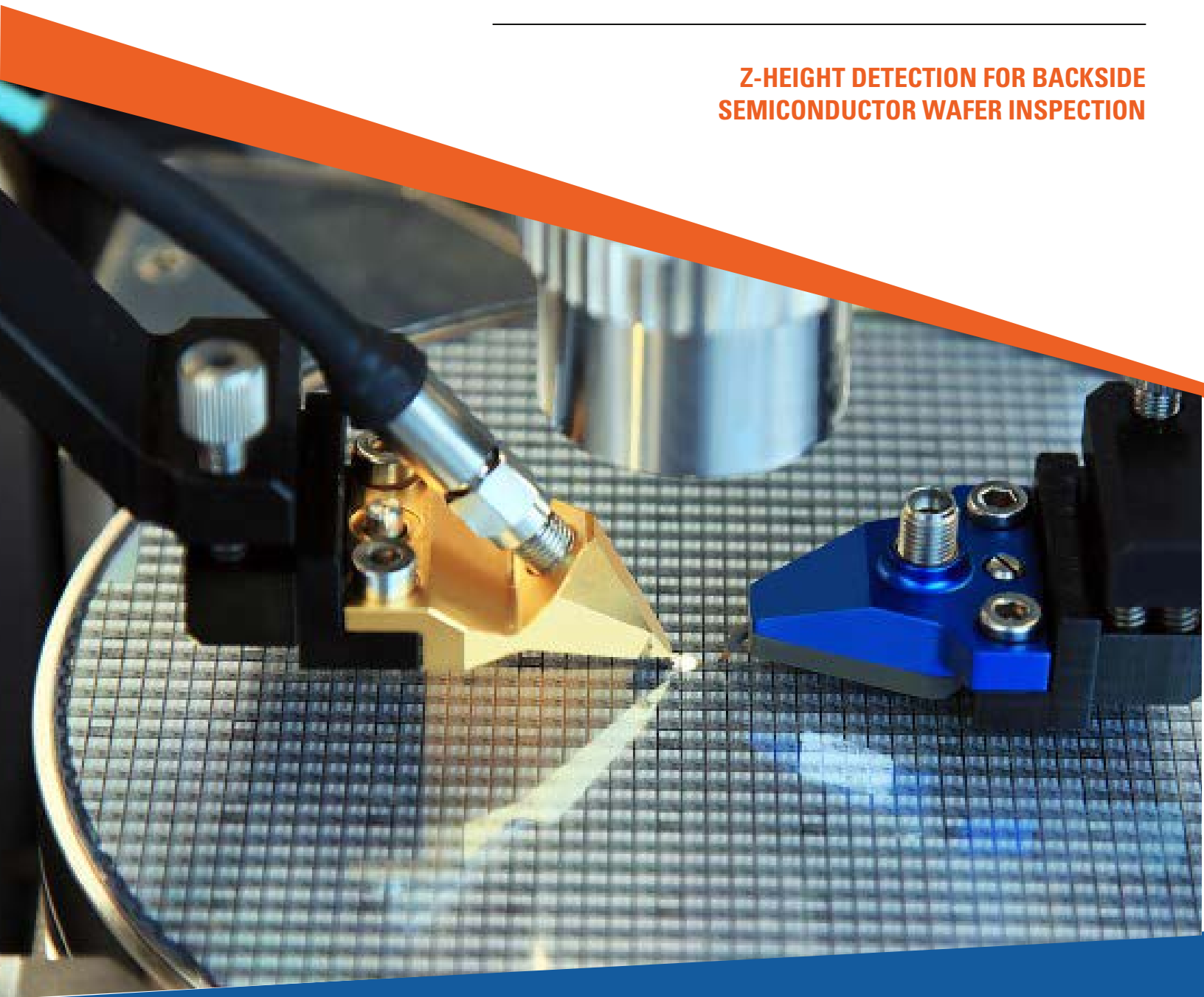


SEMICONDUCTOR AND RELATED INDUSTRIES

**Z-HEIGHT DETECTION FOR BACKSIDE
SEMICONDUCTOR WAFER INSPECTION**



APPLICATION:

Z-height detection for backside semiconductor wafer inspection

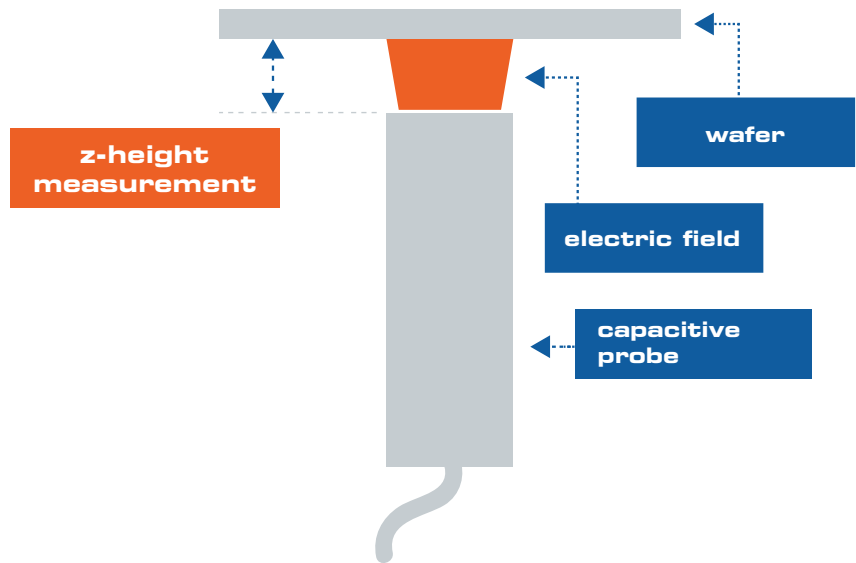
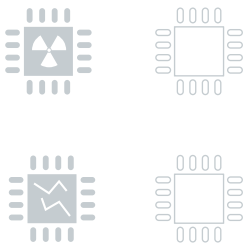
LION SOLUTION:

Lion Precision's C9.5-5.6S Sensor with a custom calibration range and CPL350 Driver

BENEFITS:

For backside wafer inspection – cleaner, flatter backside will provide higher wafer yields

- Defects such as blister defects, cracks, delamination and scratches
- Contamination, such as chips, slurry, and residual cleaning agents



A Lion Precision Capacitive Sensor is mounted below a semiconductor wafer. The Lion Precision capacitive probe sensing element averages over a relatively large area on the surface, making it ideal for “Z-height / focus” detection on an automated inspection system.

Backside Inspection and review are critical stages for determining whether wafers have become contaminated with particles due to a tool malfunction or process problem. Contamination can lead to reduced yield. Because contamination can cause stepper hot spots or further contamination of process tools, it is highly desirable to detect contamination before it creates further problems.

Besides wafer backside inspection applications, Lion Precision sensors can be used for Z-height displacement measurements on other types of microscopes and optical based metrology systems.