

# Engineer- Development II USA

Perrysburg, OH, United States

## JOB DESCRIPTION

### **Basic Job Functions:**

- Support designed experiments to evaluate innovative ideas on thin-film PVD processes in state-of-the-art research and development solar cell fabrication line.
- Plan, organize, and execute engineering experiments.
- Summarize experimental data and present it in a clear concise format.
- Troubleshoot day-to-day issues in PVD process area in a timely manner, including tool down, yield, and quality issues as well as identifying actions to prevent repeat issues.
- Identify and/or implement system improvements that contribute to the achievement of throughput, yield, and coupon performance goals.

### **Experience / Education:**

- Bachelor's Degree in an engineering discipline or similar technical discipline, with 5 years of technical work experience as an Engineer or 2 years as a Development Engineer I with First Solar.
- Master's Degree in Electrical Engineering, Materials Science, Physics, Chemistry, Chemical Engineering, or equivalent discipline, with 3 years of technical work experience as an Engineer or 2 years as a Development Engineer I with First Solar.
- Ph.D. in Electrical Engineering, Materials Science, Physics, Chemistry, Chemical Engineering, or equivalent discipline, without experience.
- Exposure to high-volume manufacturing is desirable.
- Experience with Semiconductor/PV and understanding of PV device is a plus.

### **Required Skills/Competencies:**

- Expertise in thin film deposition (PVD, CVD) processes with a strong fundamental understanding and appreciation of process/equipment interactions. Candidates with experience in vacuum-based etching techniques such as RIE are also encouraged to apply.
- Experience with advanced sputtering techniques including one or more of RF, HIPIMS, Bipolar, or Reactive Sputtering is a plus.
- Knowledge of plasma physics is desirable.
- The ability to interface and work with cross-disciplinary teams with diverse technical backgrounds to a common goal.
- Strong communication skills and the ability to effectively communicate up, down, and across organizations and organizational boundaries
- Experience in structured problem solving, including data-driven (empirical) and model-based (first principles / scientific) approaches with a high degree of comfort switching between the two.
- Proven track record in pushing beyond the state-of-the-art in a given area to deliver and implement innovative solutions to challenging technical problems.
- Proficient use of statistical analysis software (JMP preferred), Excel, and Microsoft Office products.

### **Essential Responsibilities:**

- Lead efforts to improve module performance by developing new thin-film processes. Design, execute and analyze engineering tests. Perform data analysis to identify factors influencing performance.

- Identify opportunities for improvement in process equipment design. Successfully interact with manufacturing and design engineers/maintenance technicians to implement equipment modifications.
- Work with vendors to evaluate promising, novel sputter technologies.
- Recognize metrology gaps and work across various parts of the organization to develop solutions.
- Provide training and direction to technicians on process testing and data analysis, including documentation on test plans and tool operation.
- Ensure processes are documented and develop process control plans.
- Participate in technology start-up, transfer, and ramp activities from development site to meet yield, reliability, cost, and device performance goals.
- Communicate results of engineering tests in a clear and concise manner. Be able to communicate with upper management, development/manufacturing engineers, and production personnel.
- Ensure adherence to all safety and environmental procedures as well as housekeeping standards.
- Availability to support travel up to 15%.
- Other duties as assigned.
- Job description subject to change at any time.

**US Physical Requirements:**

Hybrid Physical Requirements:

- Will sit, stand, or walk short distances for up to the entire duration of a shift
- Will climb stairs on an occasional basis
- Will lift, push, or pull up to 27 pounds on an occasional basis
- Required to use hands to grasp, lift, handle, carry or feel objects on a frequent basis
- 20/40 vision in each eye, with or without correction is required
- Must be able to comply with all safety standards and procedures
- May reach above shoulder heights and below the waist on a frequent basis
- May stoop, kneel, or bend, on an occasional basis
- Ability to wear personal protective equipment is required (including but not limited to; steel-toed shoes, gloves, safety glasses, hearing protection, protective jacket or apron, and arm guards)
- All associates working on the production floor may be required to wear a respirator at any given time and thus, the ability to wear a respirator is a condition of employment and continued employment (requires little or no facial hair)

*Potential candidates will meet the education and experience requirements provided on the above job description and excel in completing the listed responsibilities for this role. All candidates receiving an offer of employment must successfully complete a background check and any other tests that may be required.*

*Equal Opportunity Employer Statement: First Solar is an Equal Opportunity Employer that values and respects the importance of a diverse and inclusive workforce. It is the policy of the company to recruit, hire, train, and promote persons in all job titles without regard to race, color, religion, sex, age, national origin, veteran status, disability, sexual orientation, or gender identity. We recognize that diversity and inclusion is a driving force in the success of our company.*

- **Job Identification** 1011926
- **Job Category** R&D Engineering

- **Posting Date** 06/21/2022, 03:41 PM
- **Apply Before** 07/30/2022, 03:41 PM
  - **Job Schedule** Full time
- **Work Schedule** 1 (United States of America)
  -
- **Location** 28101 Cedar Park Blvd, Perrysburg, OH, 43551, US