

EXTREME TEMPERATURE CONDITIONS FACILITY



ALTER TECHNOLOGY is proud to announce the upgrade of the facilities devoted to extreme temperature testing in the R&D department of Photonics and New Technologies.

New space missions include more extreme requirements of storage, operational temperatures and vacuum conditions exceeding the standard -55 / +125°C MIL temperature range conditions.

Miniaturization implies increased power dissipation and hence higher junction and PCB temperatures.

Specific activities at ALTER TECHNOLOGY

- Parts reliability assessment to ensure mission performance
- Characterization of existing technologies under such extreme temperature conditions
- Understanding of failure mechanism
- Development of specific NEW parts for very extreme application
- Assessment on new packages and assembly methods

The updated facility comprises:

- 8 cryogenic chambers with a temperature range from -195 to +300°C
- Several dimensions available up to 90x50x35cm and ramps up to 40°C/min
- Additional 4 ovens up to 250°C
- Several vacuum space simulators developed in-house that can achieve a pressure below 10^{-7} mbar within a temperature range from -195 to +250°C
- A dedicated climatic chamber that can archive temperatures between -70 to + 150°C and control the relative humidity
- Multiple feedthrough connectors so as to allow samples on line monitoring and power up including characterization of optical, electrical and RF parameters
- Custom thermal profile is available through dedicated in-house Labview based SW
- Total in-house management of all activities (boards design & manufacturing, biasing circuitry, testing, measurement, reporting, etc.)

