

Verification is the measurement of the quality of a 1D barcode or 2D symbol according to an agreed quality standard. Microscan's Barcode Verification Solutions include cameras, software and precision illumination specifically designed for reading a variety of 1D/2D codes and direct part marks (DPM). Microscan's Verification Solutions include a variety of capabilities for inline or offline barcode grading in the most common verification applications.

1D/2D Label Verification Kit

- Vision HAWK smart camera and lens paired with NERLITE Smart Series light. Integrated mounting bracket and AutoVISION software are included.

Ideal for 1D or 2D codes on flat labels, whether printed or laser etched.



Quality Standards:

Alternative Geometries:

- ISO 15416
- ISO 15415
- AIM DPM
- Custom Grading

Large Linear Verification Kit

- Vision HAWK smart camera and lens paired with NERLITE Smart Series light. Mounting brackets and AutoVISION software are included.

Ideal for 1D codes longer than 2 inches in length, printed or laser etched on a flat surface.



- ISO 15416
- Custom Grading

Dot Peen Verification Kit

- Vision HAWK smart camera and lens paired with NERLITE Smart Series light. Mounting brackets and AutoVISION software are included.

Ideal for reading dot peen 2D Data Matrix symbols on flat surfaces.



- ISO 15415
- AIM DPM
- Custom Grading

DPM Verifiers

- DPM verifiers designed to read and verify Data Matrix. Easy one button operation allows compliance with verification guidelines.

Ideal for any 2D Data Matrix DPM verification needs.



- ISO 15415
- ISO 16022
- AIM DPM
- AS9132
- MIL-STD-130

What is Verification or Grading?

Verification is the measurement of the quality of a linear (1D) barcode according to an agreed methodology. The purpose of verification is to ensure that barcodes can be subsequently read with the intended reading equipment. Verification is sometimes referred to as grading.

Why Verify?

1D barcode verification is used to ensure that automatic identification equipment such as barcode scanners and imagers will be able to read barcodes quickly and efficiently throughout the life cycle of a product or its packaging. Ideally this is achieved by monitoring the quality of the barcode close to the point of marking so as to detect problems as soon as possible.

Quality Standards for 1D Codes

ISO 15416 (formerly ANSI X3.182-1990) is a standard that applies to 1D barcodes such as Code 128, ITF, and UPC. ISO 15416 is the standard referenced in the GS1 General Specification. In some circumstances, such as where a barcode is used within a manufacturing process, "custom grading" which departs from the ISO standard may be appropriate.

