



PELCOTEC™ CDMS - CRITICAL DIMENSION MAGNIFICATION STANDARD

- AVAILABLE IN NIST TRACEABLE OR CERTIFIED VERSIONS
- UNIQUE, ECONOMICALLY PRICED, YET FULLY TRACEABLE CALIBRATION STANDARDS
- EASY-TO-USE, QUICK AND PRECISE
- FOR SEM, FESEM, FIB, CD-SEM AND LM
- MADE USING HIGH CONTRAST Cr AND Au ON Si

The calibration standards are available with two feature size ranges, both offered as traceable or certified standards, making a total of 4 versions:

Pelcotec™ CDMS-1T; fully traceable with features from 2.0mm to 1µm for a magnification range from 10x – 20,000x. This is the ideal standard for LMs, desktop SEMs and low to medium SEM magnification applications.

Pelcotec™ CDMS-0.1T; fully traceable with features from 2.0mm to 100nm for a magnification range from 10x – 200,000x. Very useful calibration standard for all SEM and most FESEM applications.

Pelcotec™ CDMS-1C; individually certified against an NIST standard with features from 2.0mm to 1µm for a magnification range from 10x – 20,000x. This is the ideal certified standard for LMs, desktop SEMS and low to medium SEM magnifications.

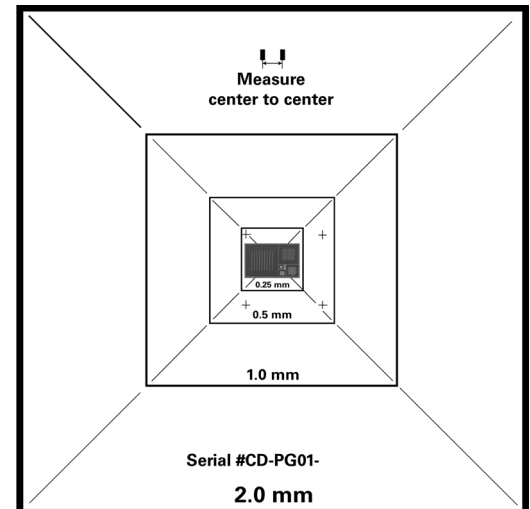
Pelcotec™ CDMS-0.1C; individually certified against a NIST standard with features from 2.0mm to 100nm for a magnification range from 10x – 200,000x. Very useful certified calibration standard for all SEM and most FESEM applications.

The Pelcotec™ CDMS Critical Dimension Magnification Standards are manufactured on a conductive ultra flat silicon substrate with precise 50nm chromium deposition for all feature sizes from 2mm to 5µm. For feature sizes from 2µm to 100nm a 50nm gold over 20nm chromium has been used. The Cr and Au/Cr on Si provides excellent contrast in both SE and BSE imaging mode. The features are easier to determine than on etched Si standards. Since the ultra flat silicon substrate, the chromium and chromium/gold features are all conductive; there are no charging issues with this calibration standard. Due to its sturdy construction, the CDMS standards can be cleaned using a plasma cleaner. Features smaller than 10µm are nested for easy and quick navigation. The size of the standard is 2.5 x 2.5mm with a thickness of 675µm ±10µm. Each standard has a unique ID number.

Pelcotec™ CDMS-1T & 1C features: 2mm, 1mm, 0.5mm, 0.25mm, 10µm, 5µm, 2µm & 1µm pitch lines.

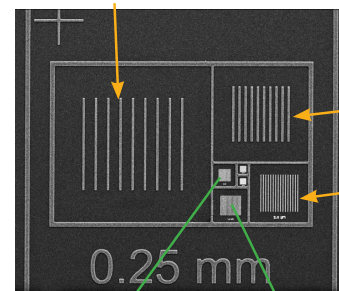
Pelcotec™ CDMS-0.1T & 0.1C features: 2mm, 1mm, 0.5mm, 0.25mm, 10µm, 5µm, 2µm, 1µm, 500nm, 250nm & 100nm pitch lines.

