

Dream Photonics Inc.

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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.

At Dream Photonics Inc., our vision is to enable a billion devices with integrated photonics by making the world's best photonic components and chipsets. Based in Vancouver, BC, and co-founded by [Lukas Chrostowski](#) (photonics) and [Sudip Shekhar](#) (CMOS electronics), we are paving the way for a future where optics technology is increasingly ubiquitous and built using high-volume silicon processes, with applications as far ranging as sensing, data communications, quantum computing, self-driving vehicles, and optical computing. Dream Photonics is a trusted partner of leading silicon photonic foundries, and is working to develop patented technology for optical applications that can be a spring-board for multiple future products. We are developing Process Development Kits (PDKs) for foundries and Photonic Wire Bond integration services to simplify the efforts required by designers to bring exciting new optical technologies to market. If you are a self-starter who is interested in an exciting career in defining the future of optics and electronics, we encourage you to apply and join our team.

Job Description: Photonic Packaging Engineer

Job responsibilities include, but are not limited to:

The Photonic Packaging Engineer will be responsible for building integrated photonic assemblies containing optical fibres, lasers, silicon photonic chips, and CMOS electronics chips. To fabricate said assemblies, the engineer will utilize numerous pieces of equipment, including the Vanguard Automation SONATA1000 for photonic wire bonding in the [UBC OMI Nanofabrication facility](#). As such, the engineer should be comfortable working in a clean room environment. The engineer will also perform packaging processes including wafer dicing (DISCO DAD3240), electrical wire bonding (TPT HB100 Automatic Thermosonic Wedge & Ball Bonder), attaching small components and chips on carriers (TPT T-3000-PRO Die Bonder), and encapsulating them. This work requires that the engineer possesses a high-degree of dexterity and attention to detail. The engineer will follow process procedures; produce specifications and documentation to manage the development of assemblies and processes; and develop and qualify new processes to meet requirements.

The following items reflect the most important tasks:

- Plans and delivers nanofabrication process work for the realization of micro- and nano-structured devices, using techniques that include, but are not limited to, photonic wire

bonding, electrical wire bonding, die attach, photolithography, wet and dry etching, physical and chemical vapour deposition, metrology, and testing.

- Works on a number of different projects, that includes internal stakeholders and customers.
- Carries out processing of existing and new nano/micro-fabrication and packaging techniques.
- Monitors process performance to ensure that these processes remain operational and perform to specifications. Perform measurements to characterize the devices by generating test programs.
- Interacts with customers and industry partners, including discussion of new projects, reporting on results, coordinating work, and shipping parts.
- Produces the necessary documentation and technical reports on the work done to present internally and/or externally to clients and customers.
- Keeps inventory of required materials and orders as required.
- Assists with shipping and receiving of parts to and from customers and suppliers.

Requirements

- College degree, or working towards BAsC (or equivalent) in ECE, Engineering Physics, or Photonics discipline
- Experience in working in a clean room environment, including micro/nano-fabrication equipment such as optical lithography, resist processing, and working with other chemicals in a wet bench environment
- Track record of working across organizations and with customers
- Good communication skills, presentation skills, and analytical skills
- Working knowledge of Python
- Prior experience with device fabrication, preferably photonic devices, preferred
- Self motivated

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 matthew.mitchell@dreamphotonics.com, with email **Subject: DP PWB Engineer**