

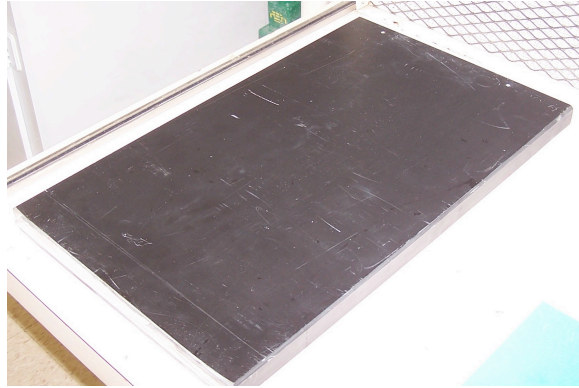
Disco Grinder Procedures

Mounting Small Samples on Adhesive Film

9/29/2008

This procedure will explain how to secure and remove a sample from an adhesive film for back side grinding. This procedure uses a heat release type of adhesive film. There is also a UV release film available (but, it has not been characterized at this time)

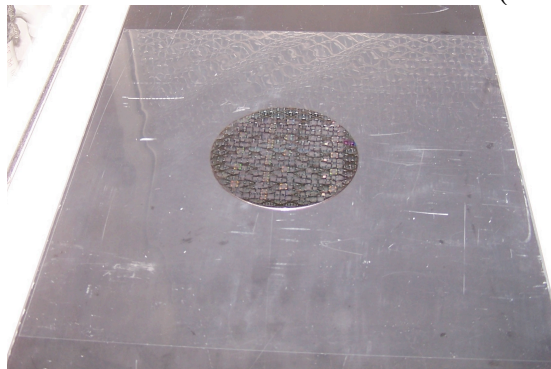
Wipe off the working surface of the black block inside the laminar flow bench.



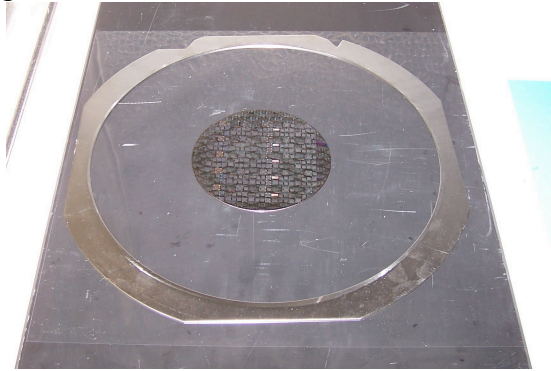
Retrieve the film that you are going to use. Separate the clear cover sheet from the adhesive film. Place the clear cover sheet on the black block and set the adhesive film to the side (with the sticky side up).



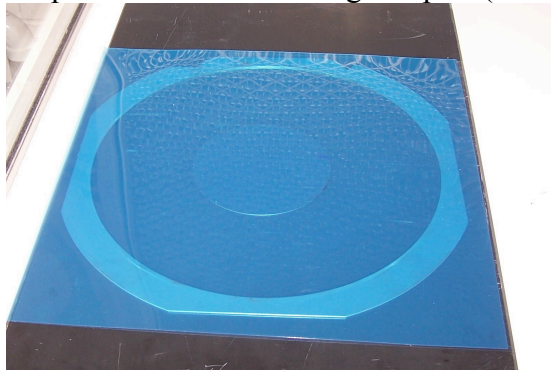
Place your samples/wafer in the center of this clear cover sheet (circuit side up).



Place an 8" mounting ring on the clear cover sheet.



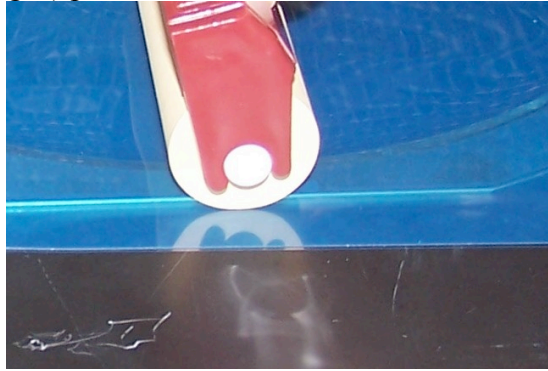
Place the adhesive film on top of the cover sheet/ring/samples (sticky side on the sample).



