

# CERTIFICATE OF CALIBRATION


ISSUED BY: LAMBDA CALIBRATION LTD

DATE OF ISSUE: 27 February 2023 CERTIFICATE No: 763594

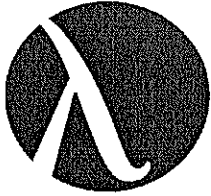


Page 1 of 3

APPROVED SIGNATORY

  
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**Lambda**  
CALIBRATION LTD

**Customer:** DJB Labcare Ltd  
**Address:** Unit 12, Cromwell Business Centre  
Newport Pagnell, Buckinghamshire  
MK16 9QS

**Item Number:** 18110007 (4046)  
**Description:** Digital Thermometer  
**Model/Range:** TMD-56  
**Manufacturer:** Amprobe  
**Date of Cal:** 27 Feb 2023  
**Calibrated by:** Gabor Szabo  
**Procedure Name:** Amprobe, Digital Thermometer, TMD-56 (DJB Labcare)  
**Rev/Basis:** 05:E-650, Based on BS EN 60584.1  
**Temp/Humidity:** 20.0°C ±2°C <80%rh

The Results on the following pages are: As Found  
All Measurements are Traceable to National Standards.

Note 1: The unit under test was calibrated using a multifunction calibrator.

Note 2: Where the reported value lies within the specified tolerance then this will be indicated by the word "PASS", if outside then by the word "FAIL".

Note 3: Any supplied test leads have been checked as part of the Visual/Operational test but have not been used during calibration.

Note 4: Temperature indicating instruments that contain an internal reference junction for use with thermocouples are calibrated with the reference junction enabled.

Note 5: Unless otherwise stated, the device has been calibrated with its protective cover removed (if a cover was fitted) and was powered by battery (if applicable).

**Engineers' Notes:**

**Equipment Used:** Multi-function Calibrator: LMMC-02 / LMMC-04 / LMMC-10 / LMMC-14 ✓

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor  $k=2$ , providing a coverage probability of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements. Unless otherwise stated: [1] The 'Compliance Statement' is based on 'simple acceptance' (result vs tolerance) with the relevant calibration uncertainty being no greater than the tolerance. [2] Reported activities were carried out at the address detailed in the header. [3] The results relate only to the items calibrated. This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units and / or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

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UKAS ACCREDITED CALIBRATION LABORATORY No: 0495

CERTIFICATE No:

763594

Page 2 of 3

Parameter	UUT Range	UUT Indicated Value	Applied Value	Acceptance Limits Low	Acceptance Limits High	Summary
Visual/Operational Test						
	Result of Operator Evaluation					PASS
Measurement of Thermocouples (Electrical Simulation)						
Channel T1						
Type T						
	-190.0°C	-190.0°C	-190.3	-190.8	-189.2	PASS
	-80.0°C	-80.0°C	-80.2	-80.7	-79.3	PASS
	-50.0°C	-50.0°C	-50.1	-50.7	-49.3	PASS
	-30.0°C	-30.0°C	-30.1	-30.3	-29.7	PASS
	-10.0°C	-10.0°C	-10.2	-10.3	-9.7	PASS
	0.0°C	0.0°C	-0.2	-0.3	0.3	PASS
	4.0°C	4.0°C	3.7	3.7	4.3	PASS
	37.0°C	37.0°C	36.9	36.7	37.3	PASS
	50.0°C	50.0°C	49.9	49.7	50.3	PASS
	100.0°C	100.0°C	99.9	99.7	100.3	PASS
	150.0°C	150.0°C	149.9	149.6	150.4	PASS
	200.0°C	200.0°C	199.9	199.6	200.4	PASS
	250.0°C	250.0°C	249.9	249.6	250.4	PASS
	300.0°C	300.0°C	299.9	299.6	300.4	PASS
	390.0°C	390.0°C	390.0	389.5	390.5	PASS
	100.0°F	100.0°F	99.8	99.3	100.7	PASS
Type K						
	0.0°C	0.0°C	-0.1	-0.3	0.3	PASS
	500.0°C	500.0°C	499.9	499.4	500.6	PASS
	1000.0°C	1000.0°C	999.9	999.2	1000.8	PASS
Type J						
	20.0°C	20.0°C	19.9	19.7	20.3	PASS
	1100.0°C	1100.0°C	1100.0	1099.2	1100.8	PASS
Type E						
	20.0°C	20.0°C	20.0	19.7	20.3	PASS
	900.0°C	900.0°C	900.1	899.3	900.8	PASS
Type N						
	20.0°C	20.0°C	20.0	19.6	20.4	PASS
	1100.0°C	1100.0°C	1100.2	1099.1	1101.0	PASS
Type R						
	500°C	500°C	500	498	502	PASS
	1100°C	1100°C	1100	1097	1103	PASS
Type S						
	500°C	500°C	500	498	502	PASS
	1100°C	1100°C	1100	1097	1103	PASS

