

VCSEL DESIGNER

Sense Photonics is seeking an experienced VCSEL Designer to play a critical role in building the next-generation of LiDAR systems for autonomous vehicles, UAVs, industrial automation and other applications. This position will focus on the design and development of GaAs-based III-V integrated VCSEL devices for our LiDAR system components and will require a special candidate with the ability to work seamlessly across multiple domains. The candidate should have a deep theoretical grasp of VCSEL design and be a hands-on “doer”, eager to take ownership of problems and solve them with minimal oversight. Innovation, creativity and collaborative problem-solving abilities are required.

JOB RESPONSIBILITIES

- Design and develop Vertical Cavity Surface Emitting Laser (VCSEL) devices for III-V semiconductor and related materials, leveraging heterogeneous integration technologies.
- Model and specify epitaxial film structures to target device performance requirements.
- Evaluate thin film, optical, and electrical characterization data to understand epi growth outcomes for feedback into the design parameters.
- Work with Layout and Fabrication teams to realize optimal device and VCSEL array performance with high yields.
- Evaluate device performance and yields to determine pareto of improvement activities.
- Explore creative approaches to leverage heterogeneous integration technologies to produce world-case devices for LiDAR.
- Promote a safe work environment, employee ownership of quality and continuous improvement.

REQUIREMENTS

- Strong, in-depth understanding of semiconductor physics and VCSELs structures.
- Experience with the design of MOCVD epitaxial structures and growth limitations.
- Graduate Degree in Physics, Materials Science, Electrical Engineering or an equivalent field.
- Minimum 5 years of hands-on design experience with III-V semiconductor device structures.
- Strong analytic and communication skills, flexibility, and ability to work well in a dynamic, multi-disciplinary team environment.

PREFERENCES

- Experience working with microfabrication and process integration is preferred.
- Knowledge of high power VCSEL design is preferred.



ABOUT US

We are passionate about building the next generation of LiDAR systems for autonomous vehicles, UAVs, industrial automation and many other applications. Our core technology – protected by over 200 patents – enables a simple, high-performance, solid state solution with no moving parts that can meet the rigorous performance, reliability and cost requirements of the automotive industry.

Sense Photonics was founded in 2016 and is based in Research Triangle Park, NC and is an equal opportunity employee. We are backed by several top tier venture capital firms and have already developed strong customer traction for our solution. We are committed to building a world-class company that designs and builds the world's best 3D sensor systems.