

Senior Optical System Engineer / Project Engineer (GRIN Optics)

Location: Corvallis, OR (ATAMI Building)

Status: Full-Time, Salaried

Reports to: VP of R&D

Work Authorization: U.S. citizen or permanent resident (green card holder)

Role Summary

Nanovox is pioneering gradient refractive index (GRIN) optics through advanced inkjet-based additive manufacturing. We seek a multidisciplinary engineer who can bridge optical system design, product development, and project execution for government and commercial R&D programs. This role demands technical depth, strong modeling and statistical analysis skills, and exceptional communication—both written and verbal—to convey complex concepts simply to customers and stakeholders.

Key Responsibilities

Project & Product Engineering

- Translate customer requirements into technical specifications and system architectures.
- Manage scope, schedule, and deliverables for multi-partner R&D projects.
- Coordinate across optical designers, materials scientists, and manufacturing engineers to ensure design-for-manufacture and design-for-test.

Optical System Design & Analysis

- Design and analyze optical systems incorporating GRIN elements using industry-standard tools (e.g., Zemax OpticStudio, CODE V).
- Perform wavefront and aberration analysis using Zernike modes; evaluate image quality metrics (MTF, PSF, Strehl).
- Conduct Power Spectral Density (PSD) analysis for surface and index structure characterization.
- Develop tolerance models and system-level performance predictions.

Advanced Modeling

- Perform optical systems modeling of customer applications, using analytical methods to refine optical component specifications and tolerances.
- Apply statistical methods to analyze experimental data and optimize processes.
- Build and validate models for multi-species diffusion in GRIN inks (e.g., Maxwell–Stefan frameworks) to predict refractive index gradients.
- Correlate material properties and manufacturing parameters with optical performance.

Customer Interaction & Reporting

- Communicate complex technical concepts clearly and simply to customers and stakeholders.
 - Write **data-driven reports** integrating results from multiple team members.
 - Prepare **compelling proposals** for government and commercial customers, aligning technical solutions with their needs.
 - Present technical findings in meetings and formal reviews.
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Required Qualifications

- Degree in **Optical Engineering** or **Physics** (MS or PhD preferred; BS with strong experience considered).
 - Proficiency in optical design software (Zemax, CODE V) and modeling tools (Python, MATLAB).
 - Strong foundation in optical metrology, wavefront analysis, and statistical data analysis.
 - Experience with interdisciplinary R&D projects and customer-facing technical communication.
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Preferred Skills

- Familiarity with optical lens design, lens materials, and tolerancing.
- Knowledge of digital holography, phase interferometry, and GRIN metrology techniques.

- Experience writing proposals for government solicitations.

Join Nanovox and help redefine optical design and manufacturing through innovation, precision, and speed.