

## Photonics Components

- 1 Lasers and optoelectronics**
  - 1.01 Solid-state lasers
  - 1.02 Gas lasers
  - 1.03 Diode lasers
  - 1.04 Fibre lasers
  - 1.05 Other lasers
  - 1.06 Laser system components
  - 1.07 Laser components
  - 1.08 Safety/protection against laser radiation
  - 1.09 Light-emitting diodes (LEDs)
  - 1.10 OLEDs
  - 1.11 Non-coherent light and radiation sources
  - 1.12 Electro-optics
  - 1.13 Acousto-optics
  - 1.14 Opto-electronic tubes
  - 1.15 Opto-electronic components
  - 1.16 Optical systems
  - 1.17 Opto-mechanics
  - 1.18 Software for lasers and optics
  - 1.19 Placement and assembly systems
- 2 Optics**
  - 2.01 Raw materials
  - 2.02 Crystals
  - 2.03 Processed components
  - 2.04 Optical lenses
  - 2.05 Diffractive optics
  - 2.06 Optical transmission components
  - 2.07 Miscellaneous optical components
  - 2.08 Design software for passive optical components
- 3 Manufacturing technology for optics**
  - 3.01 Optical manufacturing equipment for optical systems
  - 3.02 Optical manufacturing processes for optical systems
  - 3.03 Manufacturing materials for optical systems
  - 3.04 Optical coating materials
  - 3.05 Manufacturing technology for optical systems, miscellaneous
  - 3.06 Adhesives for optical systems
- 4 Sensors, test and measurement**
  - 4.01 Measurement systems for laser characterization
  - 4.02 Measurement and analysis systems for optical parameters
  - 4.03 Systems for measuring optical parameters of devices and systems
  - 4.04 Optical measurement systems
  - 4.05 Optical sensors
    - 4.05.1 Sensors for geometric parameters
    - 4.05.2 Sensors for dynamic parameters
    - 4.05.3 Sensors for optical parameters
    - 4.05.4 Sensors for other physical parameters
- 5 Services**
  - 5.01 Application development and application labs
  - 5.02 Optical design and engineering services
  - 5.03 Processing centers
  - 5.04 Contract production
  - 5.05 System consultants
  - 5.06 Maintenance and service for laser systems
  - 5.07 Optics and illumination design
  - 5.08 Second-hand equipment
  - 5.09 Education and advanced training
  - 5.10 Authorities, institutes, organizations, associations
  - 5.11 Technical literature, trade journals
  - 5.12 Research and development
  - 5.13 Customer-specific solutions
  - 5.14 Technical consultants and agencies
  - 5.15 Professional financing services
  - 5.16 Services, miscellaneous

## Photonics Applications

- 6 Systems by application sectors**
  - 6.01 Systems for the automotive industry and OEMs
  - 6.02 Systems for the toolmaking and mechanical engineering
  - 6.03 Systems for printing technology and graphics
  - 6.04 Systems for data processing and information technology
  - 6.05 Systems for electronics
  - 6.06 Systems for electrical engineering
  - 6.07 Systems for the semiconductor industry
  - 6.08 Systems for plastics processing
  - 6.09 Systems for biophotonics, life sciences and pharma
  - 6.10 Systems for research and science
  - 6.11 Systems for show technology, advertising, art
  - 6.12 Systems for sensor technology
  - 6.13 Systems for illumination technology
  - 6.14 Systems for solar production
  - 6.15 Systems for environment engineering
  - 6.16 Systems for aerospace industry
  - 6.17 Systems for security and defense
  - 6.18 Systems for imaging and machine vision
  - 6.19 Systems for production of energy storage
  - 6.20 Systems for other sectors
- 7 Laser systems for production engineering**
  - 7.01 Material processing systems
  - 7.02 System peripherals of laser production engineering
  - 7.03 Laser-aided product design and development systems
  - 7.04 Laser systems for various materials
  - 7.05 Laser systems for various applications
  - 7.06 Laser systems for production of organic and printed electronics
  - 7.07 Raw materials for material processing
  - 7.08 System integration
- 8 Optical measurement systems**
  - 8.01 Laser-aided test and measurement systems
  - 8.02 Holographic systems and components
- 9 Optical information and communication**
  - 9.01 Fibers, cabling, connectors and distribution
  - 9.02 Active optical components and subsystems
  - 9.03 Passive optical components and subsystems
  - 9.04 Fibre optical test and measurement
  - 9.05 Process and assembly equipment for fibre optical applications
- 10 Biophotonics and medical engineering**
  - 10.01 Applications
    - 10.01.01 Medicine
    - 10.01.02 Biotechnology
    - 10.01.03 Environment and nutrition
  - 10.02 Methods and techniques
    - 10.02.01 Spectroscopy
    - 10.02.02 Microscopy and imaging
    - 10.02.03 Therapies
    - 10.02.04 Manipulation techniques
    - 10.02.05 Methods and techniques, other
- 11 Imaging**
  - 11.01 Components
  - 11.02 Applications
  - 11.03 Image processing
  - 11.04 Displays
  - 11.05 Monitor assemblies
  - 11.06 Display assemblies
  - 11.07 Display elements
- 12 Illumination and Energy**
  - 12.01 Illumination
  - 12.02 Photovoltaics and renewable energy
- 13 Security**
  - 13.01 Applications
  - 13.02 Modules
  - 13.03 Equipment