



AeroflexRAD Colorado Springs Facilities Fact Sheet – May, 2014

Aeroflex RAD is a comprehensive radiation effects test and support laboratory, offering the following capabilities, services and standard products for Hi-Rel Military and Space applications.

- MIL-STD Radiation Effects Test Services
- Device Preparation for Single Event Effects (SEE) Testing
- Device Assembly, Screening and Element Evaluation
- Quick-Turn Prototype IC Assembly

Location: 5030 Centennial Blvd, Colorado Springs, CO 80919 **Total Facility:** ~35,000 sq ft

Building Square Footage:

Includes:

Laboratories	5300 sq ft	Radiation chambers, development and cryogenic testing
Clean room	1250 sq ft	Assembly clean room, class 100
Encapsulation	1250 sq ft	Furnace sealing, seam seal, cap welding
Screening and Electrical Test Facilities	3200 sq ft	Screening, burn-in, electrical test and environmental
Office space	3500 sq ft	Computer automated powerhouse and HVAC equipment
Common areas	5300 sq ft	Offices, cubicles, conference rooms
Future expansion	12900 sq ft	Shipping/receiving, storage, lunch room, restrooms, halls
	2200 sq ft	For future test, assembly expansion

Radiation Test Equipment:

Cobalt-60 Panoramic Source (HDR): One high dose rate (HDR), 50-300 krad(Si) for device and box/system level testing

Cobalt-60 Panoramic Source (LDR): Two low dose rate (LDR) Co-60 source dedicated for Enhanced Low Dose Rate Sensitivity (ELDRS) testing at 1, 10 and 100 mrad(Si)/s.

Cesium-137: Focal Plan Array (FPA) development and testing.

Flash X-Ray Source: Pulserad 112A up to 10^{11} krad(Si)/s, 20ns FWHM for prompt dose testing.

Pelletron Source: 1 MeV Electron Beam Source

Neutron Source: 14 MeV for Single Event Upset (SEU) and displacement damage testing.

- ▼ High Dose Rate, Total Ionizing Dose (HDR)
 - Aeroflex RAD has tested thousands of analog and digital devices. Numerous tests are conducted, onsite, every month.
- ▼ Low Dose Rate, Total Ionizing Dose (LDR) or ELDRS.
 - Again, Aeroflex RAD has tested thousands of analog and digital devices. These tests are conducted, onsite, every month. Due to the low dose rate and amount of time necessary to get sufficient total dose on a part, Aeroflex RAD has added a second ELDRS cell and both cells are now panoramic.
- ▼ 14 MeV Neutron Irradiation
 - Aeroflex RAD also conducts, onsite, many neutron irradiation tests for SEE or displacement damage. Fluence levels from 10^8 neutrons/cm²/s to 10^{12} neutrons/cm² achievable.
- ▼ Flash X-ray Irradiation (Prompt Dose Test)
 - Tests are conducted on site with up to 100 pulses per day and up to 10^{11} rad(Si)/s, 20 ns FWHM pulse. Many tests are conducted every month.
- ▼ Heavy ion and proton Single Event Effects (SEE) testing
 - All preparation, including hardware and software design and pretesting is conducted at Aeroflex RAD. The final test(s) is conducted primarily at either LBNL or TAMU.