

## Industry profile

# Photonics

### In brief

The photonics industry includes all companies that develop and manufacture products and services for the technical applications of light. Important fields of application are metrology in manufacturing, medical, communication and information technologies, and security & defence. In 2019, more than 1,000 German companies with their 142,500 employees generated sales of EUR 37.5 bn.

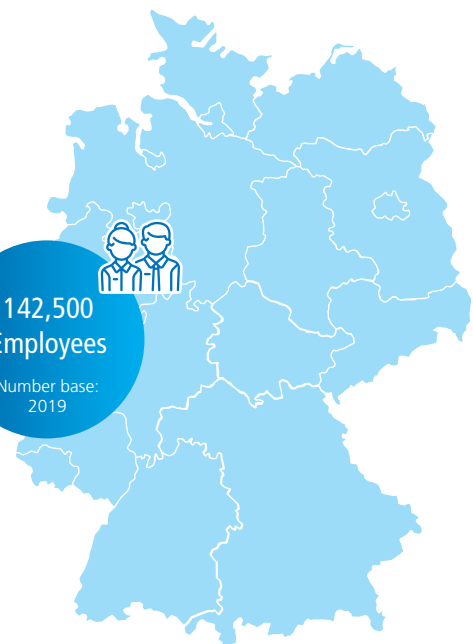
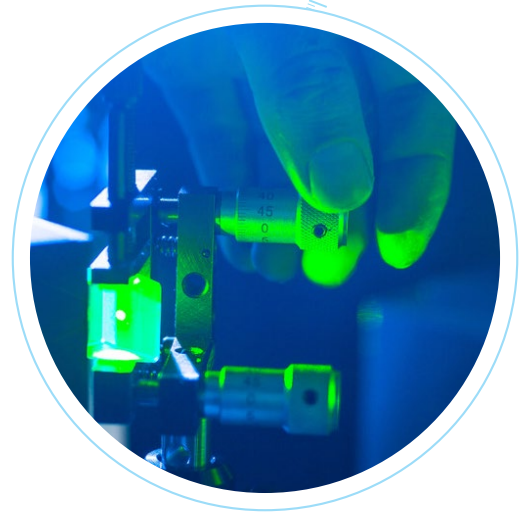
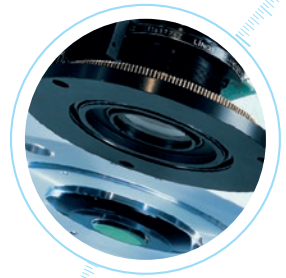
### Industry structure

Most of the products of the photonics industry are used in global supply chains. Accordingly, about 70% of goods are exported. Almost all companies in the industry are facing global competition, especially with companies in North America and Asia.

Most photonics manufacturers in Germany are medium-sized companies with specialized product portfolios serving system integrators in various industries. The activities are predominantly business-to-business; some companies also serve consumer goods markets.

### Companies

The list of selected photonics companies that are members of SPECTARIS can be found at: [www.spectaris.de/photonik/mitglieder](http://www.spectaris.de/photonik/mitglieder)



## Products & technology

- Laser technology, LEDs and OLEDs
- Glass fibres for performance and information transfer
- Imaging optics, such as cameras, microscopes and endoscopes
- Optical sensors

## Customers & markets

- Production technologies
- Medical technologies
- Vehicle technologies, especially in automotive engineering
- Measurement technologies in various industries

## Opportunities, challenges, trends

Photonics is a key technology for many technical applications. Accordingly, developed industrial nations like Germany, the USA, China and Korea are promoting photonics with specific research programs.

Increasing substance regulations in Europe - but also worldwide - are very challenging for the photonics industry. Pushing the boundaries of the technologies requires a variety of substances in small amounts which are essential for the optical performance of the products.

## Further information

- "Trendreport Photonik - Märkte, Entwicklungen, Potenziale" The report provides a detailed overview of the industry (only in German).
- [www.photonics-infographics.com](http://www.photonics-infographics.com)

Photonics	2011	2017	2018	2019	Dev. 2019/18
<b>Total sales (€ bn.)</b>	26.7	34.8	37.1	37.5	+1.0%
<b>Domestic sales (€ bn.)</b>	9.1	9.9	10.4	10.4	-0.6%
<b>Foreign sales (€ bn.)</b>	17.6	24.9	26.7	27.1	+1.6%
<b>Export rate (%)</b>	66.0	71.5	71.8	72.3	+0.7%
<b>Employees (Thousand)</b>	118.5	130.9	138.0	142.5	+3.3%
<b>Companies</b>	approx. 1,000				

Data contains rounding differences

Source: Optech Consulting (2011), SPECTARIS-projection (2017 ff)



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