



NEW TECHNOLOGY INTRODUCTION
HIGHEST ACCURACY ACTIVE
ALIGNMENT

EPIC

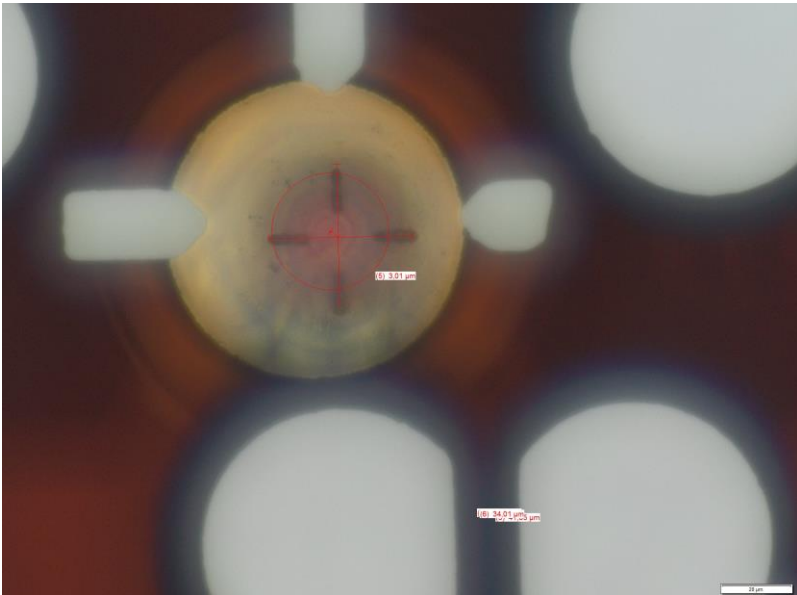
MARCH 30, 2021



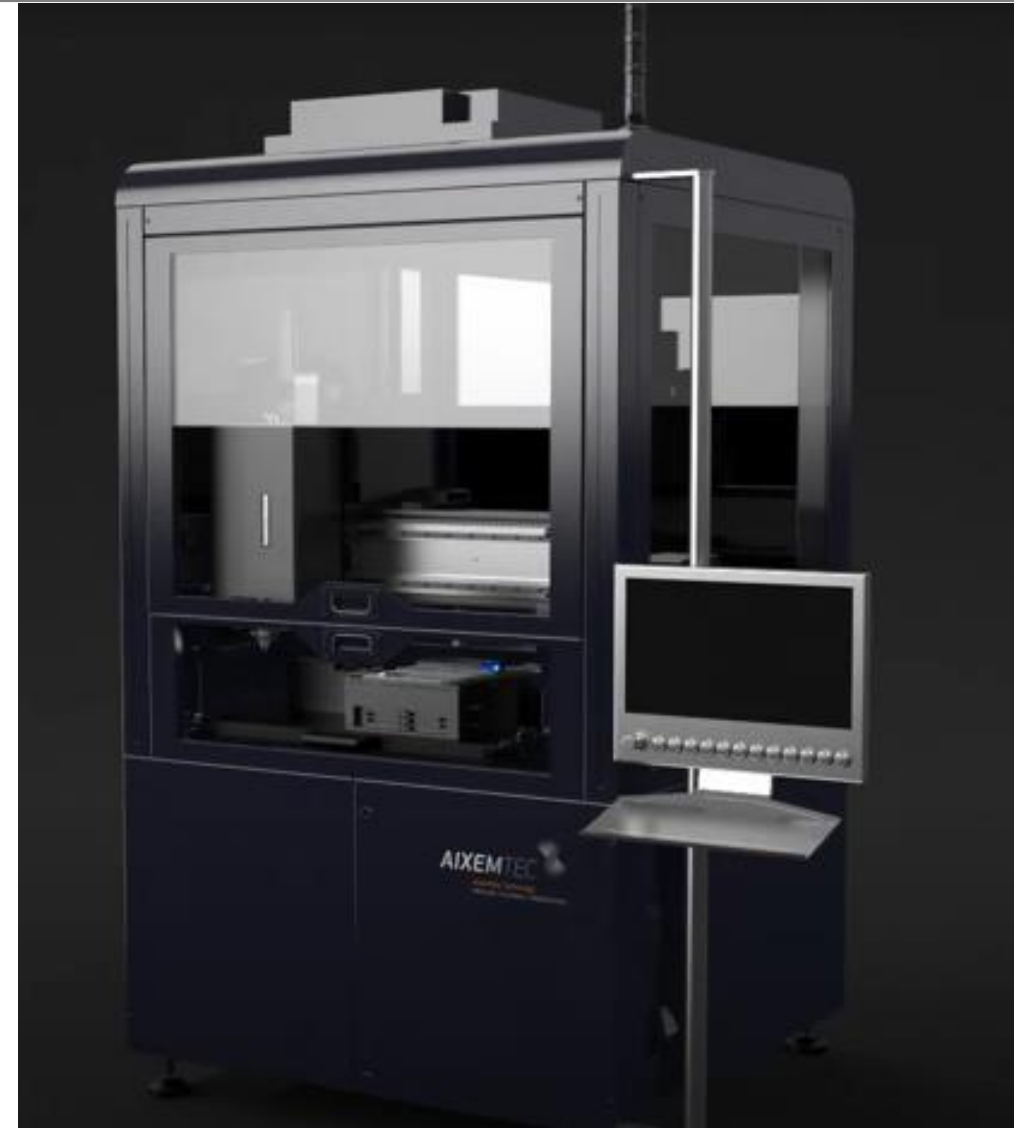
- AEMtec – dedicated to highest accuracy assembly
 - “Less than 1 μ away from perfection”
- European company, focusing on the high complexity customized packaging
- Extension of facility – doubling the size
 - Clean room ISO 5 : 300m², ISO 7, 1200m², ISO 8 1500m²
- Introduction of active alignment for optic



