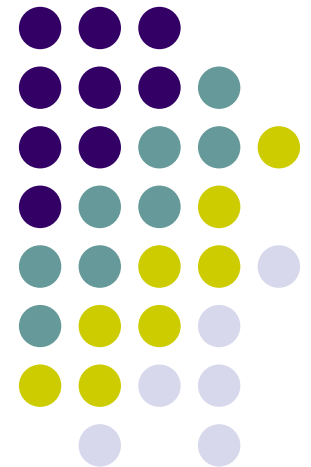


Polishing the Ferrules

Howard Budd
Aug 22 2007



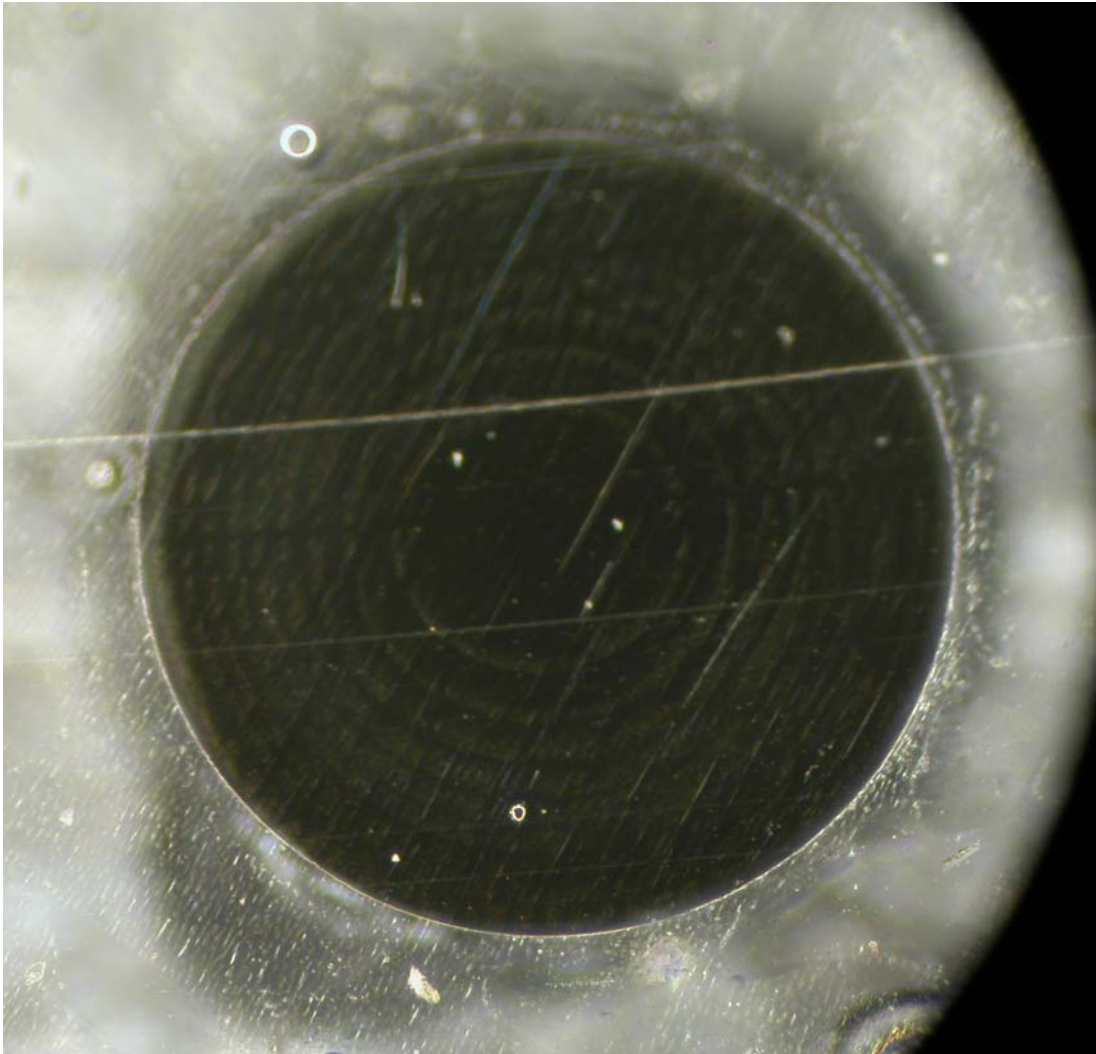


Visit

- We visited the place where the polisher is made
- We got 2 collets which the ferrules fit well in
- Paul claims the material polishes like a material with glass in it
- In this file we will have a pictures of fiber polished at Fiberfin and one we did a while ago
 - Not clear of the history of the one we did awhile ago, but they may have been the one of the ones we looked at to claim the polishing was OK
- There may be some residual cleaning marks on the fibers. How one cleans these requires a study. (We have decided how to clean DDK connectors and it may not be the same for these ferrules)