ISO/ANSI Grade Scales

- A = 4.0 – 3.5
- B = <3.5 - >= 2.5
- C = <2.5 - >= 1.5
- D = <1.5 - >= 0.5
- F = <0.5 - 0.00



GRADE A SYMBOL EXAMPLE

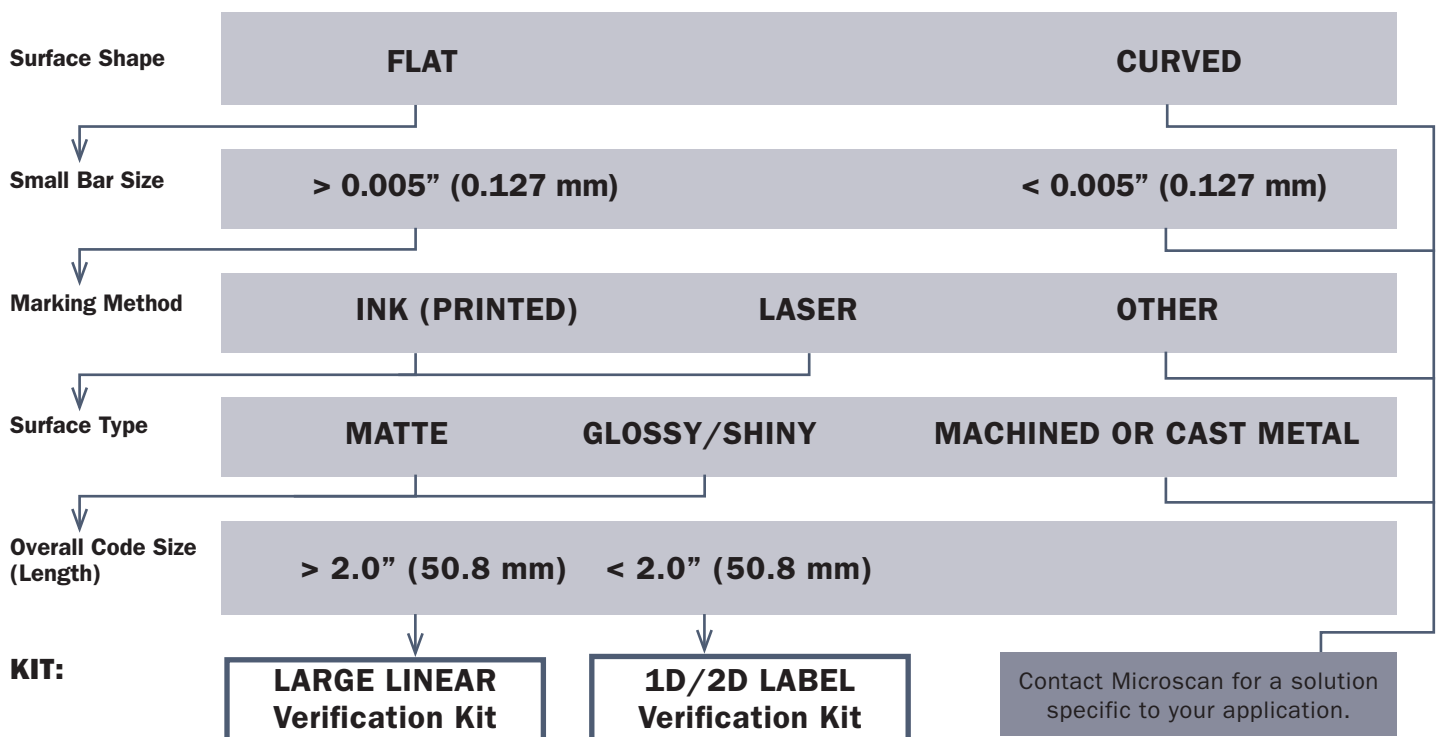
Note: ISO reports numeric grades but many specifications use letters.

Design Inputs for Barcode Verification

- Surface Shape:** Flat or Curved
- Surface Material:** Matte (like paper, cardboard or anodized metal) or Glossy/Shiny (like coated paper or polished metal)
- Code Size:** > 2.0 inches or < 2.0 inches

The chart below will guide your choice of Microscan Verification Kit for online or offline 1D barcode grading. These kits include a smart camera, software, lighting, and mounting components. Contact Microscan for calibration and cabling options.

1D BARCODE VERIFICATION: ISO 15416 OR CUSTOM



What is Verification or Grading?

Verification is the measurement of the quality of a 2D symbol, such as Data Matrix, according to an agreed methodology. The purpose of verification is to ensure that barcodes and symbols can be subsequently read with the intended reading equipment. Verification is sometimes referred to as grading.

Why Verify?

2D symbol verification is used to ensure that automatic identification equipment such as barcode imagers will be able to read symbols quickly and efficiently throughout the life cycle of a product or its packaging. Ideally this is achieved by monitoring the quality of the symbol close to the point of marking so as to detect problems as soon as possible.

Quality Standards for 2D Symbols

There are two principal standards for 2D Data Matrix symbols. ISO 15415 is most applicable to high contrast printed symbols, while the AIM DPM 2006 Guidelines are designed for direct part marked (DPM) symbols. In some circumstances, such as where a barcode is used within a manufacturing process, "custom grading" which departs from the ISO standard may be appropriate.