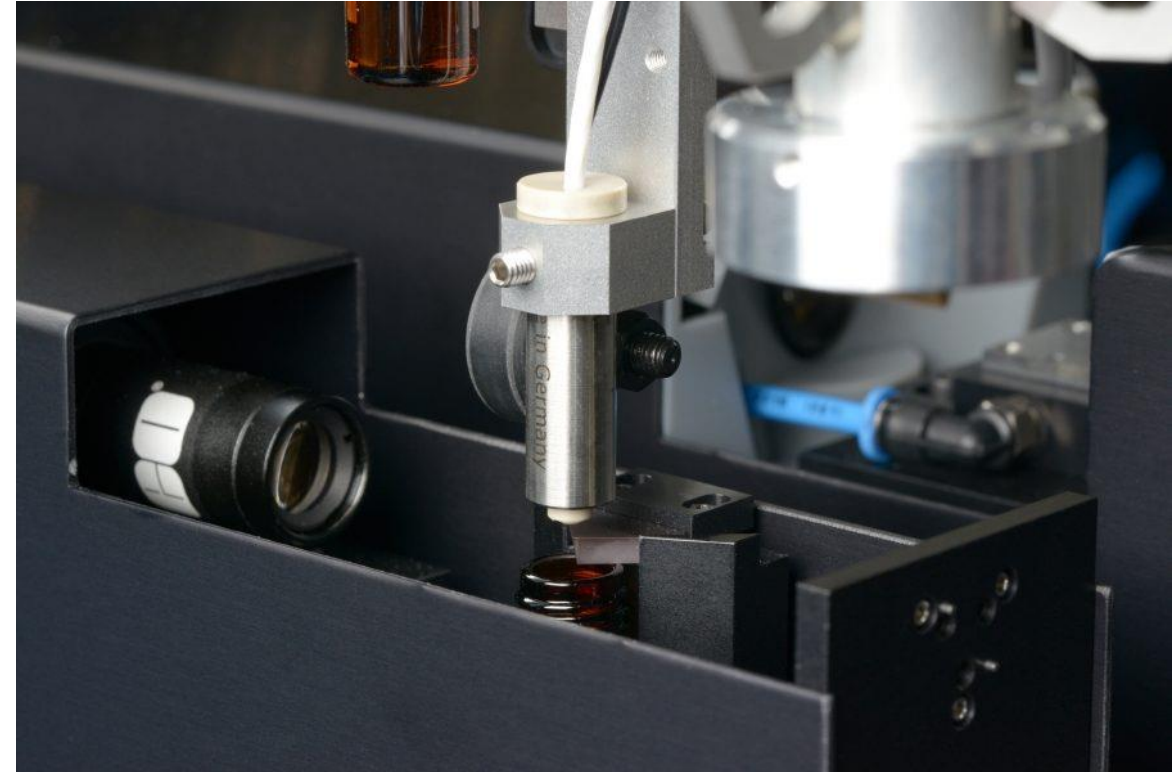
- Accurate placement $<1\mu\text{m}$ of a VCSL array
- 5 axes alignment
- Measurement of position through transparency
- Medium quantities $<1\mu\text{m}$ placement for Lidar



