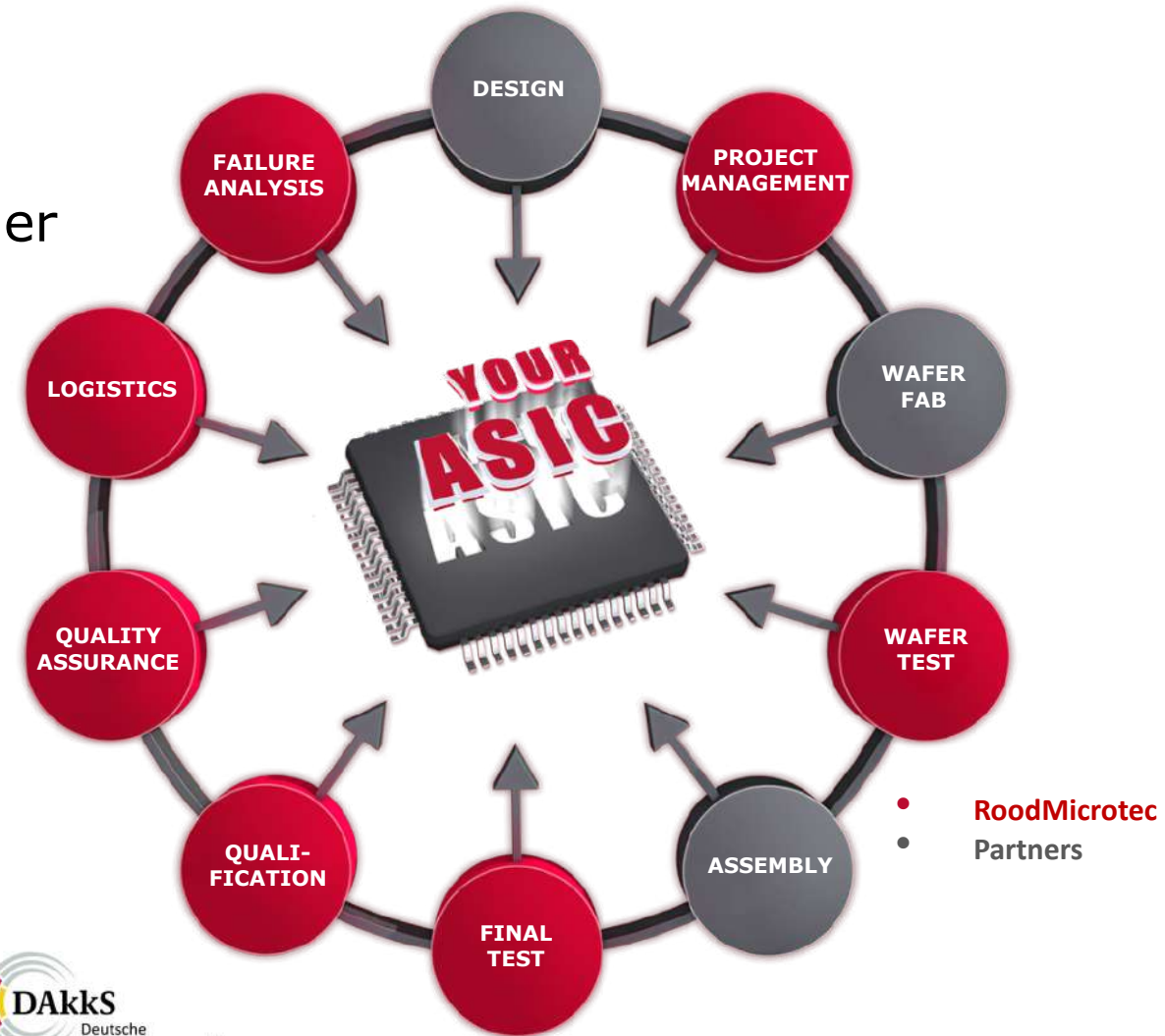


Reliability Testing Services for VCSELs, laser & photo diodes

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Manager Optoelectronics & Innovation

RoodMicrotec at a glance

- ❑ Located in Stuttgart & Nördlingen, Germany.
~100 employees
- ❑ 50 years experience as semiconductor supplier and wafer & component test house
- ❑ Focus on Automotive, Industrial, Datacom, Healthcare & Aerospace
- ❑ Covering the complete supply chain for ASICs as well as quality services
- ❑ Strong background in datacom qualification from Alcatel history



Accredited acc. to DIN EN ISO/IEC 17025
Certified acc. to DIN EN ISO 9001:2015



Service for VCSELs, laser and photo diodes

❑ Reliability tests acc. to Telcordia GR-468-CORE, IEC, JEDEC, MIL

- ❑ Dedicated Life-Test / Burn-in system for VCSELs from Yelo
- ❑ Temperature Humidity Biased / Biased Damp Heat (THB/BDH) (e.g. 1000h @ 85°C / 85% rh)
- ❑ High Temperature Reverse Bias (HTRB) for photo diodes (e.g. 2000h @ 175°C)
- ❑ NEW: HTOL & THB system for EML devices
- ❑ Temperature Cycling / Shock
- ❑ ESD tests (HBM, MM, CDM)
- ❑ Die shear & wire bond strength
- ❑ Mechanical shock & vibration

❑ Optoelectronic characterization

- ❑ Spectral and power analysis of emitters, LIV curves. Fully automatic batch processing available!
- ❑ Responsivity, photo & dark current measurements for photo diodes
- ❑ Photobiological safety / eye safety (IEC 62471:2006)
- ❑ Laser classification (DIN EN 60825-1:2015-7)

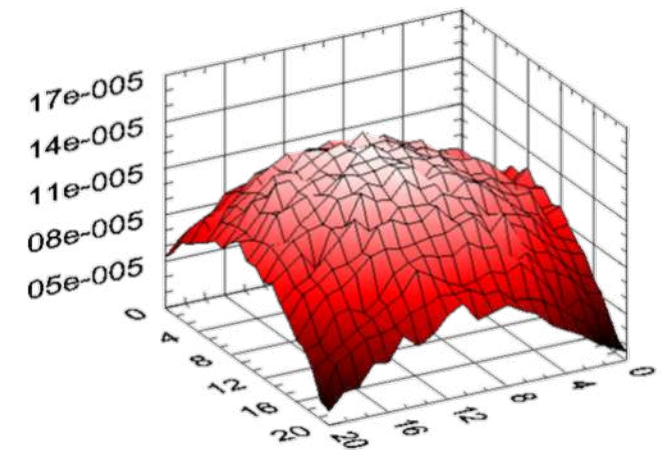


Service for VCSELs, laser and photo diodes

Our speciality: Custom electronics, adaptive holders & intelligent test programs, tailored to the demands of our customers, well-known datacom players!

Examples:

- ❑ Self-stabilizing VCSEL current sources for humidity tests and versatile modules for up to 128 VCSELs
- ❑ Modification of a Newport Laser Lifetest system with modulator control for EML HTOL
- ❑ Fully-automatic x-y scanning system for LIV & spectral characterization of arrays of emitters



The two EPIC questions

1. What can we do for you?

- We take care of your reliability tests. Either once or in a long-term partnership
- Tailored hardware, intelligent monitoring & automatic read-outs for highest quality data

2. What can you do for us?

- Contact us if you need a partner for reliability testing!
- Developing new test scenarios or devices? Let's collaborate in an industrial or funding project!
- We would like to gain more experience with VCSEL arrays.

Thank you for your attention!

Ask for more information: bjorn.hoffmann@roodmicrotec.com