ISO/ANSI Grade Scales

- A = 4.0 - 3.5
- B = <3.5 - >= 2.5
- C = <2.5 - >= 1.5
- D = <1.5 - >= 0.5
- F = <0.5 - 0.00



GRADE A SYMBOL EXAMPLE

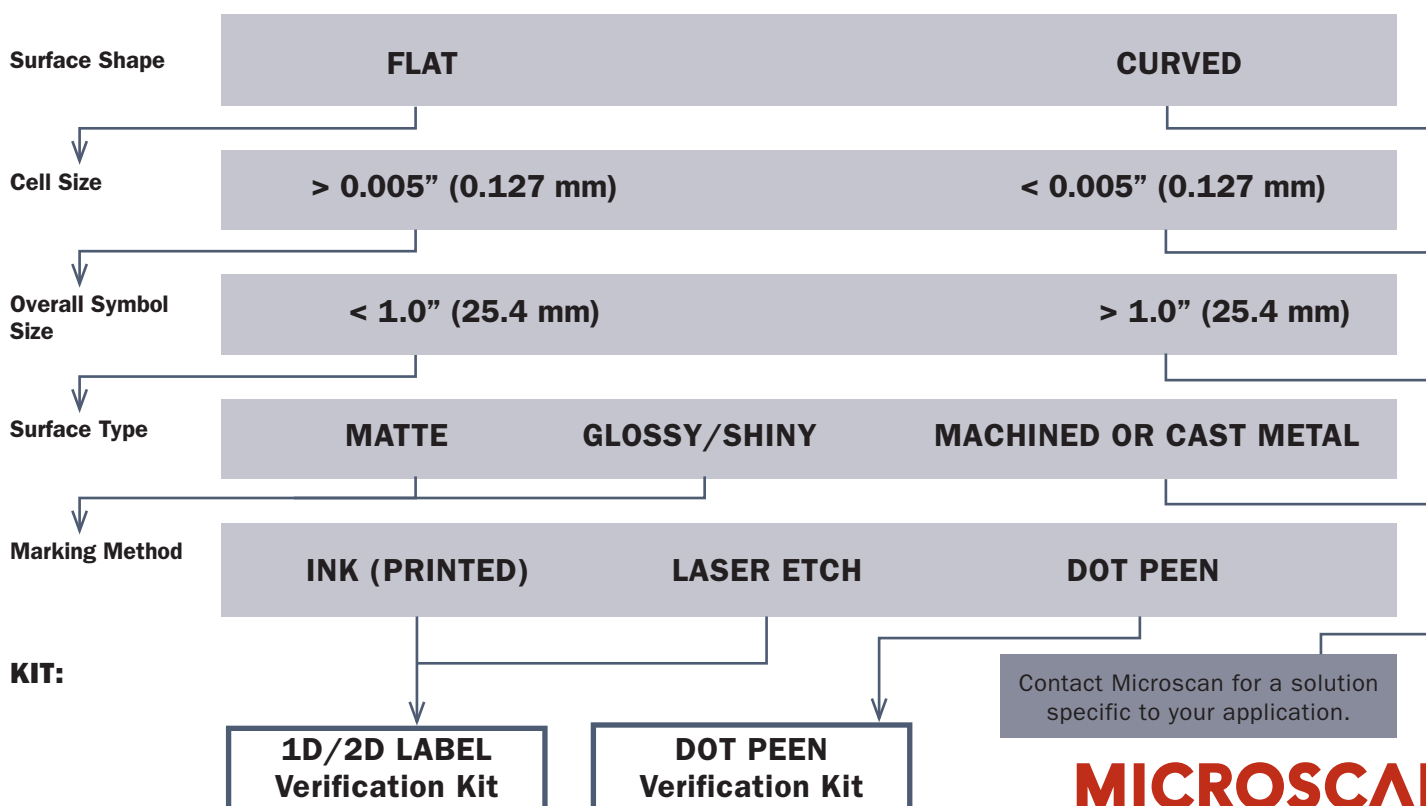
Note: ISO reports numeric grades but many specifications use letters.

Design Inputs for 2D Symbol Verification

Surface Shape:	Flat or Curved
Surface Material:	Matte (like paper, cardboard or anodized metal) or Glossy/Shiny (like coated paper or polished metal)
Cell Size:	> 0.005 inches or < 0.005 inches
Marking Method:	Ink, Laser Etch or Dot Peen

The chart below will guide your choice of Microscan Verification Kit for online or offline 2D symbol grading. These kits include a smart camera, software, lighting, and mounting components. Contact Microscan for calibration and cabling options.

2D SYMBOL VERIFICATION: ISO 15415, AIM DPM, OR CUSTOM



MICROSCAN