Dream Photonics Inc.

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About Us

Join us in enabling the next revolution in the semiconductor industry. For the last 50 years, electronics hardware has benefited greatly from the innovations developed by the semiconductor industry. Silicon photonics, where light is also used in conjunction with electronics in CMOS chips, will revolutionize the semiconductor industry by improving performance, miniaturizing optical assemblies, and enabling completely new applications using photonic integrated circuits (PICs).

At Dream Photonics Inc., we're on a mission to solve the PIC optical I/O bottleneck in the next generation silicon photonics hardware used for scaling up the AI infrastructure. Based in Vancouver, BC, we design and deliver patented silicon-photonics optical I/O and hybrid integration technologies that enable high-efficiency, low-loss, and reliable links for data centers and AI accelerators. As a strategic partner to leading foundries and optical interconnects innovators, our optical I/O and hybrid integration expertise helps springboard the hardware platforms needed to scale-up AI compute efficiently and sustainably. If you're a self-starter who's passionate about bridging optics and electronics to define the future of datacenters and AI infrastructure, we'd love to hear from you.

Job Description: Optical Testing Engineer

As a Optical Testing Engineer at Dream Photonics, you will own the end-to-end characterization, automation, and analysis of our silicon photonics optical I/O and hybrid integration technologies. You'll work hands-on with electro-optical test equipment, automated probe stations, tunable lasers, optical spectrum analyzers, detectors, and custom fixtures. Your responsibilities include, but are not limited to:

- Automated & Manual PIC Characterization:
  - Operate and maintain our automated probe stations to perform high-throughput measurements of photonic integrated circuits (PICs).
  - Execute manual bench tests integrating various electro-optical characterization instruments, including tunable lasers and optical power monitors as well as optical spectrum analyzers.
  - Diagnose and troubleshoot instrument operation, test sequences, optical alignment, probe contact, and electrical/optical signal issues to maximize data quality and yield.
- Instrument Control & Automation:
  - Architect, develop, and maintain Python-based automation frameworks (SCPI-over-GPIB/LXI/VISA) for multi-instrument test sequences.
  - Integrate new hardware (e.g., probes, switches, detectors) into existing test beds, validating end-to-end automation workflows.
- Data Processing & Analysis:
  - Design and implement data pipelines in Python using NumPy, Pandas, and SciPy to clean, calibrate, aggregate, and analyze large experimental datasets.
  - Apply signal-processing techniques and visualize results with python to extract device metrics such as insertion loss, bandwidth, and polarization-dependent loss.
- Technical Reporting & Documentation:
  - Author and maintain detailed test plans, standard operating procedures (SOPs), and calibration logs to ensure reproducibility and compliance.

    - Compile comprehensive technical reports and whitepapers summarizing experimental methodologies, findings, and recommendations.
    - Present results and road-map proposals to internal R&D teams, external partners, and key customers.
- Cross-Functional Collaboration:
    - Collaborate with design and packaging teams to align on test requirements, share insights, and accelerate product iterations.
- Laboratory & Inventory Management:
    - Manage inventory of wafers, dies, probes, optical fiber arrays, and consumables; maintain accurate records and build upon/develop lab information management systems.

Requirements

- Bachelor's degree in Electrical & Computer Engineering), Engineering Physics, Photonics, or a closely related discipline. Excellent candidates with a diploma in engineering programs will also be considered.
- Hands-on experience with electronics test equipment and in a lab environment
- Proficiency in utilizing programming languages for data analysis and visualization
- Excellent verbal and written communication, with polished presentation abilities
- Strong analytical mindset and attention to detail
- Self-motivated and resourceful: able to design and execute independent research to solve novel problems

Preferred qualifications:

- Prior experience using Python for data analysis and visualization (including using specific libraries such as NumPy, Pandas, Matplotlib (or similar libraries), as well as for peripherals readout and control .
- Prior experience with interfacing to test and measurement instruments using standard protocols (SCPI/GPIB/LXI/VISA scripting)
- Prior experience with working with optical test and measurement instruments (lasers, optical power meters, polarization controllers, etc.)

Team Building

Equity, diversity and inclusion are essential to our company's growth. An open and diverse community fosters the inclusion of voices that have been underrepresented or discouraged. We encourage applications from members of groups that have been marginalized on any grounds enumerated under the BC Human Rights Code, including sex, sexual orientation, gender identity or expression, racialization, disability, political belief, religion, marital or family status, age, and/or status as a First Nation, Métis, Inuit, or Indigenous person.

To Apply

Please send your CV, contact information for references, and a statement of your interests in this position, to mustafa.hammood@dreamphotonics.com, with email **Subject: DP Optical Testing Engineer**

Location: Vancouver, BC, Canada
Employment Type: Full-time, In-person
Compensation: $70K - $85K CAD