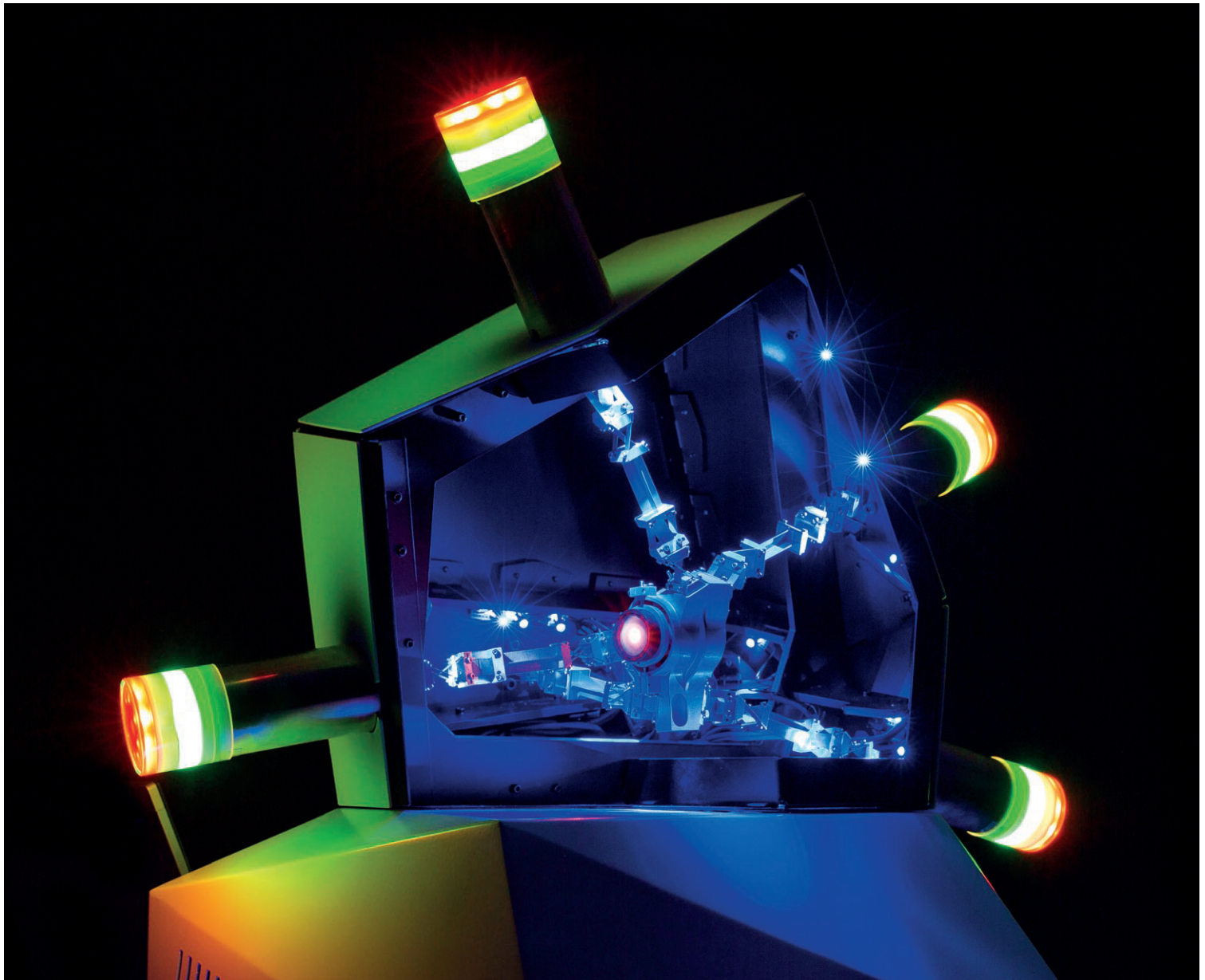


Photonics

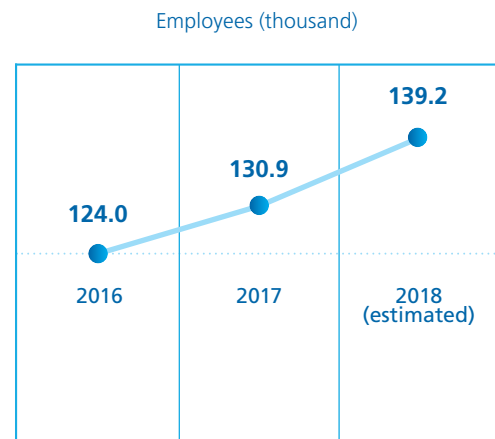
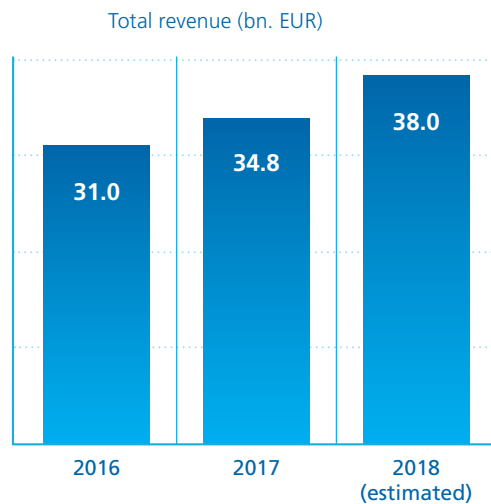
SPECTARIS-Spotlight
