

## Job Description

**Job Title** Senior Optoelectronic Team Leader (Optoelectronics Engineer / Laser Physicist)  
**Company** Cascade Technologies  
**Reports to** Technical Director

### General Company Description

Cascade Technologies provides innovative gas fingerprinting solutions for the emissions and hazardous materials markets. Its technology is innovative, and has already gained significant commercial deals with blue chip companies in the UK and USA and has ambitious plans for growth.

### General Role Description

Cascade is seeking to recruit an Optoelectronic Team Leader to be responsible for the R&D and production of semiconductor diode lasers for use sensing systems.

We are specifically interested in the development of mid infrared semiconductor diode lasers such as QC Lasers that can be engineered for deployment on a variety of platforms. The candidate must be able to assemble a small group of experienced laser specialists and manage foundry subcontractors developing and applying laser devices for civilian and military applications.

The position involves technical leadership, program management, business development, and customer interaction.

### Duties and Responsibilities

- Project management
- Planning, setting-up and execution of experiments
- Development and measurements and test of optical and optoelectronics devices and components
- Supervise laser design and engineering
- Manage components definition, procurement and evaluation
- Define laser reliability test bed system
- Carry out performance evaluation and analysis
- Develop proposals for adoption of new technologies
- Identify, select and specify new lab equipment
- Attend presentations and submit publications

### Qualifications, Skills and Experience

- PhD degree, or equivalent, in Semiconductor Physics, Physics, Electrical Engineering, or an equivalent field
- Carried out post doctoral research and or 7-10 equivalent in industrial research on Semiconductor physics, Optoelectronics
- Demonstrated record of highly creative, independent research
- Strong track record in collaborative research and working effectively as a team member
- Ability to establish and lead research projects
- Ability to lead a team of professional scientists and to interact effectively with a broad range of colleagues
- Ability to recommend new directions, methods, and techniques
- Developed and tested optoelectronic components
- Working knowledge of MBE, lithography, wet and dry etch, ion implant, PECVD, Ion mill, and related clean room equipment
- Good knowledge of associated engineering and data-evaluation software tools
- Understand modelling of semiconductor structures
- Experience of growth, processing and mounting techniques of optoelectronic components
- Optical design skills
- Knowledge of laser spectroscopy tools for devices characterisations such as Monochromator and FTIR
- Excellent interpersonal, analytic, and leadership skills

## Hours

- This role will involve working 10 am to 4 pm core hours, with a normal working week of 42.5 hours with an hour per day for lunch. However time input will be flexible due to requirements of job
- Shift working may be required as the business develops.
- Travel may be required occasionally.