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763594

Page 3 of 3

Parameter	UUT Range	UUT Indicated Value	Applied Value	Acceptance Low	Acceptance High	Summary
Channel T2						
Type T		-190.0°C	-190.3	-190.8	-189.2	PASS
		-80.0°C	-80.1	-80.7	-79.3	PASS
		-50.0°C	-50.1	-50.7	-49.3	PASS
		-30.0°C	-30.1	-30.3	-29.7	PASS
		-10.0°C	-10.1	-10.3	-9.7	PASS
		0.0°C	-0.1	-0.3	0.3	PASS
		4.0°C	3.8	3.7	4.3	PASS
		37.0°C	36.9	36.7	37.3	PASS
		50.0°C	49.9	49.7	50.3	PASS
		100.0°C	100.0	99.7	100.3	PASS
		150.0°C	150.0	149.6	150.4	PASS
		200.0°C	200.0	199.6	200.4	PASS
		250.0°C	250.0	249.6	250.4	PASS
		300.0°C	300.0	299.6	300.4	PASS
		390.0°C	390.0	389.5	390.5	PASS
		100.0°F	100.0	99.3	100.7	PASS
Type K		0.0°C	-0.2	-0.3	0.3	PASS
		500.0°C	499.9	499.4	500.6	PASS
		1000.0°C	999.8	999.2	1000.8	PASS
Type J		20.0°C	19.8	19.7	20.3	PASS
		1100.0°C	1100.0	1099.2	1100.8	PASS
Type E		20.0°C	19.8	19.7	20.3	PASS
		900.0°C	900.0	899.3	900.8	PASS
Type N		20.0°C	19.8	19.6	20.4	PASS
		1100.0°C	1100.1	1099.1	1101.0	PASS
Type R		500°C	500	498	502	PASS
		1100°C	1100	1097	1103	PASS
Type S		500°C	500	498	502	PASS
		1100°C	1100	1097	1103	PASS

End of Calibration Data

Estimated Uncertainty of Measurement:

## Electrical Measurement of Thermocouples

Type: B +500°C to +1820°C ±0.65°C  
Type: C +0°C to +2320°C ±0.48°C  
Type: E -200°C to +1000°C ±0.29°C  
Type: J -210°C to +1200°C ±0.32°C  
Type: K -200°C to -250°C ±0.67°C  
Type: K -200°C to +1300°C ±0.34°C  
Type: L -200°C to +900°C ±0.33°C  
Type: N -200°C to -100°C ±0.40°C  
Type: N -100°C to 1300°C ±0.31°C  
Type: R +0°C to +1767°C ±0.61°C  
Type: S +0°C to +1767°C ±0.58°C  
Type: T -250°C to -200°C ±0.70°C  
Type: T -200°C to +400°C ±0.34°C  
(+0.5°C where UUT resolution is 1°C)