

Photon Inc. Quality Management System

Introduction

Photon Inc is a small company and, as such, has close and constant communications between the marketing, sales, engineering, and manufacturing functions. Unlike in larger firms it is not as critical that there be complex, formal procedure manuals to ensure that these communications take place when necessary. Nonetheless, it is important that there be an overall commitment to the quality and consistency of all Photon products.

Photon Inc. manufactures the laser measurement equipment that has become the “gold standard” for laser characterization over the years. In reality there is no other agreed standard for laser performance. There is a recommended laser test procedure standard, ISO 11146, that sets out standard methods for the measurement of laser beams, but there is no “standard laser” maintained by NIST, ISO, DIN or any other certifying organization. Photon overcomes this deficiency by maintaining its own “Gold Standard” BeamScan, against which it measures all of the test fixtures and calibration standards that are used in the manufacture and test of the various instruments that it produces. In addition, all other test equipment, such as oscilloscopes, DVMs and tachometers, are maintained and calibrated to NIST-traceable standards consistent with good manufacturing practices in the industry.

Procedures

Photon Inc. maintains a comprehensive list of well-defined assembly and test procedures to ensure that each instrument is consistent with its design specifications. There are rigorous test and calibration procedures that guarantee the accuracy of each instrument produced. Photon Inc. has a tracking database that keeps the record of every instrument serial number produced. Many of these instruments have been in service in excess of ten years and still meet the original specifications for accuracy and precision when they are returned to Photon Inc. for regular calibration.

The Engineering department also maintains defined procedures for the design and release of new products. Both hardware and software development are documented. All revisions of software are archived, and regular defect reports are maintained. Fixes to identified software defects are distributed automatically to users of affected instruments. Software upgrades and improvements are offered for purchase to users outside of a normal warranty period whenever possible. Barring hardware constraints that make it impossible, Photon Inc. strives to maintain downward compatibility in software products.

The Marketing department maintains the databases, which track the history of every instrument serial number and works closely with Sales and Service to ensure that customer service problems are dealt with swiftly. Service problems are reviewed monthly by the manufacturing, engineering and marketing managers in order to identify any endemic problems with instruments. Depending on the nature of any problems, they will be resolved by Engineering, Manufacturing or Purchasing. Manufacturing will modify any procedures necessary to remedy a problem caused by a faulty manufacturing; engineering will provide solutions to design or software problems; and Purchasing and Engineering will work with vendors to remedy problems caused by faulty OEM devices.

Archives

Photon Inc. maintains archives of all important documents, procedures, software code and databases both on site and backed-up at an offsite data storage facility. Photon supports discontinued and obsolete products for as long as is technically feasible. Copies of down revision software and instrument manuals are also archived and available if needed for all Photon products.

Photon Management Statement of Quality Assurance

“Photon Inc. manufactured the first BeamScan in 1983. Since then, it has continued to set standards of quality for the industry and has become the *de facto* beam width and beam position standard recognized worldwide. Photon’s original goal was—and continues to be—to produce instruments that both suppliers and original equipment manufacturers can depend on to provide accurate beam width, beam position and laser power values. Each instrument is checked against an in-house laser standard and is not shipped unless it exceeds the proper test criteria. It is Photon’s design philosophy to provide its customers with unparalleled beam profiling quality.”

John M. Fleischer

President

Photon Inc.