

CURRENT SITUATION 2015

KEY DATA

PHOTONICS

INDUSTRY REPORT 2015

PHOTONICS INDUSTRY REPORT: CURRENT SITUATION 2015

German photonics industry shows dynamic growth in core areas

Photonics Germany

- Production volume reached € 30 bn. in 2014 (€ 27 bn. in 2011)
- Growth across all Photonics segments at ~4 %
 - In strong core areas in Production/Industry growth rate was larger
 - Laser Systems: + 11 %
 - Laser Sources: + 5 %
 - Industrial Image Processing: + 16 %
 - Lithography for semiconductor equipment: + 15 – 16 %
 - Optical systems in medical technology – solid growth of about 6 %
 - Lighting: LED-technology gained share – market share in outdoor lighting area exceeded 50 %
 - Photovoltaic, information technology and displays – continuously weak
- Further increase in export share > exceed average of manufacturing industry
- Ongoing high R&D quota of ~ 9-10%
- 2015: Stable growth expectations 1-1,5x GDP
- Trend towards intelligent system solutions, LED-Lighting as well as the digitization of production processes open excellent future prospects



**MEDIA BACK-UP: SELECTED CHARTS FROM
INDUSTRY REPORT 2013**

KEY DATA

PHOTONICS

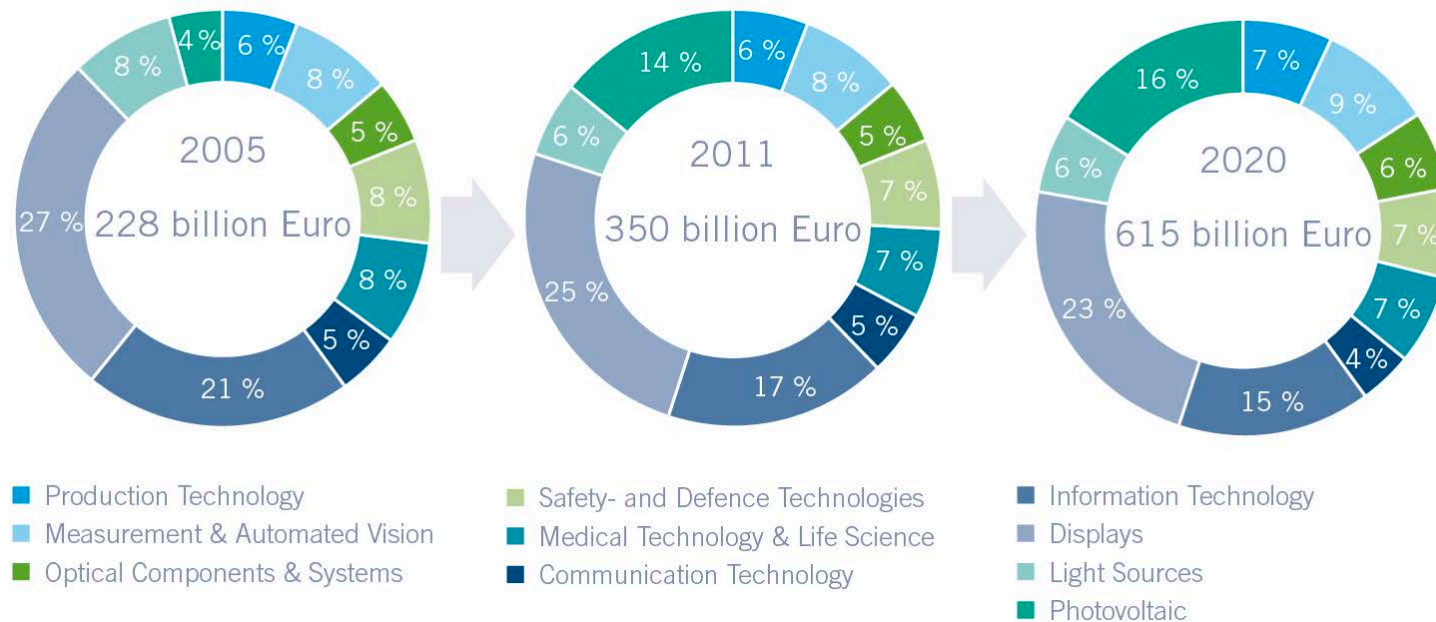
INDUSTRY REPORT 2013

Industry Report Photonics 2013 Management Report – World

World Market Photonics

Will Be A 615 Billion Euro Market In 2020 – CAGR >> GDP

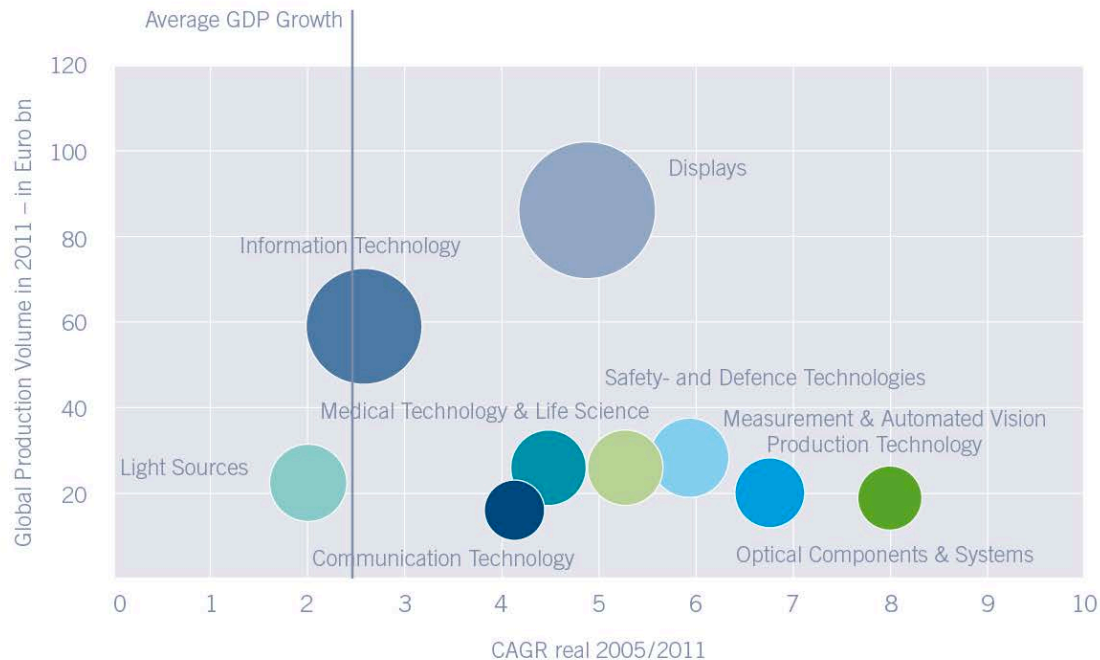
Key Data Photonics World 2005, 2011 and Expectations 2020



World Market Photonics 2011

Strong Segments Growing Faster Than GDP

Growth of Global Photonics Segments in 2005–2011 compared to GDP Growth (without PV)



