

# LEADING PERFORMANCE OF LIGHT SENSING WITH NEW PHOTODIODE TECHNOLOGY

# Where innovation meets the challenging demand

ElFys provides photodetector technology with sensitivity better than anything seen so far. We design, develop and manufacture photodiode sensors to help our customers achieve competitive edge with new performance levels in a wide range of light sensing applications:

- Analytical instruments
- Safety & security sensing and imaging
- Industrial & environmental sensing
- Medical imaging

# Key benefits to your applications

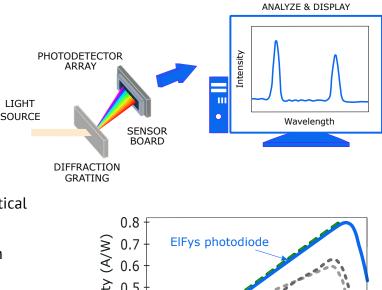
- High responsivity (> 96% EQE) over entire optical spectrum range (200 nm to 1050 nm)
- Ultra wide sensing angle with extremely high absorbance (> 95% @ 60°)
- Superior responsivity in ultraviolet wavelength range (no signal losses in the photodetector surface layer)
- Customized design with optimal electrical properties
- ESA TRL 5 ready, critical performance verified in relevant environment

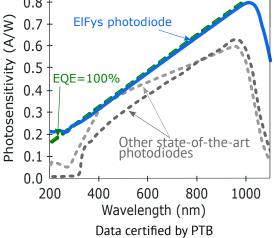
# Core technology: Black Silicon Induced Junction

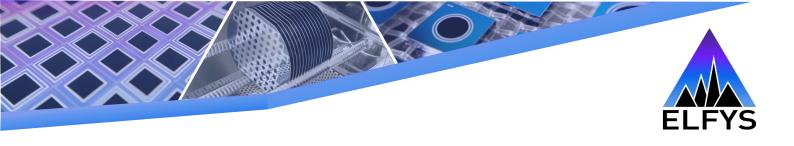
- Nano-engineered surface structure
- Defect-free induced junction
- > Advanced ALD coating technique

## Patents

Our photodiode technology is protected by our patent families worldwide







#### **Business offering and products**

ElFys provides advanced photodetector products and services based on our innovative black silicon induced junction technology. We support our customers to evaluate photodetector performance for proof-of-concept. We design and develop tailored photodetector solutions with our in-depth know-how. We manufacture and supply photodetector products with small volume and mass production.

#### We offer: Innovation package

- Photodetector technology support and consultation
- Demonstration and evaluation of the photodetector technology
- Solution package with production
  - Customized photodetector design
  - Prototyping and validation in small volume
- Black silicon induced junction technology and semiconductor processing services
  - Core know-how technology available for outsourcing or licencing
  - Cleanroom detector processing services

#### Manufacturing

ElFys Inc. has a partnership agreement with Micronova Nanofabrication Center in Espoo, Finland, where 2600 m<sup>2</sup> of state-of-the-art processing facilities allow flexible and scalable production. Our CMOS-compatible technology can be easily integrated into your existing process.

## Contact

ElFys Inc. Tekniikantie 12,02150, Espoo, Finland Phone number: +358 40 557 7716 E-mail address: <u>info@elfys.fi</u> www.elfys.fi VAT: FI28496888

## About us

ElFys Inc. was founded in Autumn 2017. Our core team consists of former senior researchers from Aalto University (Espoo, Finland) and engineering leaders.