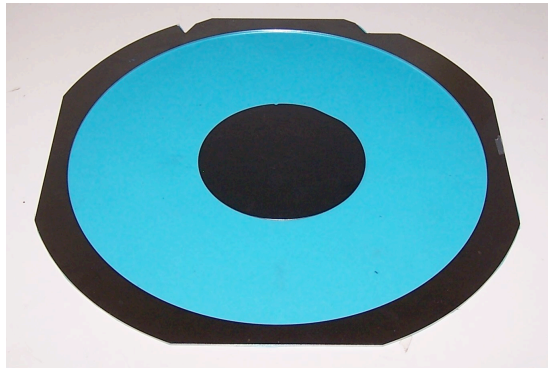
To secure your sample to the adhesive film you will need to apply a slight pressure to stick them together. You can use either a roller or squeegee. For large samples: Pressing down with roller (or squeegee-use a slight angle), start at the center of the sample and move towards the outer edge forcing the air out from under the film. This should not be a problem in starting from the center for small samples; you may just start from the edge. If any air pockets are left under the adhesive film, this will significantly affect the desired accuracy & thickness of the sample. A good seal will have no bubbles and this will allow a greater accuracy for the back grinding process



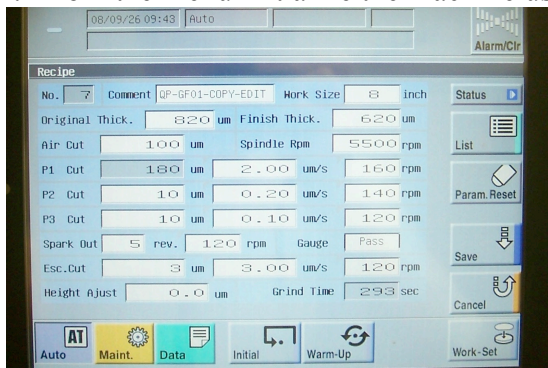
Using the roller (or squeegee) press the adhesive film to the mounting ring.



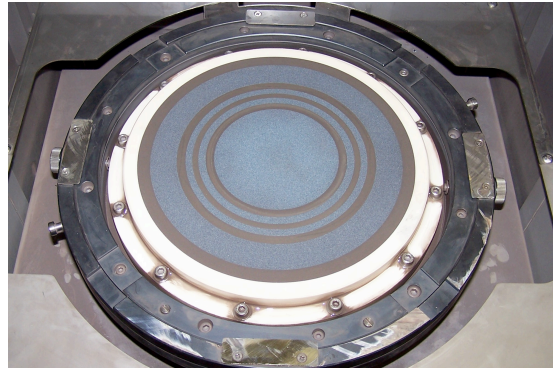
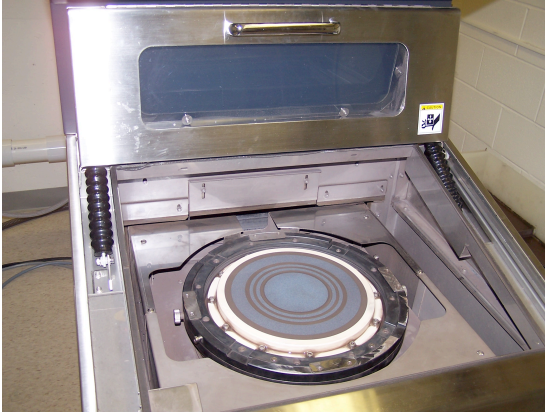
Remove and discard the clear cover sheet. Trim the excess adhesive film from around the edge of the ring.



