Position/Title: Reliability Engineer
Reports To: Quality Management Representative
Executive: Managing Director
Department: TUSP, Administration
Date Completed: November 2014

Summary
Provide expertise in the area of reliability and advanced statistical methods relating to the development of new and more robust products, as well as the characterization and improvement of existing products at TRUMPF Photonic’s state of the art semiconductor and electro-optics manufacturing facility.

Principle Duties & Responsibilities
The statements below are intended to describe the general nature and level of work in this position. They are not intended to be an exhaustive list of all responsibilities. The position may require that employees perform other duties as assigned.

- Work cooperatively with Management Team, R & D, Production Engineering and Production to define reliability objectives.
- Contribute to the development of product specifications and qualification plans.
- Design and conduct in-depth Life Data analyses in support of R&D’s product and process development activities.
- Design accelerated life testing plans (ALT or HALT) with life-stress models for one or multiple stresses; application of Arrhenius Models in ALTs; knowledge of typical activation energies and scaling factors for semiconductor materials; application of censoring schemes.
- Development of Reliability Models based on results of life-test data and application of appropriate reliability distributions such as Weibull, Exponential, or others.
- Perform reliability prediction analyses on existing or proposed products on basis of Life-Test results or actual field failure data to determine important metrics such as Mean-Time-to-Failure (MTTF), Mean-Time-Between-Failures (MTBF), Failure Rate, etc.
- Provide Management Team with analysis results and data regarding determination of warranty terms and conditions.
- Work cooperatively with R&D engineers to identify and quantify device failure modes (FMEA) and to develop and execute reliability-oriented Design of Experiments.
- Conduct reliability assessments to validate the effect of process changes.
- Participate in product design reviews and provide representations of product reliability.
- Provide expertise in advanced statistical analysis to engineering staff.

Experience
Minimum 2 years experience in a Reliability Engineering position, preferably in the semiconductor or solid state device industry. Certified Reliability Engineer is a plus. Advanced expertise using statistical analysis software (Minitab, JMP, Weibull ++) is required. Must be able to effectively work independently and in a team environment with minimal supervision.

Education
Advanced degree in Industrial, Reliability or Quality Engineering or Applied Statistics or suitable combination of education and work experience required.