

[0173 "Engineer 5"]

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An innovative, self-directed mechanical engineer who has a proven record in adapting to new manufacturing environments with an expertise in the development of micro-devices. Possesses strong skills in production startup, collaboration with engineering teams and product design.

PROFESSIONAL EXPERIENCE

MicroD, Quidwick, Rhode Island

1998-Present

Engineer (2001-Present)
Senior EFAB Technician (1998-2001)

Involved in the production of micro-devices in a clean-room environment for multiple applications, including products in the microchip industry, filters for radio frequency applications and electrical switches for a privately held, investor-funded startup manufacturing company.

- Played a key role in the setup and development of manufacturing operations, including hiring staff, collaborating with engineers for production startup, monitoring and optimizing development, and equipment troubleshooting. Achieved 100% of customer obligations for product specifications and order promise date, generating \$780,000 in revenue in the first year and securing sales contracts for an additional \$3.5 million.
- Developed a custom flip chip bonding project into a fully functional process during a ten-week consulting duration with the research and development team.
- Increased average throughput by decreasing layer cycle time from 15 to 4.5 hours and consulting with the engineering team on manufacturing changes, including transitioning production group from dry film to wet film resist in lithography and implementing technician-friendly inspection criteria.
- Developed methods for identification of defects and root cause during post-processing. Reduced the defect rate to less than 7% within eight months.
- Conducted a detailed analysis of each product component for evaluation of defect impact and acted as a resource for the engineering team.
- Spearheaded the integration of activities related to research and development, design group, production team and scheduling, creating flexibility to make significant changes within one week and increasing market competitiveness.
- Participated in the invention of design methods involving long electrical leads without shorting and release etching procedures.

SCANPX ZMT, Austin, Rhode Island

1993-1998

Mechanical Engineer, Eye-Tracking Systems

Designed and built customized head-mount and tabletop eye-imaging systems for clients in aerospace, advertising, medical field, psychological research institutes, automotive industry and military. Assumed responsibility for product development, assembly, testing, customer service and delivery.

- Developed the first outdoor eye-tracking system that worked in sunlight, resulting in sales to automotive manufacturers.
- Designed and produced a multiple eye-tracking system for the army, utilized in testing new reconnaissance strategies in hostile environments.
- Designed and built a mini pan-tilt system for securing video eye-imaging equipment on tabletop mounts, expanding flexibility of applications and contributing to more than \$500,000 in sales.

Lucyde Systems, Middletown, Rhode Island

1990-1993

Value Engineer, Ion Implant Systems

Worked as an engineer for the value-engineering department of a publicly traded international company specializing in the production of silicon manufacturing equipment.

- Redesigned three different assemblies involving robotic wafer handling, magnet harness table and laser housing, saving \$3.5 million annually in ion system manufacturing.

PRIOR EXPERIENCE

Worked as a machine operator for a packaging company.

EDUCATION

New Providence State University, Providence, Rhode Island

Bachelor of Science, Mechanical Engineering, 1989

US PATENT APPLICATIONS

P-US0846-HADSFA Utility US App No. AF/34583, 346
P-US253345-ASF-YTST Utility US App No. 24/69964, 963

TECHNICAL SKILLS

Auto Cad ¹⁴	Interferometer
Pro-Engineer (introductory)	Scanning Electron Microscope
	Chemical Etching
Lithography	Reactive Ion Etching
Electroplating	
Laser Welding	Fluidic Systems
Machining	Compressed Air Systems
Lapping	Motion Systems
Dicing	