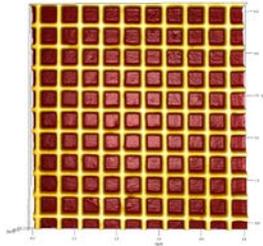


2000 L/MM SEM CALIBRATION SPECIMEN SCANNING TUNNELING MICROSCOPE PRODUCT NO. 677-STM

This specimen is a replica of a 2,000 lines/mm cross line diffraction grating. When imaging the specimen it should be kept in mind that the line spacing is 500nm+/- 1%; and the pattern will not be visible until the imaging system is set to resolve that level of detail.



To calibrate instrument magnification, use the following calculation:

Take the measurement, in millimeters of as many squares and lines of the replica pattern as possible. The line is a trench type groove. Always measure the same sides of the lines. Apply the following formula:

$$\text{Magnification} = A \times 2000/B$$

A is distance in mm between limiting lines.

B is number of spaces between limiting lines.

(Alternatively, use the PELCO[®] Magnification Calibration Calculator, Prod. No. 253)

CARE OF THE SPECIMEN

Open the storage box by cutting the white label where the lid and base meet. Discard the piece of foam in the lid (necessary for shipping only).

At all times the surface of the replica must be protected from damage. The replica is mounted on a metal disk which is laying facedown in the storage box. **The disk can be removed by carefully inserting forceps under the rim, using the groove provided in the box base.** Do not grip more than 2mm into the center of the disk. Once the disk is removed from the storage box always lay it down with the specimen side facing up. Store the specimen in the original box or a similar container, which will protect the surface.

Do not attempt to clean the specimen or remove it from the metal disk.

Never allow the specimen to be exposed to water or solvents.

677-STM TN V1 10182013