



Photonics Design Engineer

Location: San Diego CA, United States

Company Description

RAM Photonics has its headquarters in San Diego CA, with facilities in San Diego CA and Rochester NY. The company portfolio includes specialty optical and optoelectronic systems for defense, commercial, and industrial applications, including advanced signal processing, high-power lasers, and instrumentation systems. RAM Photonics seeks capable, creative, and driven contributors skilled at communicating and performing within a technical team composed of leading photonics, electronics, and software engineers.

Job Description

The Photonics Design Engineer will be responsible for designing application-specific silicon / III-V devices for signal processing and data communication products. The candidate is expected to perform photonics design, modeling, layout, test methodology development, and participate in both multi-project wafer and dedicated runs in commercial foundries. The candidate will work with internal and external integration teams to develop electrical, thermal, and mechanical specifications for module packaging. Exact title and compensation package will be offered based on the candidate's experience and skills.

Minimum Qualifications:

- MSc / PhD degree with minimum 2 years of relevant industrial / academic experience (recent graduates welcome to apply).
- Strong knowledge in integrated photonic device physics, including but not limited to propagation physics in waveguides, mode coupling, polarization / higher-order mode conversion, multimode interference, optical resonance, thermo-optic and electro-optic effects, band-gap engineering, and carrier transport phenomena.
- Knowledge in basic optical devices (e.g., waveguide, spot-size converters, vertical grating couplers, directional couplers, multimode interference devices, polarization splitter / rotator, modulators, photodetectors, semiconductor lasers, external cavity laser, etc.).
- Hands-on experience in photonics modelling techniques and tools (Lumerical eigenmode solver, EME, FDTD, thermal and charge carrier transport solvers).
- Experience in layout design (Python, KLayout, Cadence SKILL) and design rule checks (MentorGraphics Calibre) using foundry rule decks.

Preferred Qualifications:

- Deep understanding in foundry-based fabrication processes and respective constraints on integrated photonics device performance.
- Experience in photonics design using foundry PDK.
- Knowledge in microwave and high-speed optoelectronic devices (modulator, photodetector).
- Experience in high-frequency simulation using ANSYS HFSS, Cadence (formerly Integrand) EMX and ADE.
- Experience in PCB / substrate design using Orcad / Allegro / SiP.

Qualified applicants should submit resume, with cover letter, using the link below:

<http://completepayroll.evolutionadvancedhr.com/JobApplication.aspx?jobpostingkey=c2366dbd-c78f-4c30-9e88-d12f8fec3627>