Bubble size indicates worldwide production volume in 2011

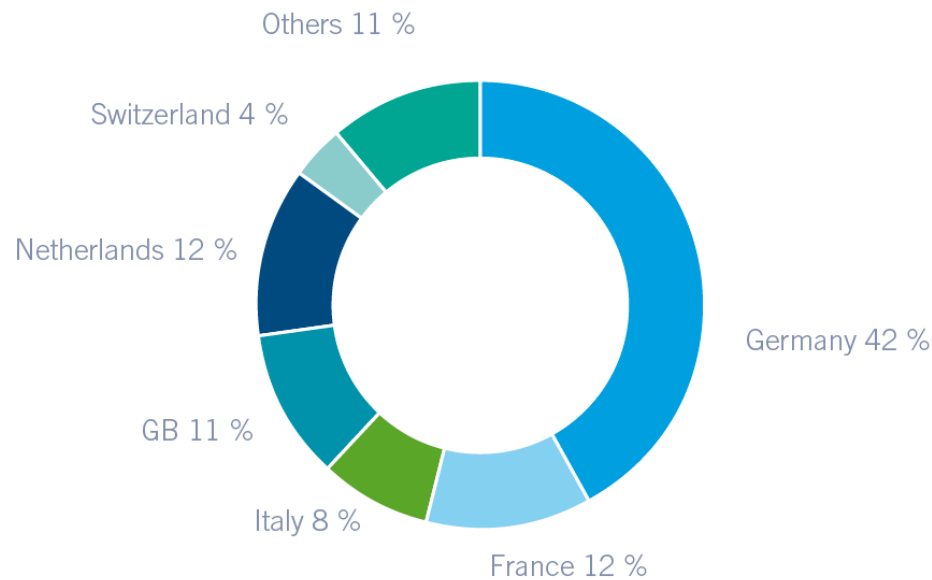
Source: BMBF, SPECTARIS, VDMA, ZVEI (pub.), 'Branchenreport Photonik 2013', Optech Consulting, Study 'Photonik 2013'/Own calculations