OVERVIEW



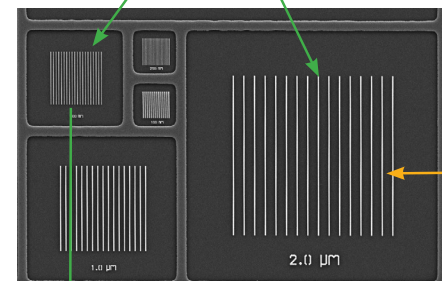
CLOSE-UP VIEW

10µm Pitch Lines

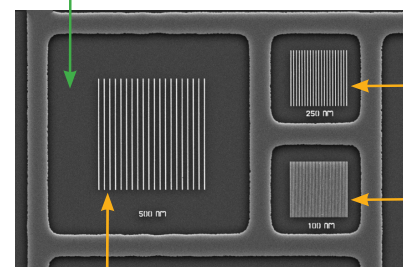


5µm Pitch Lines

2µm Pitch Lines



2µm Pitch Lines



500nm Pitch Lines

250nm Pitch Lines

100nm Pitch Lines



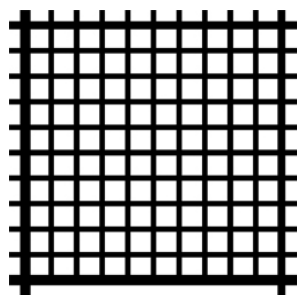
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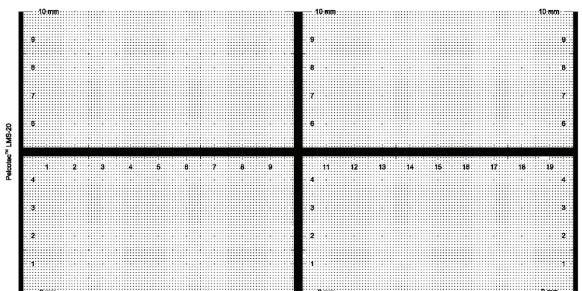
PELCOTEC™ G-1 SILICON CALIBRATION SPECIMEN - 1μm PITCH

The Pelcotec™ G-1 calibration specimen with a 1μm pitch grid is especially useful for magnification calibration or image distortion check in the 100x to 10,000x magnification range. Can be used for SEM, FIB and LM. Specimen may also be mounted directly on the Pelcotec™ G-1, which will give an accurate internal calibration in the image. Particularly useful when working with powders.

- Total calibration area is 3 x 3 mm with a 1μm pitch grid
- Lines at 10 μm and 100 μm are thicker for easy orientation
- 300nm +/- 30nm deep line etched in ultraflat Si
- Line width is 200nm at 1μm, 300nm at 10μm and 400nm at 100μm pitch lines
- Precision is 1 μm +/- 0.025 μm with a perpendicularity better than 0.01°
- Serial number etched on each Pelcotec™ G-1 standard
- NIST traceable version is Pelcotec™ G-1T
- Individually fully certified version is Pelcotec™ G-1C
- Si die size is 4 x 4 mm with a thickness of 525μm +/-20μm, <100> orientation
- Boron doped silicon wafer; resistivity of 5-10 Ohm/cm
- Available unmounted or mounted on common SEM specimen mounts or glass slide for LM

NIST Traceable Pelcotec G-1T Calibration Standards

633-1	Unmounted	each
633-1A	Mount A.....	each
633-1B	Mount B (<i>you supply mount</i>).....	each
633-1C	Mount C.....	each
633-1D	Mount D.....	each
633-1E	Mount E.....	each
633-1F	Mount F.....	each
633-1G	Mount G (<i>you supply mount</i>).....	each
633-1K	Mount K.....	each
633-1L	Mount L.....	each
633-1M	Mount M.....	each
633-1O	Mount O.....	each
633-1P	Mount P.....	each
633-1Q	Mount Q.....	each
633-1R	Mount R.....	each
633-1S	Mount on 25x75mm slide	each



PELCOTEC™ LMS-20 LOW MAGNIFICATION CALIBRATION STANDARD

The Pelcotec™ LMS-20 calibration standard has been specifically designed for precise low magnification calibration and specimen stage calibration. Useful for large area particle analysis, GSR analysis, low magnification SEM applications and LM applications. Useful in the 5x to 1000x magnification range.

- Total calibration area is 20 x 10mm with crossed lines and 0.01mm divisions
- 75nm Cr lines on ultra-flat silicon substrate
- Cross hairs shown at every 0.1 mm with larger cross hairs at 0.5 and 1 mm over the complete area
- Serial number etched on each Pelcotec™ LMS-20 calibration standard
- NIST traceable version is Pelcotec™ LMS-20T
- Individually fully certified version is Pelcotec™ LMS-20C
- Si die size is 22 x 11mm with a thickness of 675μm +/- 10μm, <100> orientation
- Boron doped silicon wafer; resistivity of 5-10 Ohm/cm
- Available unmounted or mounted on larger SEM specimen mounts or glass slide for LM

NIST Traceable Pelcotec LMS-20T Calibration Standards

688-1	Unmounted	each
688-1G	Mount G (<i>you supply mount</i>)	each
688-1L	Mount L	each
688-1O	Mount O.....	each
688-1R	Mount R.....	each
688-1S	Mount on 25x75mm slide	each