



ThermoLab

A universal thermal testing platform for
research and development



TAU Industrial Robotics

tauindustrialrobotics.com



Ultra fast transition times (up to 30C/s)



Unprecedented precision and contained temperature drift (less than 0.1C)



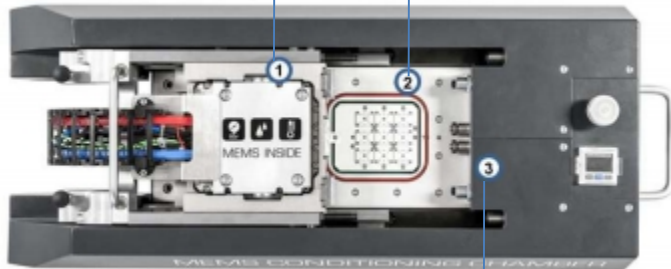
Dynamic, multi-temperature testing in a single device loading cycle, with fully configurable temperature transition times

Thermal head

- Multiple temperature inputs monitored
- Thermal head can be changed according to the devices processed

Socket

- Standard pitch, industrial socket
- Can be removed and replaced to handle different component sizes and shapes
- Calibrated springs to apply correct force on any component



Chamber

- Chamber is optimized to minimize temperature stabilization time
- Sealings and frame designed to handle wide temperature ranges dynamically, pressure as an option

ThermoLab at a glance

Based on a next generation thermal conditioning technology, ThermoLab is the first integrated r&d platform to generate multi-temp, ultrafast temperature stimuli in a compact, tabletop solution.

Thermal testing should be fast and flexible

Rapid development cycles require flexible thermal testing platforms, capable of transitioning seamlessly and precisely from low to high temperatures, with controlled and configurable transitioning times, without thermal drift. All this is now possible with ThermoLab, a universal thermal testing platform for all r&d, development and calibration tasks that supports a wide range of packages and devices forms.

About Tau Industrial Robotics

Tau Industrial Robotics has a decade long experience in semiconductor manufacturing technologies. Our company developed its own technologies to assist semiconductor and fabless companies in developing, testing and calibrating their devices at different temperature ranges.



A small, laboratory-ready station for full thermal testing temperatures (range from -20 up to 120C)



Exchangeable and configurable socket (easy configuration between different devices testing)



Proven reliability over time (mean time between scheduled maintenance > 200.000 temp cycles)

Technical specifications

Temperature transition gradient	Up to 30°C/s
Supported device packages	2x2 to 5x5 metal/plastic lid
Temperature precision	+/- .1°C
Example transition time -20°C to 125°C	25s
Example transition time 125°C to -20°C	50s

A closer look at ThermoLab

ThermoLab uses nitrogen-less technology to deliver fast and accurate temperature change right in contact with the device. The system reads and acts on temperature feedback coming from different sources, including the tested devices themselves when they have thermal sensing capability. The thermal head has been developed to guarantee fast transition times, outstanding reliability and easy maintenance over the entire life cycle.



Semiconductors



ThermoLab

Contacts

Italy – Piedmont

Tre Tau Engineering s.r.l.

Via Casalis 33

Torino IT

italy@tauindustrialrobotics.com

Italy - Trentino

Tautronik s.r.l.

Via Marighetto 78

Trento IT

italy@tauindustrialrobotics.com

Russia

Tau Industries OOO

Skolkovo Innovation Center

Ul. Lugovaya 4, Moscow RU

russia@tauindustrialrobotics.com

UK

Asterope Ltd

Office 31, Central Chambers, The

Broadway, London UK

italy@tauindustrialrobotics.com



TAU Industrial Robotics

tauindustrialrobotics.com