Industry Report Photonics 2013 Management Report – Europe

Photonics In Europe

Production Share of Europe 2011 – Germany Leads Before France And Netherlands

Photonics Production Europe By Countries, 2011

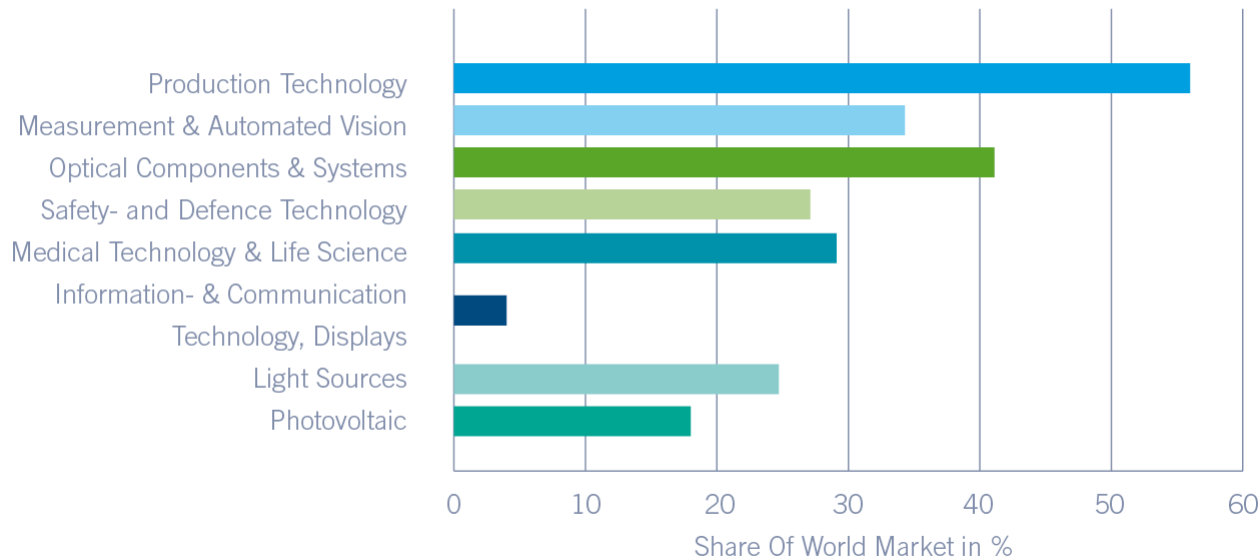


Source: Optech Consulting, 2013

Photonics In Europe

Share Of World Market Production 2011– Leading Position In Production Technology

Photonics, Domestic Production Europe In Relation To World Market, 2011



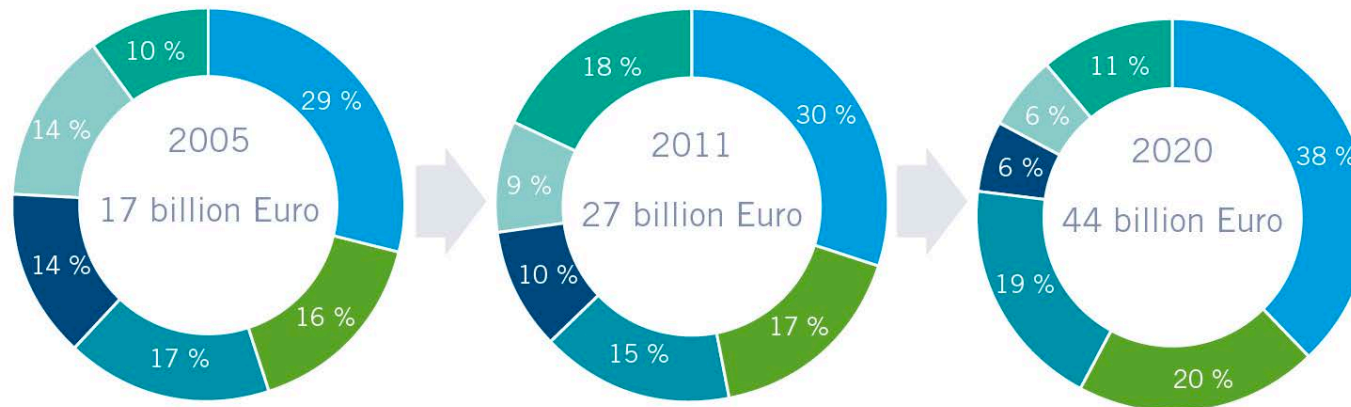
