

Job Title: Process Development Engineer
Reporting to: Stereax Technical Director
Reports: N/A

Company description

Ilika (www.ilika.com) is a pioneer in solid state batteries. The company has developed miniature micro-fabricated solid state batteries (Stereax) for Internet of Things (IoT) applications and is now developing large format solid-state cells for electric vehicles.

Ilika is a publicly listed company with its head office in Romsey and a facility at the University of Southampton. In 2021 Ilika is establishing a new facility for the scale up and manufacture of Stereax solid state batteries. We offer the successful candidate a competitive package and the opportunity to be part of a world class technical team using state of the art equipment in a supportive environment. This is an excellent opportunity to join the team during a period of growth, and to make a meaningful contribution during this exciting transition.

Overview of the role

In this hands-on role, you will form part of a team of engineers and work closely with the manufacturing team on a day-to-day basis. However, in the Development Engineer capacity of the role, you will also work closely with the R&D team, sharing ideas, strategies and ultimately creating and carrying out projects to develop required technology and to extract better performance from our processes. The successful candidate will support the transfer of processes into Ilika's Stereax Manufacturing Facility. We are looking for individuals who are very innovative with a proven track record to reduce to practice in a high volume manufacturing environment.

Your main duties will include:

- Participate in R&D activities to develop new unit processes for future technology.
- Liaise with outsource partners to successfully deliver project / business requirements
- Organise parts and paperwork for prototype builds
- Responsible for the design and development of production intent die stacking process
- Responsible for the specification and acquisition of new equipment
- Support the transfer and implementation of processes to the Ilika manufacturing facility (specifically back-end processes) as project/business need arises.
- Support Stereax battery manufacture (specifically back-end processes) at the new Manufacturing facility.
- Control, qualification, and characterization of the process metrology tools used for analysis of thin films such as film thickness and stress.
- Lead projects with external suppliers to develop new processes and complete qualification.
- Development and maintenance of Process documentation and procedures to comply with appropriate quality standards;
- Manage and execute workload/tasks to ensure OTD of project/business requirements and achievement of KPI's;
- Documentation of optimised production workflows for various format processes;

To be successful in this role, you will possess the following:

- Minimum qualification level HNC although a BSc or BEng/Meng would be desirable;
- Expert level knowledge in assembly steps: wafer thinning, wafer dicing, die attach (including multi-die stacking) and wirebond
- Familiarity with semiconductor processing
- Strong materials science and engineering knowledge and failure analysis (FA) capability related to assembly interactions and reliability failures.
- Good working knowledge of wafer characterisation including ellipsometry, wafer stress. Wafer probe & wafer testing experience would be an advantage,
- Experience working in a production cleanroom environment (ideally Semiconductor or MEMS) in volume production would be an advantage.
- Be able to conduct independent research to understand the industry landscape on relevant technologies.
- Good understanding of manufacturing processes;
- Ability to follow and maintain qualified processes with good attention to detail;
- Six Sigma skills (Fishbone, FMEA, etc.) applicable to troubleshooting;
- Must be highly motivated to accomplish all the tasks required to meet aggressive product development schedules
- Present ideas, design concepts, data and plan with high confidence at team review meetings
- Ability to write well defined operating procedures in compliance with ISO 9001;
- Conscientious and have a good eye for detail;
- Demonstrated ability to work well in a team;

Ilika is an equal opportunities employer and positively encourages applications from suitably qualified and eligible candidates regardless of sex, race, disability, age, sexual orientation, gender reassignment, religion or belief, marital status, or pregnancy and maternity.

Contact: careers@ilika.com