

# **CERTIFICATE OF ACCREDITATION**

### **The ANSI National Accreditation Board**

Hereby attests that

### Applied Image Inc. 1653 East Main Street Rochester, NY 14609

Fulfills the requirements of

## **ISO/IEC 17025:2017**

In the field of

### CALIBRATION

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



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Jason Stine, Vice President

Expiry Date: 30 October 2025 Certificate Number: AC-2818

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

### Applied Image Inc.

1653 East Main Street Rochester, NY 14609 Gary Reif 585-482-0300 ext, 230

#### CALIBRATION

Valid to: October 30, 2025

Certificate Number: AC-2818

#### Length – Dimensional Metrology

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Single Axis Length Non-Contact <sup>1</sup>	Up to 200 μm (200 to 400) μm (400 to 800) μm (800 to 1 600) μm	0.43 μm 0.73 μm 1.3 μm 1.5 μm	Filar Microscope
	Up to 25.4 mm	0.49 μm	Laser-based Measuring Machine
	(0.8 to 400) mm	(2.3 + 0.008 <i>L</i> ) μm	CMM
	(401 to 1 200) mm	(15 + 0.051 <i>L</i> ) μm	Coordinatograph
	Up to 25.4 mm (25.4 to 75) mm	2.4 μm 4.5 μm	Micrometers
	Up to 150 mm	32 µm	Caliper
Length Aspect of Bar Code Measurement <sup>1</sup>	(3 to 200) mils (0.2 to 5) mm	$(0.051 + 0.000 \ 25L)$ mils $(1.3 + 0.25L) \ \mu m$	Automated Bar Code Verification System (Judge)
Angular Measurement <sup>4</sup>	(5 to 85)° (5 to 25) mm (25 to 75) mm > 75 mm	$(0.036 - 0.0011 5L)^{\circ}$ $(0.008 7 - 0.000 06L)^{\circ}$ $(0.004 4 - 0.000 003L)^{\circ}$	Coordinate Measuring Machine



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#### **Photometry and Radiometry**

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Spectral Reflection Aspect of Bar Code Measurement <sup>2,3</sup>	(0.25 to 100) %R 660 nm	(0.35 + 0.014R) %R	Automated Bar Code Verification System (Judge)
45°:0° or 0°:45° Spectral Reflection Photometry <sup>3</sup> (Status A Density)	(V Filter) Up to 1.25 D (1.25 to 2.1) D (C Filter) Up to 1.25 D (1.25 to 2.1) D (M Filter) Up to 1.25 D (1.25 to 2.1) D (Y Filter) Up to 1.25 D (1.25 to 2.1) D	0.011 D 0.033 D 0.012 D 0.034 D 0.009 5 D 0.026 D 0.009 4 D 0.031 D	Color Reflection Densitometer
45°:0° or 0°:45° Spectral Reflection Photometry <sup>2,3</sup>	(0.25 to 100 <mark>) %R</mark> 660 nm	(0.066 + 0.007 <i>R</i> ) %R	Spectral Reflectometer
Spectral Transmission Photometry <sup>2,3</sup>	Up to 100 %T (250 to 400) nm (401 to 700) nm (701 to 900) nm (901 to 1 000) nm	(0.15 + 0.004 1T) %T $(0.22 + 0.000 66T) %T$ $(0.4 - 0.000 72T) %T$ $(0.67 + 0.002 7T) %T$	Transmission Spectro-photometer
(Orthochromatic Filter)	Up to 3.7 D (3.701 to 4.5) D	0.025 D 0.059 D	Transmission Densitometer

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. L =length in mils or mm.
- 2. R =value in % R; T =value in %T.

3. The following are non-SI terms: %T is percent transmission; %R is the percent reflectance; and D is the optical density.

4. The angle is determined by the measurement of two points on a line in the x-y plane. The x-y values are used to calculate the angle using the arctan(x-y). The distance between the two points affect the uncertainty as indicated. *L* is the length of the measured line in mm.

5. This scope is formatted as part of a single document including Certificate of Accreditation No. AC-2818.



Jason Stine, Vice President





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