Source: Optech Consulting, 2013

Industry Report Photonics 2013 Management Report – Germany

Photonics in Germany

Core Segments Gain Importance – Will Contribute To 80 % Of Sales And Jobs

Shares of Photonics Segments in Germany



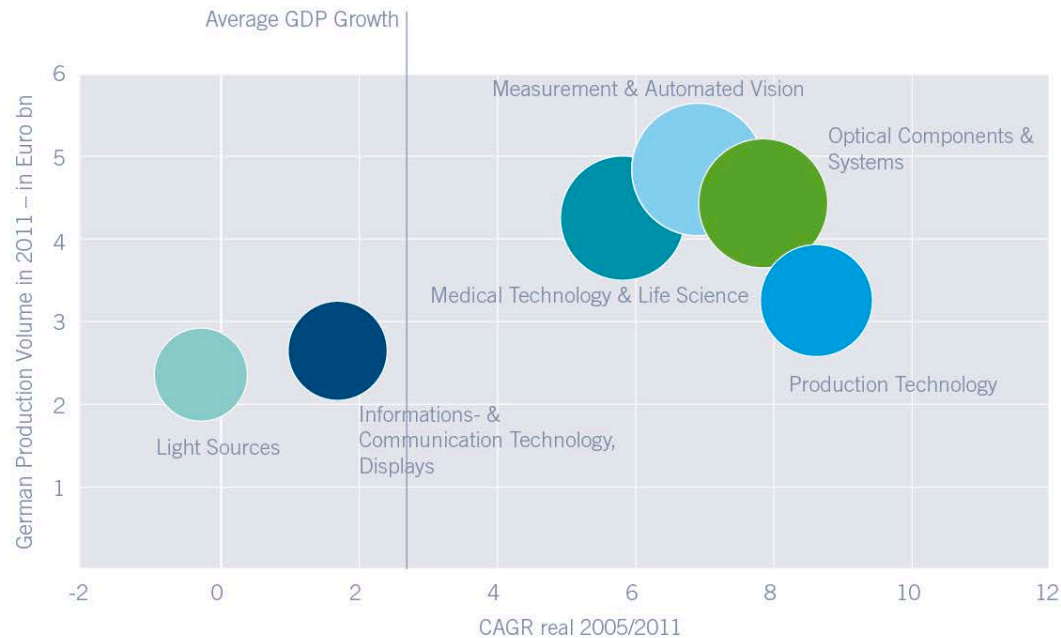
- Production oriented Segments
- Optical Components & Systems, Safety- and Defence Technologies
- Medical Technology & Life Science
- Communication Technology, Information Technology, Displays
- Light Sources
- Photovoltaic