Facts and data on a key technology



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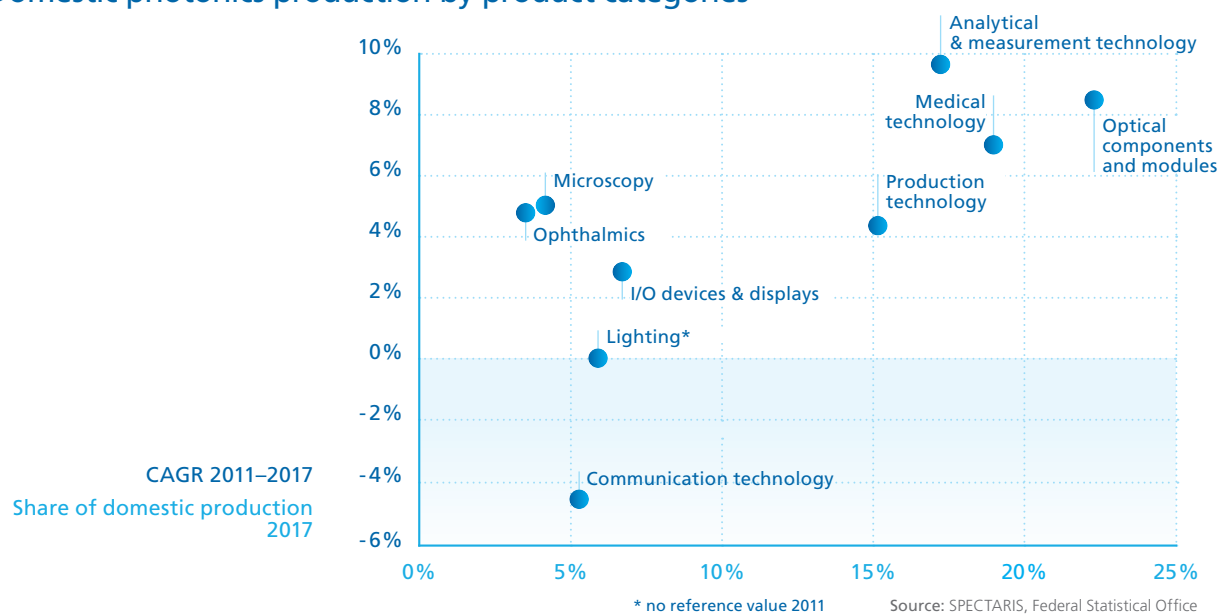
The photonics industry in Germany

