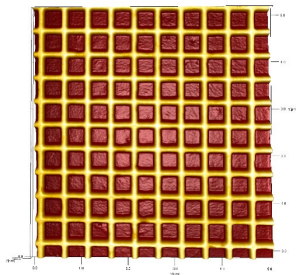


## MAGNIFICATION CALIBRATION 500NM DIFFRACTION GRATING REPLICA FOR AFM

**Product No. 677-AFM**

This specimen is a cellulose acetate 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. The height of the bars of the grid pattern is ~100nm.



### To calculate instrument magnification:

Take the measurement, in millimeters, between the limiting lines of as many squares of the replica pattern as possible. Apply the following formula:

$$\text{Magnification} = A \times 2,000/B$$

(Use a scan size of under 10µm for best results)

Where “A” represents distance in mm between limiting lines of first and last square measured, and  
“B” represents number of spaces between limiting lines of first and last square measured.

*Alternatively, use the online PELCO® Magnification Calibration Calculator by scanning the QR code below:*



### 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.

At all times, the surface of the replica must be protected from damage. The replica is mounted on a metal disc, which is lying face down in the storage box. **The disc can be removed by carefully inserting forceps under the rim, using the groove provided in the box base.** Do not grip more than 1mm into the center of the disc. Once the disc 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 disc.**

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

**NOTE:** During the mounting process, an area around the extreme outer edges of the specimen may have been damaged. Avoid these areas when using the specimen for calibration purposes.

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