



JOB DESCRIPTION

SENIOR ELECTRICAL ENGINEER

GENERAL SUMMARY

The Senior Electrical Engineer is responsible for the design and development of electronic and optical assemblies used in Company's high tech/high precision military defense programs and law enforcement agencies. This position also provides production support, troubleshooting, tool design, test development, as well as senior level support for modeling and analyzing electro-optical systems, sub-assemblies, components, and optical test equipment, including alignment and calibration. Conducts daily interfaces with internal decision makers and multi-disciplined design team about requirements, specifications, and design reviews. As a Supervisor, the position manages a group of engineers, drafters, and technicians.

PRIMARY JOB FUNCTIONS

1. Designs, builds and tests electronic circuits (analog) and firmware that control and power products.
2. Designs and tests optics for products.
3. Develops, and implements procedures used to assemble, process, test and/or manufacture products.
4. Manages, designs, and develops electrical components, equipment, systems, sub-systems, and products, applying knowledge and principals of electrical design and engineering.
5. Meets the requirements of ISO 9001 2008 and maintains required documentation.
6. Supervises the electrical engineering group of engineers, drafters, and technicians.
7. As a supervisor of staff, the Supervisor assists the Affirmative Action Officer with the following:
 - Identification of problem areas and elimination of barriers to equal employment opportunities and affirmative action practices;
 - Periodic review of hiring and promotion patterns and training programs to attain affirmative action placement goals and objectives;
 - Review of employee qualifications to ensure minorities and women are given full opportunity for transfers and promotions;
 - Career counseling for employees as needed;
 - Adherence to the Company's policy of equal opportunity for all employees and communication to employees supervised to promote understanding, support, and adherence.

SECONDARY JOB FUNCTIONS

1. Supports manufacturing and sets up standard test apparatus or devises test equipment and circuitry to conduct functional, operational, environmental, and life tests to evaluate performance and reliability of prototype or production model.
2. Analyzes and interprets test data.
3. Prepares test plans and test reports.
4. Develops computer programs for microcontrollers and other applications as necessary.
5. Performs laser safety calculations.
6. Uses computer-assisted engineering and design software and equipment to formulate and test electronic and optical designs.
7. Prepares and presents technical material to customers.
8. Acts as project manager for some R&D projects.
9. Incorporates methods for maintenance and repair of components, and designs and develops repair procedures.

OTHER DUTIES

Other duties may be assigned.



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SUPERVISORY RESPONSIBILITIES

Supervises a group of engineers, drafters, and electronic technicians to include performance reviews, work instructions, and corrective action.

Implements plans and controls activities related to staff.

SUPERVISION

- Works under general supervision.
- Work is reviewed for soundness of judgment and overall adequacy and accuracy.

COMPLEXITY

- Solves a variety of complex problems.
- Applies technical knowledge and best practices to situations and makes recommendations.

DISCRETION AND DECISION MAKING

- Makes decisions based on knowledge of technical and operating standards, past experience, and data; evaluates practices for compliance.
- Frequently exercises discretion and independent judgment with respect to matters of significance.
- Makes purchasing decisions regarding parts.
- Makes inspection (pass/fail) decisions.

QUALIFICATIONS

Minimum of a B.S. in Electrical Engineering, or Physics required. M.S. preferred.

EXPERIENCE

- With a B.S., a minimum of 10 years' experience in electronic and optical engineering of laser based products in a fast-paced environment. Breadth of knowledge of multiple engineering design disciplines, i.e., optics, precision mechanical, electrical, etc. Working knowledge of analog design, in particular.
- Five years' experience supervising a group of engineers and technicians in the design and development of electro-optical products.
- Extensive experience in analysis, concept definition, design, and development of electro-optical products.
- Experience with full systems engineering lifecycle from proposal development to product delivery.
- Knowledge of laser safety FDA regulations.

SKILLS REQUIRED

- Computer proficiency required in ORCAD, PADS, ZEMAX, AUTOCAD, MATHCAD, LABVIEW, Assembly language, C, Visual Basic, MS Office and other related software.
- Must have working knowledge of electronic test equipment, such as, oscilloscopes, digital multi meters, spectrum analyzer equipment, and I.C. programming equipment.
- Strong analysis and simulation experience.
- Exceptional written and verbal communication, as well as interpersonal skills.
- Supervisory skills and ability to successfully coach, train, and motivate employees.
- Ability to effectively assess readiness and capability of staff and delegate as needed.
- Integrity and ability to maintain confidentiality in sensitive situations.
- Ability to effectively communicate with all levels of employees.
- Able to multi-task and manage conflicting priorities.



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- Ability to work under pressure and meet deadlines.
- Proactive and resourceful in solving issues.
- Self-directed requiring minimal supervision and ability to exhibit initiative.
- Teamwork oriented.
- Highly organized.
- Critical thinking and problem solving skills, as well as excellent mathematical skills.
- Ability to communicate to technical and non-technical internal customers.

ADDITIONAL REQUIREMENTS

U.S. Citizenship or Permanent Resident status required. (Applicants selected will be subject to a government security check and must meet eligibility requirements for access to classified information.)

PHYSICAL DEMANDS

- Ability to sit for extended periods of time up to 80% of time.
- Job requires standing, walking, reaching with hands and arms, or lifting up to 20 pounds 20% of time.
- Ability to work for extended periods in front of a computer screen.
- Ability to use standard office equipment in a manufacturing and engineering environment.

WORK ENVIRONMENT

- While performing the duties of the job, the employee is often exposed to a manufacturing environment. The noise level in the work environment is usually quiet to moderate.
- Occasional exposure to glues, epoxy, and isopropyl alcohol in the Production Department.

Affirmative Action and Equal Opportunity Employer