The German photonics industry in numbers

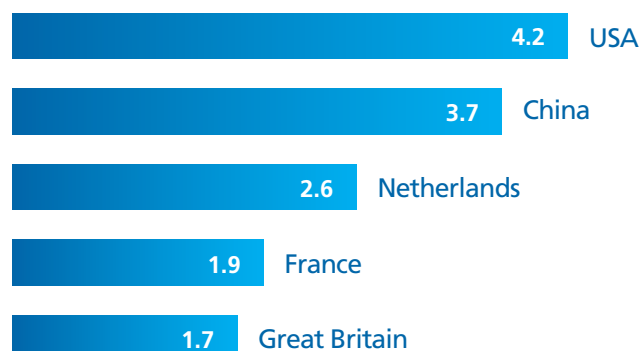


Source: 2016 Optech Consulting, 2017 ff. SPECTARIS estimate

Domestic photonics production by product categories



Top 5 target countries for German photonics exports (bn EUR)

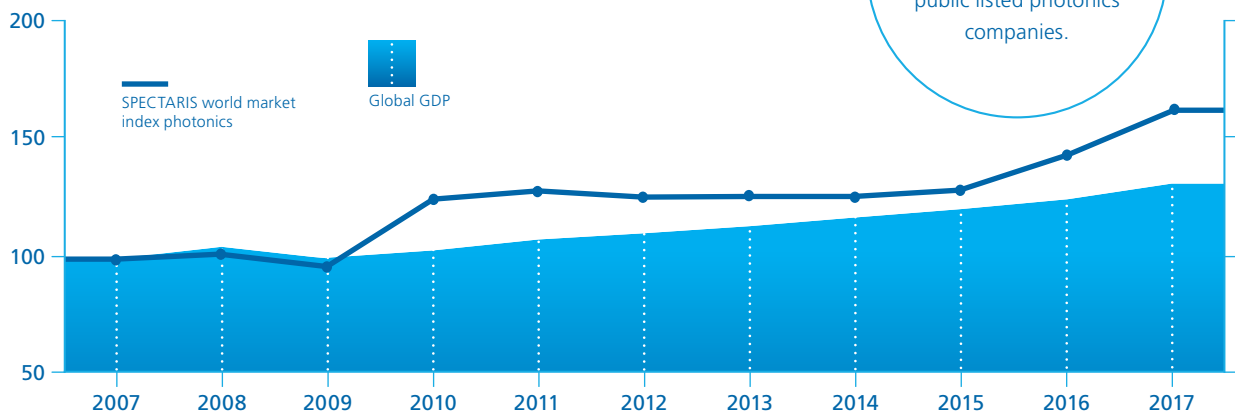


The USA and China are the most important target countries. Within Europe, the Netherlands are ahead.

Source: SPECTARIS, Federal Statistical Office

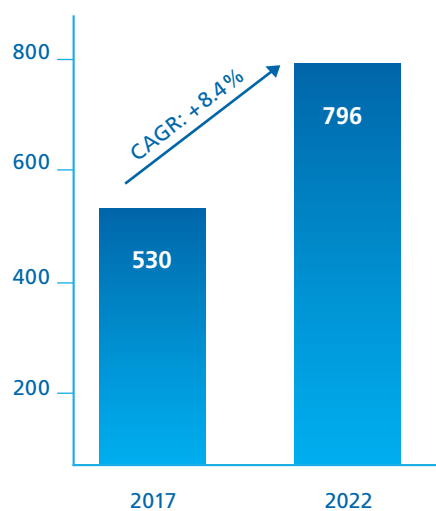
Global photonics market

SPECTARIS world market index Photonics



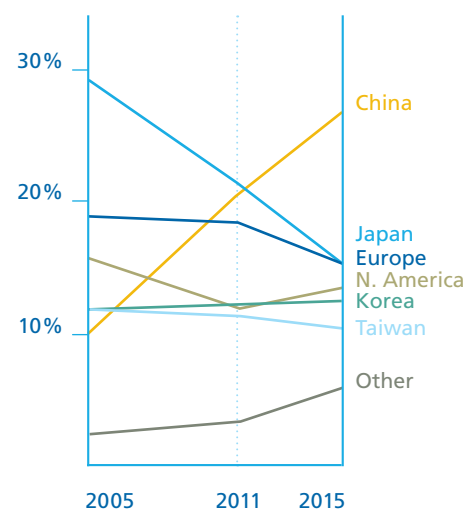
Source: SPECTARIS, World Bank; own calculation

Global photonics production volume (bn USD)



