

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

ATLAS MATERIAL TESTING TECHNOLOGY LLC 1500 Bishop Court Mount Prospect, IL 60056

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CALIBRATION

Valid To: SEE FOOTNOTE 11 Certificate Number: 2101.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests listed below^{1, 8}:

I. Optical Radiation

Parameter/Equipment	Range	CMC ^{2, 7} (±)	Comments ⁶	Location
Control Parameters in Weathering Instruments ^{3, 4}				
Temperature	(0 to 85) °C	0.8 °C	Fluke 51 digital thermometer	WIN
Relative Humidity	(5 to 90) % RH	3.9 % RH	Vaisala HMI 51 humidity calibrator	
AC Power ⁵	Up to 6 kW (6 to 12) kW	0.4 % 3.0 %	Hioki PW3335 power meter	
Pressure	Up to 20 psig	0.6 psig	Omega DPG1000B-100G digital pressure gauge	

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Parameter/Equipment	Range	CMC ^{2, 7} (±)	Comments ⁶	Location
Illuminance ^{3, 4} (with Xenocal) –				
SUNTEST Instruments (380 to 780) nm	Up to 240 klx	5.0 %	Daylight, SolarStandard, WG, StoreLight, ID65	WIN
Xenotest Instruments	Up to 240 klx	7.6 %	XC270, XC300, B04	
(380 to 780) nm		10 %	XC320, XC320HLF, 7IR, 16H, 4IR3WG, 6IR1UV, GMW3414	
		4.6 %	10WG, TM16, DL Ext. IR	
Irradiance ^{3, 4} (with Xenocal) –				
SUNTEST Instruments 340 nm 420 nm (300 to 400) nm (300 to 800) nm	Up to 1.4 W·m ⁻² ·nm ⁻¹ Up to 3.5 W·m ⁻² ·nm ⁻¹ Up to 150 W·m ⁻² Up to 1300 W·m ⁻²	8.1 % 7.5 % 11 % 8.0 %	Daylight, SolarStandard, WG, StoreLight	WIN
(300 to 400) nm (300 to 800) nm	Up to 150 W·m ⁻² Up to 1300 W·m ⁻²	14 % 8.0 %	ID65	
Xenotest Instruments – 340 nm 420 nm	Up to 1.4 W·m ⁻² ·nm ⁻¹ Up to 3.5 W·m ⁻² ·nm ⁻¹	8.1 % 7.5 %	XC270, XC300, XC320, XC320HLF, 7IR, 16H 4IR3WG, 6IR1UV, GMW3414, 10WG, TM16, DL Ex. IR, B04	
(300 to 400) nm (300 to 800) nm	Up to 150 W·m ⁻² Up to 1300 W·m ⁻²	14 % 12 %	XC320, XC320HLF, 7IR, 16H, 4IR3WG, 6IRiUV, GMW3414	
(300 to 400) nm (300 to 800) nm	Up to 150 W·m ⁻² Up to 1300 W·m ⁻²	9.9 % 9.8 %	XC270, XC300, B04	
(300 to 400) nm (300 to 800) nm	Up to 150 W·m ⁻² Up to 1300 W·m ⁻²	11 % 7.8 %	10WG, TM16	
(300 to 400) nm (300 to 800) nm	Up to 150 W·m ⁻² Up to 1300 W·m ⁻²	9.3 % 7.8 %	DL Ext. IR	



Parameter/Equipment	Range	CMC ^{2, 7} (±)	Comments ^{6, 9}	Location
Irradiance ^{3, 4} (with Xenocal) – (cont) Ci Instruments 340 nm 420 nm (300 to 400) nm	Up to 1.4 W·m ⁻² ·nm ⁻¹ Up to 3.5 W·m ⁻² ·nm ⁻¹ Up to 150 W·m ⁻²	8.9 % 8.0 % 11 %	Boro S/Boro-S	WIN
Irradiance ^{3, 4} (with Reference Lamp) – 340 nm 420 nm (300 to 400) nm	Up to 3.3 W·m ⁻² ·nm ⁻¹ Up to 7.8 W·m ⁻² ·nm ⁻¹ Up to 400 W·m ⁻²	5.8 % 5.5 % 5.6 %	Hioki PW3335 wattmeter w/Hioki 9660 current probe Boro S/Boro-S	WIN
Irradiance ^{3, 4} (with Reference Radiometer) – Fluorescent Instruments (310, 340, 351) nm	Up to 3.0 W·m ⁻² ·nm ⁻¹ Up to 3.0 W·m ⁻² ·nm ⁻¹ Up to 16.0 mW·cm ⁻² ·nm ⁻¹	7.6 % 13 % 9.7 %	UV Test UV2000 UVC Test	WIN
Irradiance – Xenon Customer Xenon Ref. Lamps for Ci Instruments Operating at: Lamp AC Power Up to 6 kW 340 nm 420 nm (300 to 400) nm	Up to 3.3 W·m ⁻² ·nm ⁻¹ Up to 7.8 W·m ⁻² ·nm ⁻¹ Up to 400 W·m ⁻²	5.5 % 4.4 % 4.9 %	SP320 instrument systems spectroradiometer, Hioki PW3335 wattmeter w/ Hioki 9660 current probe & 2 working standards Boro S/Boro-S	LAL



