



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005
& ANSI/NCSL Z540-1-1994

THERMETRICS
 4220 24th Avenue W
 Seattle WA 98199
 David Eckhart Phone: 206 456 9119

CALIBRATION

Valid To: June 30, 2018

Certificate Number: 3984.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations¹:

I. Dimensional

Parameter/Equipment	Range	CMC ² (±)	Comments
Length – 1D	Up to 25.4 mm 25.4 mm to 50.8 mm 50.8 mm to 76.20 mm	0.0050 mm 0.0050 mm 0.0060 mm	Micrometer

II. Electrical – DC/Low Frequency

Parameter/Equipment	Range	CMC ² (±)	Comments
DC Resistance – Measure	(0 to 9.999) Ω (10.000 to 99.999) Ω (100.00 to 1000.00) Ω	0.007 Ω 0.017 Ω 0.19 Ω	Multimeter
DC Voltage – Measure	(10.0000 to 50.000) V	0.004 V	Multimeter

III. Mechanical

Parameter/Equipment	Range	CMC ² (±)	Comments
Mass – Measure	Up to 100 g	0.0090 g	Low mass balance
Mass – Measure ³	Up to 1000 g	0.30 g	High mass balance

IV. Thermodynamics

Parameter/Equipment	Range	CMC ² (±)	Comments
Temperature – Measure	0 °C to 60 °C	0.0063 °C	Reference temperature readout and sensor
Thermocouples – Measuring Equipment Type J	0 °C to 200 °C	0.13 °C	Thermocouple calibrator

¹ This laboratory offers commercial and field calibration service.

² Calibration and Measurement Capability Uncertainty (CMC) is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards of nearly ideal measuring equipment. CMCs represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of $k = 2$. The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.

³ Field calibration service is available for this calibration and this laboratory meets A2LA R104 – General Requirements: Accreditation of Field Testing and Field Calibration Laboratories for these calibrations. Please note the actual measurement uncertainties achievable on a customer's site can normally be expected to be larger than the CMC found on the A2LA Scope. Allowance must be made for aspects such as the environment at the place of calibration and for other possible adverse effects such as those caused by transportation of the calibration equipment. The usual allowance for the uncertainty introduced by the item being calibrated, (e.g. resolution) must also be considered and this, on its own, could result in the actual measurement uncertainty achievable on a customer's site being larger than the CMC.