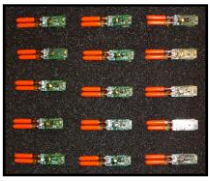
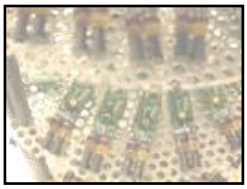
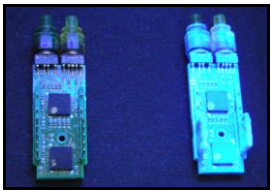


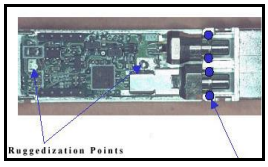
Transceivers in Preparation Stage



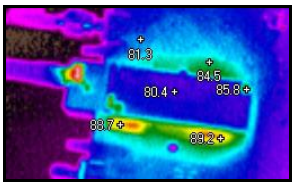
Setup Process for Vacuum Deposition



Before and After: UV additive



Ruggedization of boards and fixtures



Thermal analysis under stress showing conductivity of material/device

Optical network use under water

Overview

COTSWORKS ruggedizes optical transceivers, cables, and related circuit board assemblies for use in Military, Aerospace, Industrial, or other harsh environments. Our 6000 square foot facility meets MIL STD-1686 and is audited and certified with an S20.20 ESD program. All products and services are manufactured under JSI/J-STD-001 standards for electronic assemblies.

COTSWORKS can perform thermal, operational, storage, HALT/HASS, shock, EMC/EMI, Humidity, Immersion, Altitude, Fungus, Salt/Fog, Sand and Dust, Icing, Contamination, and MIL-HDBK-217 or Telcordia/BellCore analysis on optical components or related circuit card assemblies.

COTSWORKS manufactures fiber cables to IEC, ARINC, TIA, and MIL-STD, and built custom fixtures to test components and assemblies under stress.

COTSWORKS offers a variety of coatings such as Parylene, Urethane, Silicone, Epoxy, and Acrylic. Some coatings include a UV additive to aid in auditing and certification. Conformal coating transceivers allow them to go into harsh environments where moisture, solvents, or corrosive chemicals could cause failure of the electronics. The laser assembly is usually hermetically sealed, but the laser driver and associated circuitry are extremely susceptible to both ESD and environmental damage. Corrosion can cause a change in opto-electric performance which results in changes in link budget or thermal emission changes. Conformal coatings can prohibit tin finger growth on RoHS compliant modules. Our coatings meet MIL-I-46058 and the newer IPC-CC-830.

COTSWORKS uses a variety of epoxies that have been analyzed for Total Mass Loss and Collected Volatile Condensable Material. We offer opto-electric testing to MIL 883, 810, or DO-160B –tested off, on, or in use.

COTSWORKS can design and manufacture circuit cards to A-610 Class 1 – 3. COTSWORKS can design and build test fixtures and related software to meet MIL or DO178b requirements.

Summary

Our approach to solving the problems that come from using fiber optic components in harsh environments is to ruggedize them ourselves in house, to build the associated cabling that connect them to the outside environment, and to build the test equipment to test them under use in mission critical, multi-port environments. We offer a wide range of industry expertise that is focused on fiber optics.

Our staff includes test, mechanical, firmware, hardware, software, chemical, and quality engineers and trained and certified technicians. We have an ISO equivalent quality system today with certification expected at the end of 2008. Contact us for more information on ruggedization or optical transceiver, cable, or test equipment requirements.

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