

# (Opto)Electronic Assembly services

Process and Product development for Photonics

**Robin de Bruijn**Business development



## Integral part of innovation organization of Philips





<sup>\*</sup>Effective January 1, 2019, the reporting segment Diagnosis & Treatment comprises two clusters: Precision Diagnosis and Image-Guided Therapy.

## Facts & figures



~800 employees

50 years to build our specialism

NPS score >50%

10,000 m<sup>2</sup> infrastructure test & prototyping facilities, cleanrooms, labs

**ISO certified** for 13485 | 9001 | 14001

#### MEMS & Micro Devices

**Process Development and Manufacturing** 



#### MEMS & thin film products



Micro (Device) assembly & complex PCBA



2500 m<sup>2</sup>
Factory +
Cleanroom
FTE: ~60

(Optical) devices assembly

2650 m<sup>2</sup>

Cleanroom FTE: ~70



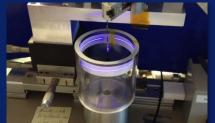


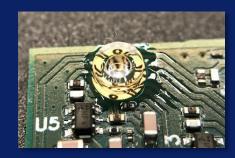
High-end laser lab

# Examples

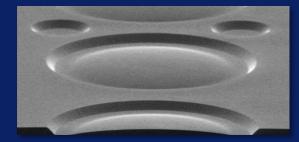


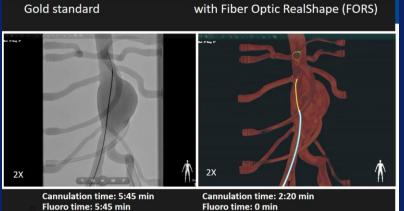




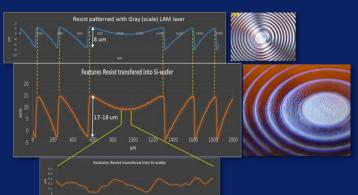










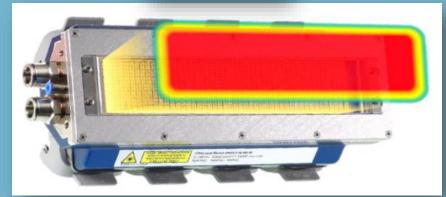


### IR VCSEL heater module

- VCSEL-based heating module
- Multiple IR VCSELs
- High energy & patterned heating

- Develop assembly process
- Use industry standard equipment
- Small volume production



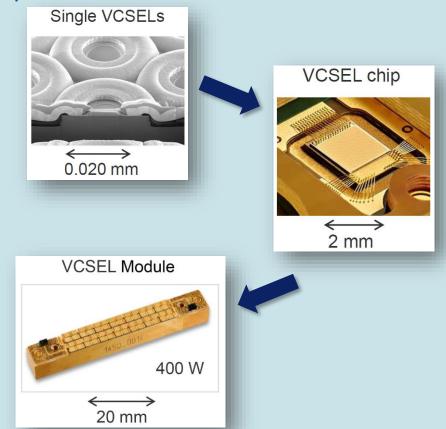


## Process development – Example case



- Main functional module
- Challenges:
  - Thermal
  - Electrical
  - Mechanical
- VCSELs → chip → carrier → module

56 chips 112,000 VCSELS 1,800 wire bonds 40 modules p/w



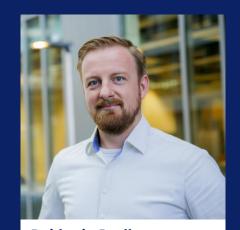
#### What we offer



- Bridging the gap from design to production
- Available for internal & external, big & small
- Large pool of experts and resources available
- Extensive experience in electronic and optoelectronic assembly
- Continuously looking for opportunities that strengthen our competencies

# Thank you for your attention





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