Source: BMBF, SPECTARIS, VDMA, ZVEI (pub.), 'Branchenreport Photonik 2013', Optech Consulting, Study 'Photonik 2013'/Own calculations

Photonics in Germany 2011

Four Strong Core Segments Driving Growth And Innovation

Growth of German Photonics Segments in 2005–2011 compared to GDP Growth (without PV)



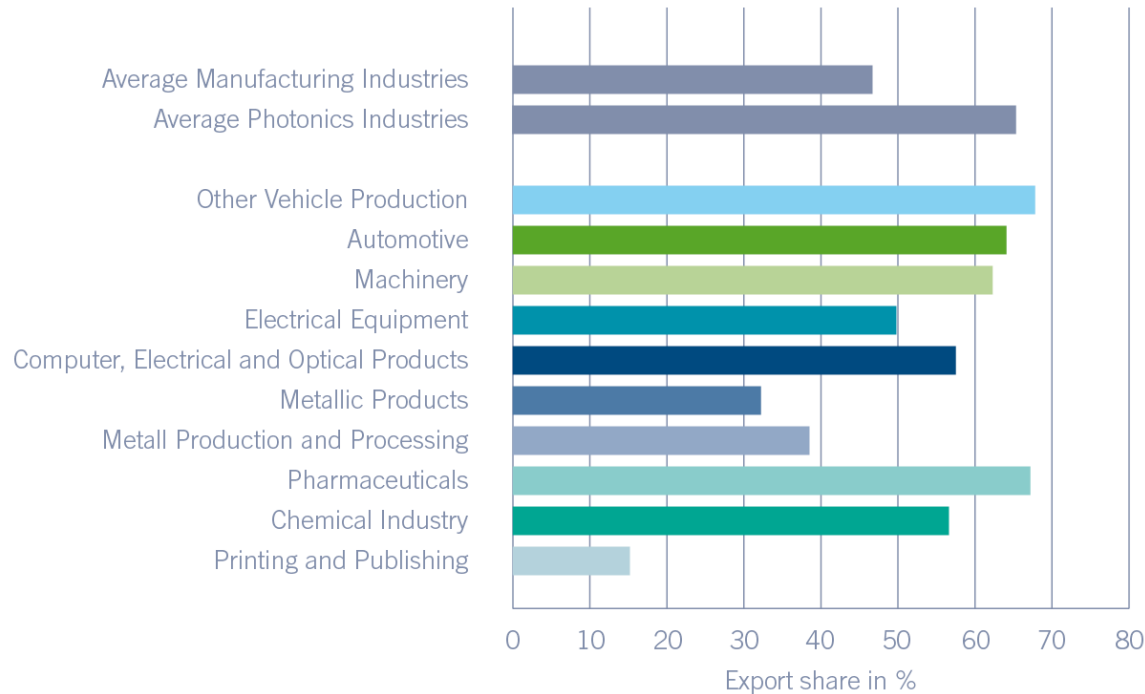
Bubble size indicates worldwide production volume in 2011

Source: BMBF, SPECTARIS, VDMA, ZVEI (pub.), 'Branchenreport Photonik 2013', Optech Consulting, Study 'Photonik 2013'/Own calculations

Photonics in Germany

Strong Export Share Well Beyond The Average Of Manufacturing Industry

Export Share Of Selected German Sectors in 2012



Source: Deutsche Bank, DB Research, Chartbook; 04.03.2012, Optech Consulting/own calculations

Industry Report Photonics 2013 Common Market Analysis



Deutscher Industrieverband für optische, medizinische und mechatronische Technologien e.V. (SPECTARIS)



Verband Deutscher Maschinen- und Anlagenbau e.V. (VDMA)



Zentralverband Elektrotechnik- und Elektronikindustrie e.V (ZVEI)



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