SEMIPROBE®
Test ▪ Inspect ▪ Innovate

SUCCESSFUL APPLICATION: OPTOELECTRONICS - 0217

Specific Requirements:

The customer wanted a 150 mm semi-automatic probe system to test vertical cavity surface-emitting laser (VCSEL) diodes. The VCSELs were in wafer and individual die form and tested at temperatures ranging from 25 °C to 200 °C. The customer required the device to be biased from the top and bottom. A manual manipulator with a multi-contact DC wedge was used for biasing. A second manual manipulator was used for a non-contact height measurement sensor. An optical fiber was required to collect the light and it needed to be mounted to a three-axis programmable manipulator with a goniometer.

SemiProbe Solution:

- SA-6 Semi-automatic 150 mm probe system:
  - 150 mm programmable X, Y, Z and theta stage
  - PILOT Software Suite – Navigator, Wafer Map and Autoalign
  - Vibration isolation table with test instrumentation rack
- 150 mm thermal chuck operating between ambient temperature and 200 °C
- PI three-axis programmable manipulator with goniometer used for fiber
- DC manipulator with multi-contact DC wedge
- Optical fiber arm with non-contact height measurement sensor
- Zoom tube optics with CCTV system