Parameter/Equipment	Range	CMC ^{2, 7} (±)	Comments ⁶	Location
Irradiance (Calibration Standards) –				
Customer Xenon Ref. Lamps for Ci Instruments Operating at				
Lamp AC Power up to 6 kW 340 nm 420 nm (300 to 400) nm Lamp AC Power up to 12 kW 340 nm 420 nm (300 to 400) nm	Up to 3.3 W·m ⁻² ·nm ⁻¹ Up to 7.8 W·m ⁻² ·nm ⁻¹ Up to 400 W·m ⁻² Up to 3.3 W·m ⁻² ·nm ⁻¹ Up to 7.8 W·m ⁻² ·nm ⁻¹ Up to 400 W·m ⁻²	5.5 % 4.4 % 4.9 % 5.8 % 5.5 % 5.6 %	SP320 instrument systems spectroradiometer, Hioki PW3335 wattmeter w/Hioki 9660 current probe & 2 working standards Boro S/Boro-S	MPL
Customer Ref. UV Radiometers for Fluorescent Instruments –				
UV Test Fluorescent Instrument 310/340/351 nm UV2000 Fluorescent	Up to 3.0 W·m ⁻² ·nm ⁻¹	7.6 %	SP320 instrument systems, spectroradiometer & 3 working standards	
Instrument 310/340/351 nm	Up to 3.0 W·m ⁻² ·nm ⁻¹	13 %	ILT2400 photometer & 3	
UVC Test Instrument	Up to 16.0 mW·cm ⁻ ² ·nm ⁻¹	9.7 %	working standards	
Irradiance –				
XenoCal/XENOSENSIV	(110 to 1300) W/m ²	5.8 %	Wavelength (300 to 800) nm	LAX
	(12 to 150) W/m ²	6.2 %	Wavelength (300 to 400) nm	
	(0.10 to 1.4) W/m ²	7.0 %	Wavelength 340 nm	
	(0.3 to 3.5) W/m ²	5.8 %	Wavelength 420 nm	
			Restricted to Xenon radiation at the Atlas calibration facility	



Parameter/Equipment	Range	CMC ^{2, 7} (±)	Comments	Location
Illuminance – XenoCal/XENOSENSIV	(20 to 250) klx	3.0 %	Restricted to Xenon radiation at the Atlas calibration facility	LAX

II. Thermodynamics

Parameter/Equipment	Range	CMC ² (±)	Comments ¹⁰	Location
Radiation Thermometers – XenoCal/XENOSENSIV	(20 to 120) °C	0.8 °C	BST/WST/BPT/WPT	LAX

¹ This laboratory offers commercial dimensional testing/calibration service.

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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 or 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. Please note the actual measurement uncertainties achievable on a customer's site can normally be expected to be larger than the Calibration and Measurement Capability Uncertainty (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. Atlas Global Technical Service team members, residing in the following countries, fall under the Atlas ISO17025 accreditation scope: Germany, France, Switzerland, Austria, Netherlands, United Kingdom, India, and the United States.

⁴ This includes but is not limited to all Atlas Weather-Ometer® and Fade-Ometer® instruments, UVTest, UV2000, Xenotest, and SUNTEST instruments.

⁵ AC Power are calibrated in the artificial weathering equipment to control temperature, humidity and irradiance.

⁶ Methods of calibration include the use of equipment listed in the column or equivalent.

⁷ In the statement of CMC Uncertainty, all percentages are defined as "percent of reading".

⁸ This scope meets A2LA's *P112 Flexible Scope Policy*.

¹¹ The locations of the laboratories that can perform the calibration are given by a three-letter code with valid to dates given in the table below:

Location	Code	Valid to Dates
1500 Bishop Court	WIN & MPL	11/30/2023
Mount Prospect, Illinois 60056, USA		
Volgelbergstraße 22	LAL	11/30/2023
Linsengericht 63589, GERMANY		
Volgelbergstraße 22	LAX	11/30/2023
Linsengericht – Altenhaßlau 63589, GERMANY		

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⁹ The Spectro 320D Spectroradiometer and NIST 1000-watt FEL Spectral Irradiance Standard reside at Atlas MTT in Mt. Prospect, IL – the Laboratory's parent company.

¹⁰ In terms of the comments, the abbreviations of BST stands for Black Standard Temperature according to DIN EN ISO 4892-1, WST stands for White Standard Temperature according to DIN EN ISO 4892-1, BPT stands for Black Panel Temperature according to ASTM G179-04, and WPT stands for White Panel Temperature according to ASTM G179-04.



Accredited Laboratory

A2LA has accredited

ATLAS MATERIAL TESTING TECHNOLOGY LLC

for technical competence in the field of

Calibration

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017

General requirements for the competence of testing and calibration laboratories. This laboratory also meets R205 – Specific Requirements: Calibration Laboratory Accreditation Program. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system

(refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 10th day of December 2021.

Mr. Trace McInturff, Vice President, Accreditation Services For the Accreditation Council

Certificate Number 2101.01

Valid to See Scope of Accreditation

Revised March 27, 2023