Job Title: Optical Engineer

Number of Position(s): 2

Department: Research & Development

Company: Light Mechanics Pvt. Ltd.

Location: Bangalore

Employment Type: Full-time

Industry: Laser Systems, Industrial Automation & Engineering Solutions

Website: www.lightmech.com

Education: B.E., M.Sc., M.Tech, and Ph.D. in Photonics

About Light Mechanics

Light Mechanics is a technology-driven company focused on industrial laser applications, automation systems, and advanced materials processing. Our work spans laser welding, additive manufacturing, surface modification, laser cladding, and precision laser machining. We actively collaborate with academic and research institutions to advance laser material interaction understanding and translate it into high-performance industrial solutions.

Position Overview

We are looking for an enthusiastic Entry-Level Optical Engineer to support the design, development, and testing of laser-based optical systems. This role involves hands-on work in optical alignment, system optimisation, and performance validation for applications such as marking, welding, cutting, and micromachining. The ideal candidate will work closely with the R&D and product teams, contributing to optical layout development, subsystem integration, and technical documentation while gaining strong exposure to advanced laser technologies.

Key Responsibilities

- Proficiency in beam alignment, opto-mechanical assembly, and diagnostics.
- Troubleshoot optical alignment issues and optimise beam quality.
- Establish and validate optical system tolerances and alignment procedures.
- Develop optical layouts for laser-based machines (e.g., marking, welding, micromachining).
- Prepare technical reports, publications, and documentation of R&D findings.

- Support development of new optical subsystems for advanced processing capabilities.
- Develop test setups for optical and laser performance validation.
- Laser Integration & Testing.
- Perform beam characterisation (M^2, divergence, focus spot size, power density, etc.).

Preferred Skills

- Strong understanding of laser-material interaction fundamentals.
- Familiarity with fiber lasers, DPSS lasers, CO_2 lasers, and UV lasers.
- Basic knowledge of optical alignment tools (beam profilers, power meters).

- Exposure to optical lab work, internships, or academic projects.
- Knowledge of machine vision, optical sensors (confocal, triangulation).
- Understanding of beam delivery systems (collimation, focusing, mirrors, etc.).
- Strong analytical and problem-solving skills.
- Good communication and documentation abilities.

Why Join Light Mechanics

- Opportunity to work on **cutting-edge industrial laser systems** and **multi-disciplinary R&D**.

- Direct involvement in **commercializing advanced laser processes**.

- Collaboration with national institutes and industries.

- Supportive environment encouraging **innovation, patents, and publications**.

Remuneration & Benefits:

- **Benefits:** Health insurance coverage, structured training programs, and career development opportunities