impact, Challenges & Growth

- The science of generation, manipulation & detection of light
- Photonics fields of application,
Lasers, LEDs, Optical fibers, Waveguides, Modulators, Optical lenses, Photodiodes, cameras, sensors, LiDARs, PICs
- Human need for data is the driving factor of photonics
- Challenges?



<https://www.statista.com/statistics/871513/worldwide-data-created/>



Photonics enabling precision

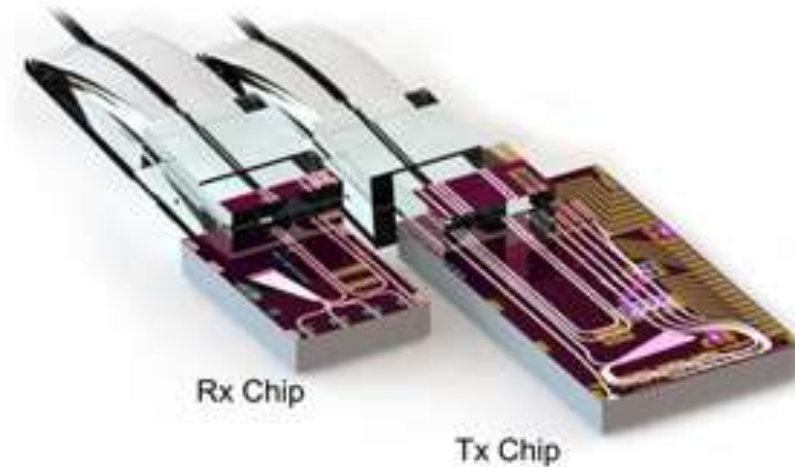
Definition, Importance, Impact, Challenges & Growth

- Miniaturization

Moving from racks to chips

- Optical Interconnects

Higher bandwidth
Lower latency & power consumption
The answer to data movement bottleneck



SILICON PHOTONICS TRANSCEIVERS IN HIGH VOLUME

OVER 3M UNITS SHIPPED, MORE THAN 2M UNIT RUN RATE

100G PSM4 QSFP

- Up to 2 km reach on parallel single mode fiber
- Fully MSA compliant

In volume production

4 fibers for 100G
2 km
On-die hybrid lasers

100G CWDM4 QSFP

- 500m, 2 km and 10km reach on duplex single mode fiber
- Fully MSA compliant
- Extended temp -40 to 85°C

