

Title: Sr. Thin Film Optical Applications Engineer

COMPANY SUMMARY

Denton Vacuum provides thin film solutions used to create the world's most innovative products. With operations in the United States and China, Denton provides thin film deposition solutions used for a wide array of applications used in the optoelectronics market including; precision optical filters, lasers, IR detectors, sensors, 5G wireless components and micro-displays. Denton's technology portfolio includes sputtering, e-beam & thermal evaporation, ion-beam-assisted deposition (IBAD) and plasma-enhanced-chemical-vapor deposition (PECVD).

JOB SUMMARY

The candidate will serve as an Applications Scientist and subject matter expert for developing thin film optical coating solutions employing reactive sputtering, ion assisted evaporation, thermal evaporation and plasma enhanced chemical vapor deposition. Provide technical support to Engineering and R&D departments. Function as an in-house optics expert and assist with equipment design, vendor selection, experimental design and analysis, and presentation of findings.

- Strong understanding of optical materials, thin film optical design software and optical monitoring/control techniques.
- Hands-on knowledge of Sputtering and Evaporation vacuum deposition equipment, ion sources and optical film deposition control as applied to optical processing applications.
- Hands-on experience with PECVD and plasma sources is a plus.
- Demonstrated ability to develop processes used in commercial applications such as; AR/HR, precision optical filters and Transparent Conductive Oxide Optical Coatings. Experience with deposition of diamond-like carbon coatings is a plus.
- Demonstrated ability to plan and execute effective, well designed-experiments and write clear, concise reports documenting the results.
- Direct participation in R&D projects and experiments with regard to capital equipment hardware design, process development and thin film characterization.
- Technical writing including technical conference papers, sales and marketing collateral including application notes, white papers and magazine articles that describe the company's product offerings and capabilities to a general technical audience.

RESPONSIBILITIES:

- Participation in state-of-the-art research, development, test and evaluation of vacuum deposited thin films for optics, display, semiconductor, biomedical, decorative, and hard coating applications.

- Responsible for advising on technical activities at Denton Vacuum.
- Previous experience with technical support of equipment sales including customer interface and sample preparation.
- Prepare presentations for senior management, staff, and customers, and key stakeholders to influence critical decisions.
- Responsible for contributing to the strategic technical roadmap to position Denton Vacuum as an industry leader.
- Identification and resolution of technical problems as they occur.
- Performing decisive analyses to determine root causes, alternatives, and risk assessment.
- Work with other senior and junior-level physicists, engineers, and technicians to assist in experimental planning, testing, and analysis.
- Experience developing, implementing, and interpreting plasma diagnostics.
- Ability to manage a project.

QUALIFICATIONS:

- Minimum Masters Degree (MS), with 5 - 10 years of related experience, or equivalent combination of education and experience.
- Minimum of 5 – 7 years of direct experience optical coating thin film deposition & etch processes.
- Vacuum deposition equipment: Sputtering, evaporation, Experience with IBAD and PECVD is a plus.
- Thin film characterization equipment: spectrophotometer, stylus profilometer, and four point probe Experience with SEM and surface analysis is a plus.
- Must have in depth understanding of MS Word, Excel, and Access.

CHARACTERISTICS:

- Strong sense of urgency and commitment
- Lead effectively by clearly communicating expectations while following through on deliverables
- Ability to build trust at all levels and a willingness to be “hands-on”
- Strong customer facing skills
- Comfortable in a small organization where you must “wear many hats.”