- DRIVERS:
 - Silicon photonics and traditional components
 - Cost-effectiveness is mandatory
 - Europe as leader in high end optoelectronic packaging
- KEY Ratios in packaging of Optoelectronics
 - Process step duration
 - Costs of the step
- Cooperation with AIXEMTEC

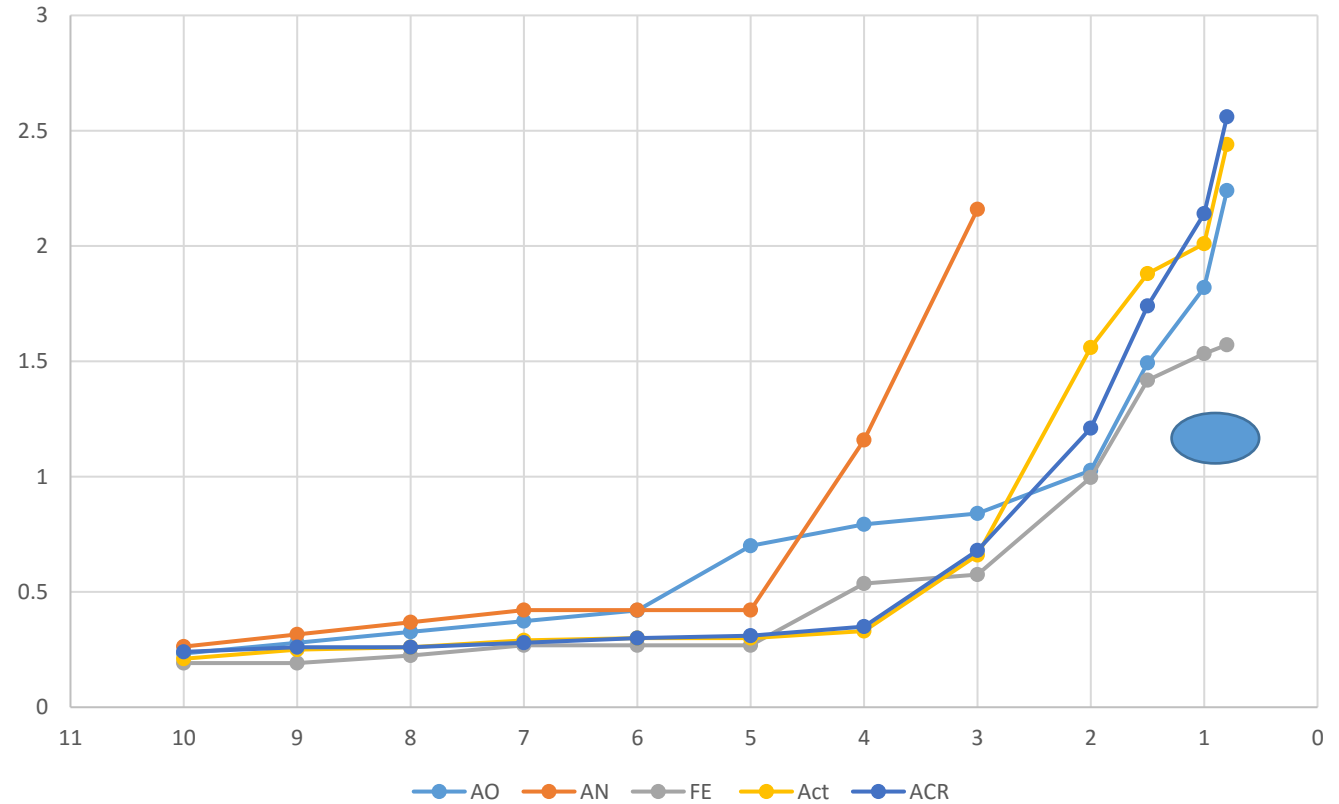


- Introduction of equipment
 - First setup
 - IQ, OQ, PQ
 - Process qualification
 - Performance qualification
 - Look for accuracy vs. process time and process costs
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- Stages
 - Extension of clean room
 - IQ – Q 3 2021
 - Full scale : 2021



- Calculation of costs
 - DE wages
 - Clean Room class ISO 5
 - Depreciation of equipment in 5 years
 - Maintenance and periodic calibration incl.

Costs of accuracy



- Targeting applications in sub- μm range
- Cost efficient accuracy
- Low and Medium quantities
- Made in Germany

The competence
of a technology
focused
organization

In a full industrial
production
environment