CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

Nikon Metrology, Inc.
12701 Grand River Road
Brighton, MI 48116
(and satellite location listed on the scope)

Fulfills the requirements of

ISO/IEC 17025:2017

In the fields of

CALIBRATION and
DIMENSIONAL MEASUREMENT

This certificate is valid only when accompanied by a current scope of accreditation document.
The current scope of accreditation can be verified at www.anab.org.

Jason Stine, Vice President

Expiry Date: 30 March 2027

Certificate Number: L1080-1

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

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

Nikon Metrology, Inc.
12701 Grand River Road
Brighton, MI 48116
Jeff Root
810-220-4360

CALIBRATION

Valid to: **March 30, 2027** Certificate Number: **L1080-1**

Length – Dimensional Metrology

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Autocollimators	Up to 10’	0.7”	Comparison to Optical Wedge
Measuring Microscope [1]:			
X, Y, Z Axis Length	(0 to 300) mm	1.5 µm	Comparison to LTE Zerodur Line Scales
X and Y Axes Squareness	Up to 50 mm	1.5 µm	X-Y Zerodur Line Scale
Optical Comparators [1]:			
Magnification [2]	(10 to 100) X	0.04 % of magnified length	Comparison to Glass Line Scales
X, Y Axis Length	(0 to 300) mm	1.5 µm	LTE Zerodur Line Scales
X and Y Axes Squareness	Up to 50 mm	1.5 µm	X-Y Zerodur Line Scale
VMA Video Measuring System [1]:			
X, Y Axis, X-Y Diagonal Length	(0 to 300) mm (0 to 700) mm	1.2 µm 2.3 µm	Comparison to LTE Zerodur Line Scales
Z Axis Length	(2 to 40) mm	0.5 µm	Gauge Blocks
Video Probe	(0.022 to 8) mm	0.5 µm	Test Slide

Length – Dimensional Metrology

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
VMR & VMZ Video Measuring System [1]:			
X, Y Axis, X-Y Diagonal Length	(0 to 300) mm (0 to 700) mm	0.8 µm 1.2 µm	Comparison to LTE Zerodur Line Scales
Z Axis Length	(2 to 40) mm	0.5 µm	Gauge Blocks
Video Probe	(0.022 to 8) mm	0.5 µm	Test Slide

Services performed at satellite location

15855 N. Greenway Hayden Loop, Suite 100
Scottsdale, AZ 85260
Chris Curtis 810-220-4360

DIMENSIONAL MEASUREMENT

3 Dimensional

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-) [3]	Reference Standard, Method, and/or Equipment
Dimensional Measurement 3D	X = up to 650 mm Y = up to 550 mm Z = up to 200 mm	(4.47 + 0.004 5*L*) µm	Measurement using Video Measuring System utilized as a Reference Standard

Calibration and Measurement Capability (CMC) is expressed in terms of the measurement parameter, measurement range, expanded uncertainty of measurement and reference standard, method, and/or equipment. The expanded uncertainty of measurement is expressed as the standard uncertainty of the measurement multiplied by a coverage factor of 2 (k=2), corresponding to a confidence level of approximately 95%.

Notes:

1. On-site calibration service is available for this parameter, since on-site conditions are typically more variable than those in the laboratory, larger measurement uncertainties are expected on-site than what is reported on the accredited scope
2. Magnification length of 100 mm up to 200 mm.
3. L=length in mm.
4. This scope is formatted as part of a single document including Certificate of Accreditation No. L1080-1.

Jason Stine, Vice President