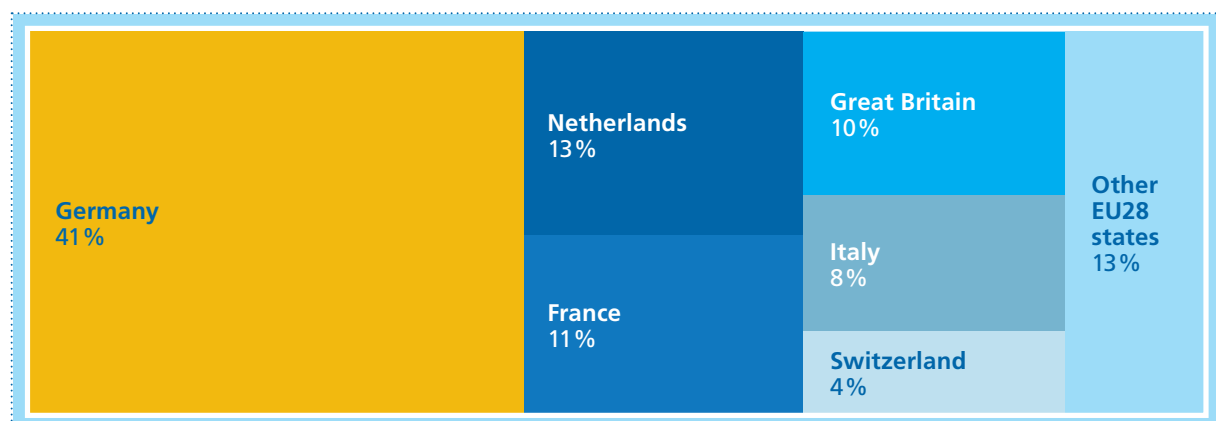
Source: MarketsandMarkets

Photonics production volume share



Source: Photonics21 (Optech Consulting)

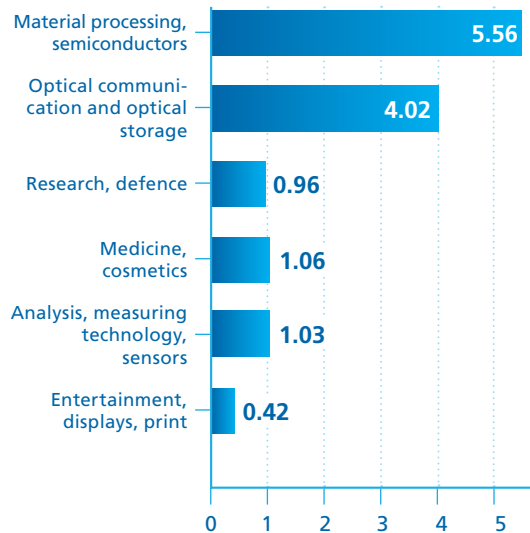
European photonics market – market share by countries



Source: Photonics21 (Optech Consulting)