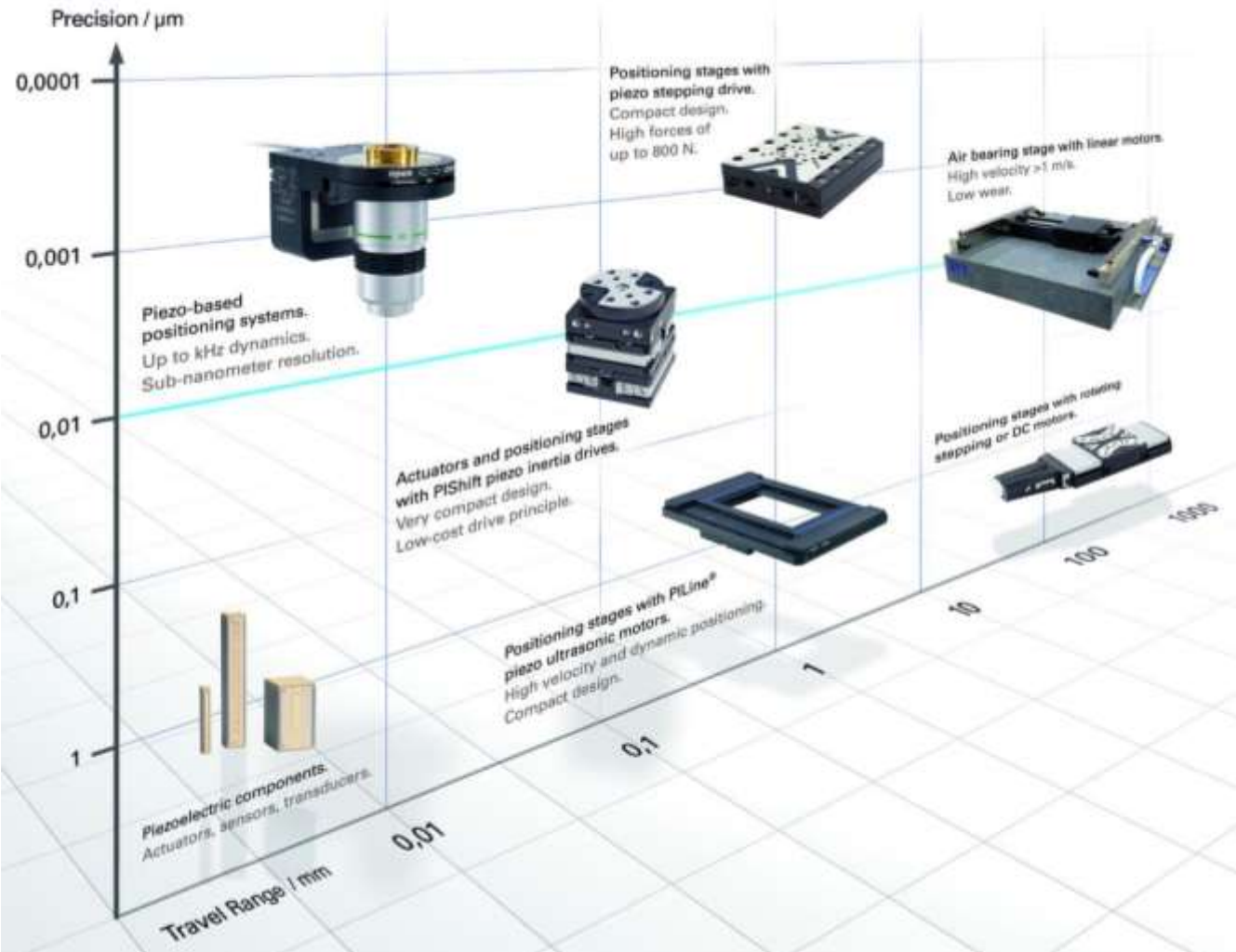
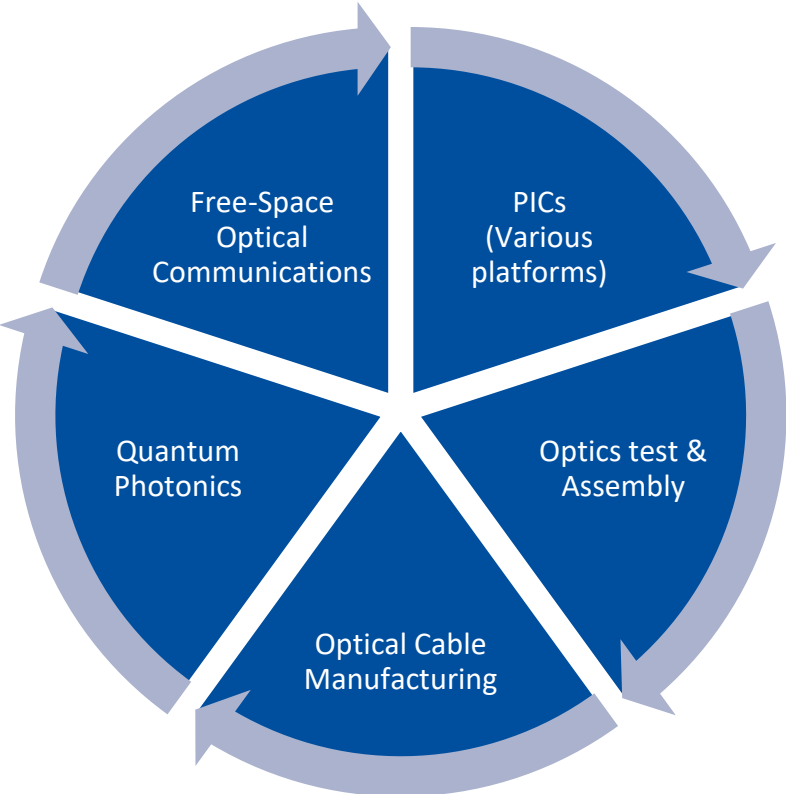
In volume production

Single fiber for 100G
2 km
Single die CWDM4 transmitter

Intel

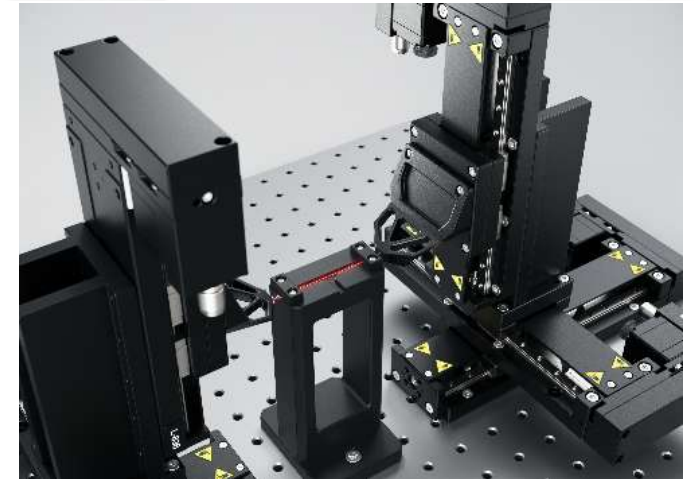
Photonics at PI

Wide range of high precision products



Photonics at PI

Product Lines dedicated to PICs test, packaging & assembly



Thanks for listening!

Visit us at Hall3 – Booth 571

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