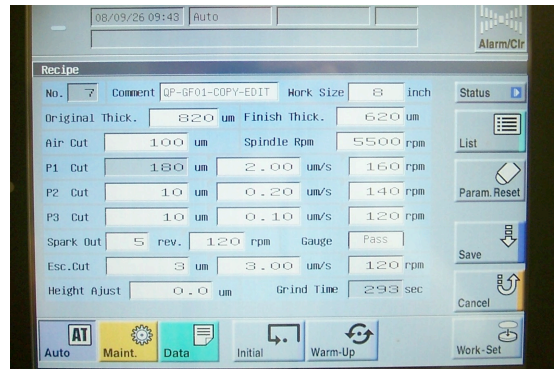
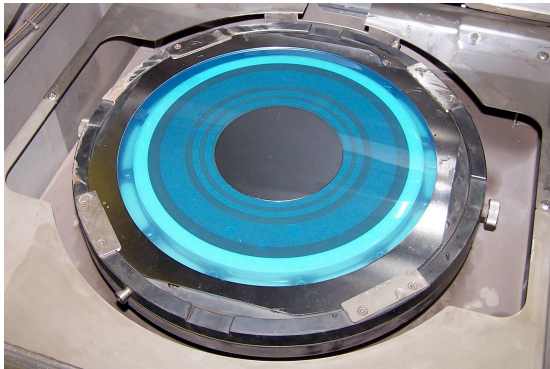
Turn the Disco grinder on. From the menu initialize the machine using the “Initial” icon.



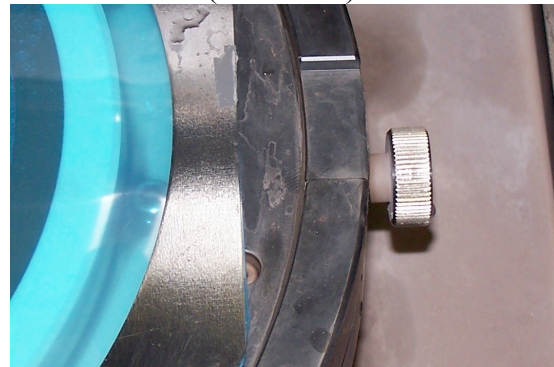
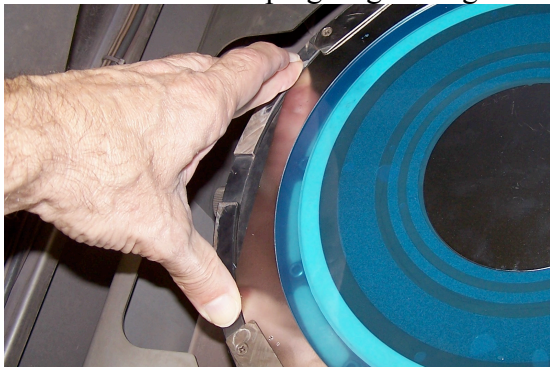
Open the door above the chuck table and unscrew the 2 knurled knobs so as to loosen the mounting clamp.



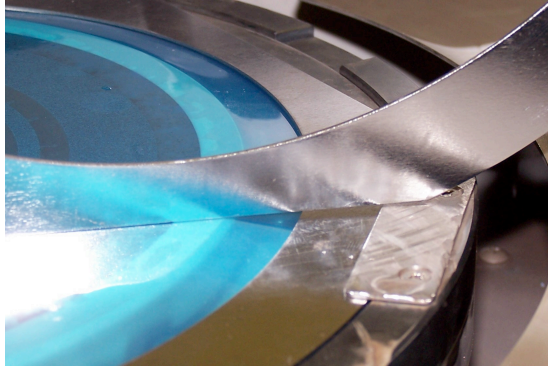
Place the ring with the tape and your sample onto the chuck table. Align the 2 notches on the ring with the 2 alignment pins on the chuck table. Rotate the clamping ring to hold down the ring. From the menu select “Work Size” and set it to 8 inches. Again from the menu select “Work Set” and then turn on the vacuum to the chuck table.



Press down on the clamping ring and tighten the knurled knob (both sides).



This is EXTREMELY IMPORTANT!!! Ensure that the clamping ring and mounting ring are both below the chuck table grinding surface. To confirm this you may use the straight edge of a mounting ring. If the rings are not below the chuck table grinding surface, **DO NOT PROCEED** until they are below the chuck table grinding surface.



Once the mounting of the rings is complete and the rings have been confirmed to be below the chuck table grinding surface, proceed with the normal grinding procedures.

Upon completion of the grinding operation, loosen the knurled knobs on the clamping ring and remove the ring holding your sample. Retighten the clamping ring using the knurled knobs.

Trim the adhesive film from your sample. Remove the adhesive film from the ring.



This blue adhesive film is a heat release film. To remove the film from you sample place the film/sample on a hotplate (120° C for about 1 _ minutes). The film should turn a lighter blue tint and at this point the samples should lift off the film easily.

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