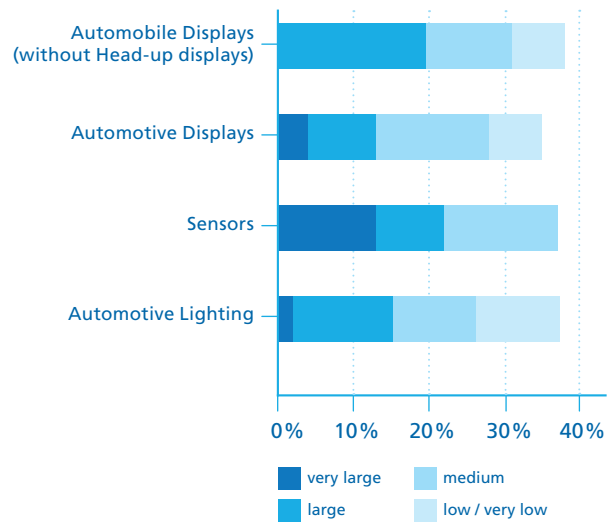
Selected growth markets

Laser world market by applications



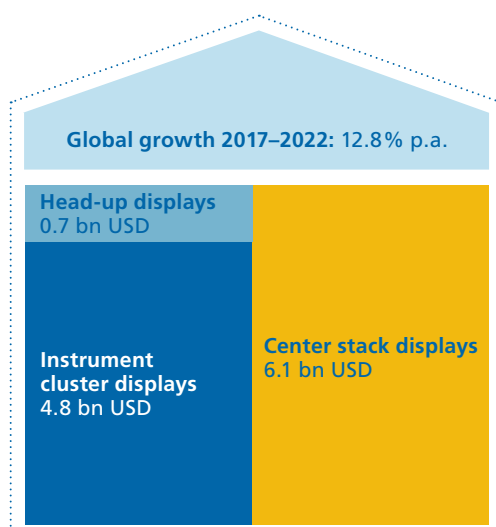
Source: Strategies Unlimited, Laser Focus World

Market potential of photonics for automotive applications



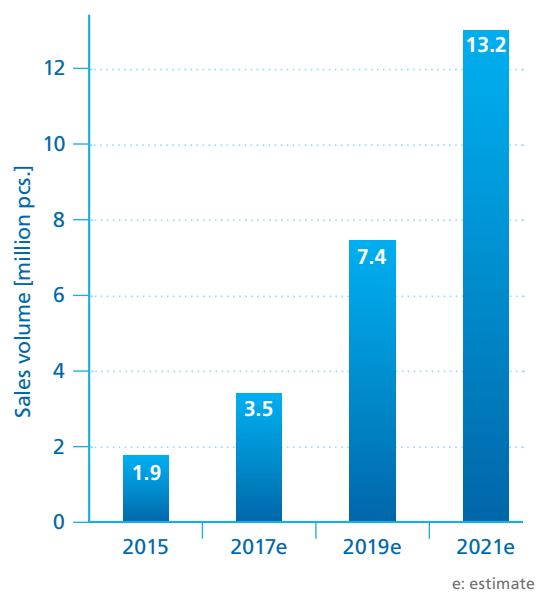
Source: Assessment of manufacturers according to SPECTARIS member survey 2018 (Difference to 100% = not specified)

Automotive displays: Center stack displays dominate



Source: IHS Markit (values=2017)

Strong increase in worldwide demand for automotive LiDAR



Source: Strategy Analytics, Daewoo Securities Research

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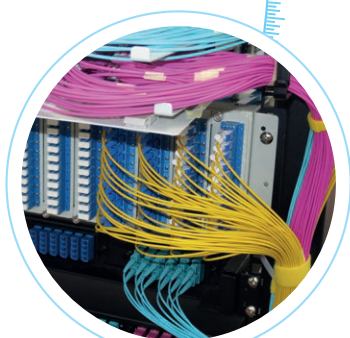
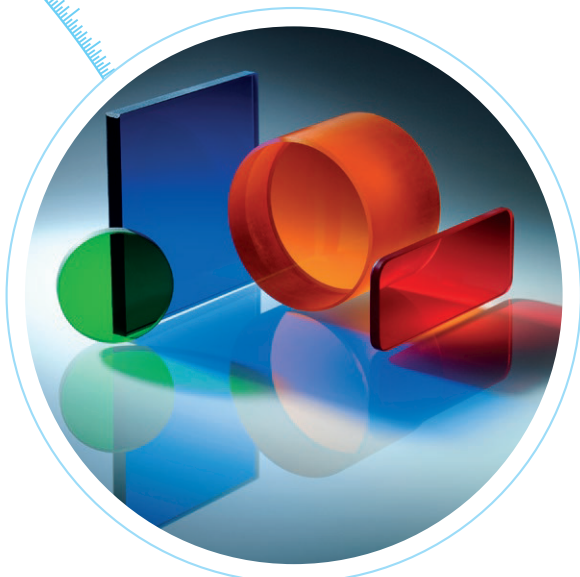
A A. Schweizer / Abbott / Adolf Thies / ADOS / AESCULAP / Agilent Technologies Deutschland / air-be-c Medizintechnik / Alcon Pharma / ALS Automated Lab Solutions / ALU REHAB / AMO Germany / Analytik Jena / Andreas Hettich / AOYAMA OPTICAL GERMANY / ARRI Lightning Stephanskirchen / ARRI Media / ASANUS Medizintechnik / asecos / asphericon / ATMOS MedizinTechnik / Axel Semrau **B** B. 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