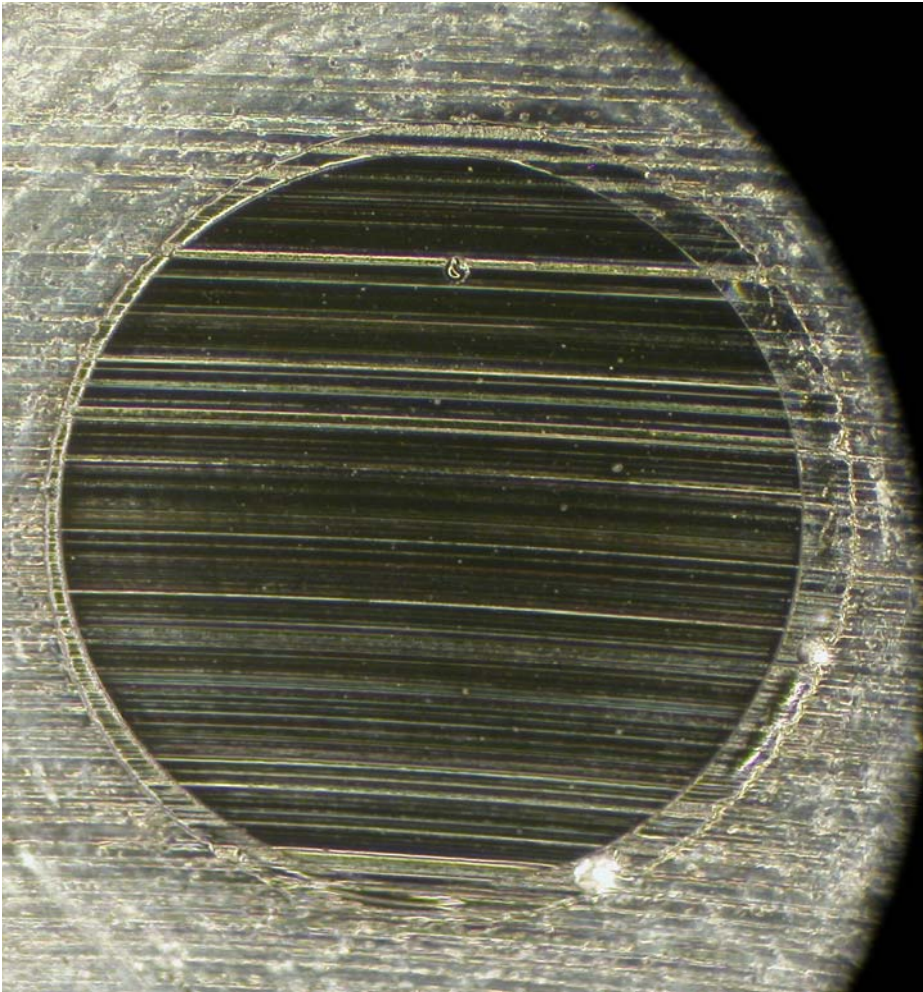


New Diamond, no ferrule polish



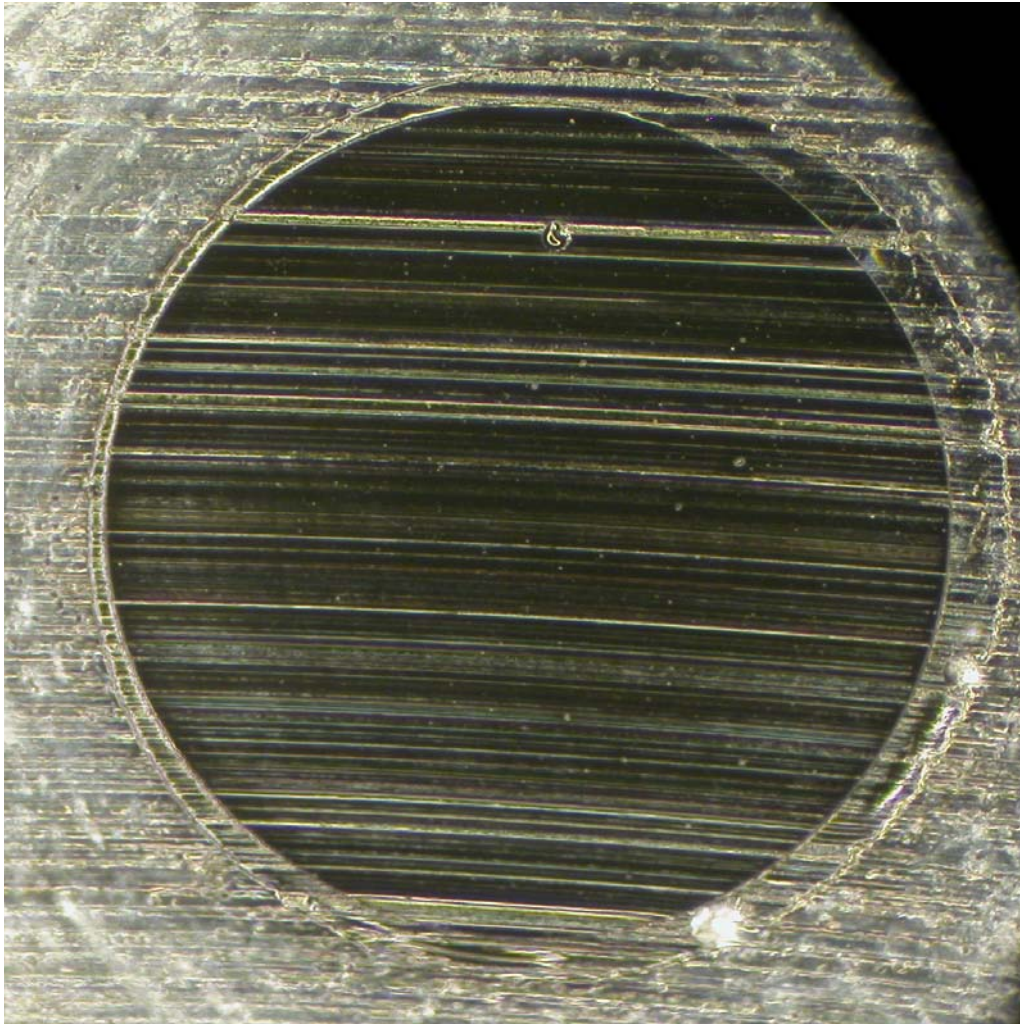
- New Diamond
- Diamond has not touched the ferrule but has only polished the epoxy and the fiber
- The fiber is this clear mult index fiber and you can circles from the multi-indexing
- The horizontal scratch might be a cleaning scratch

New Diamond, 1st Ferrule polish



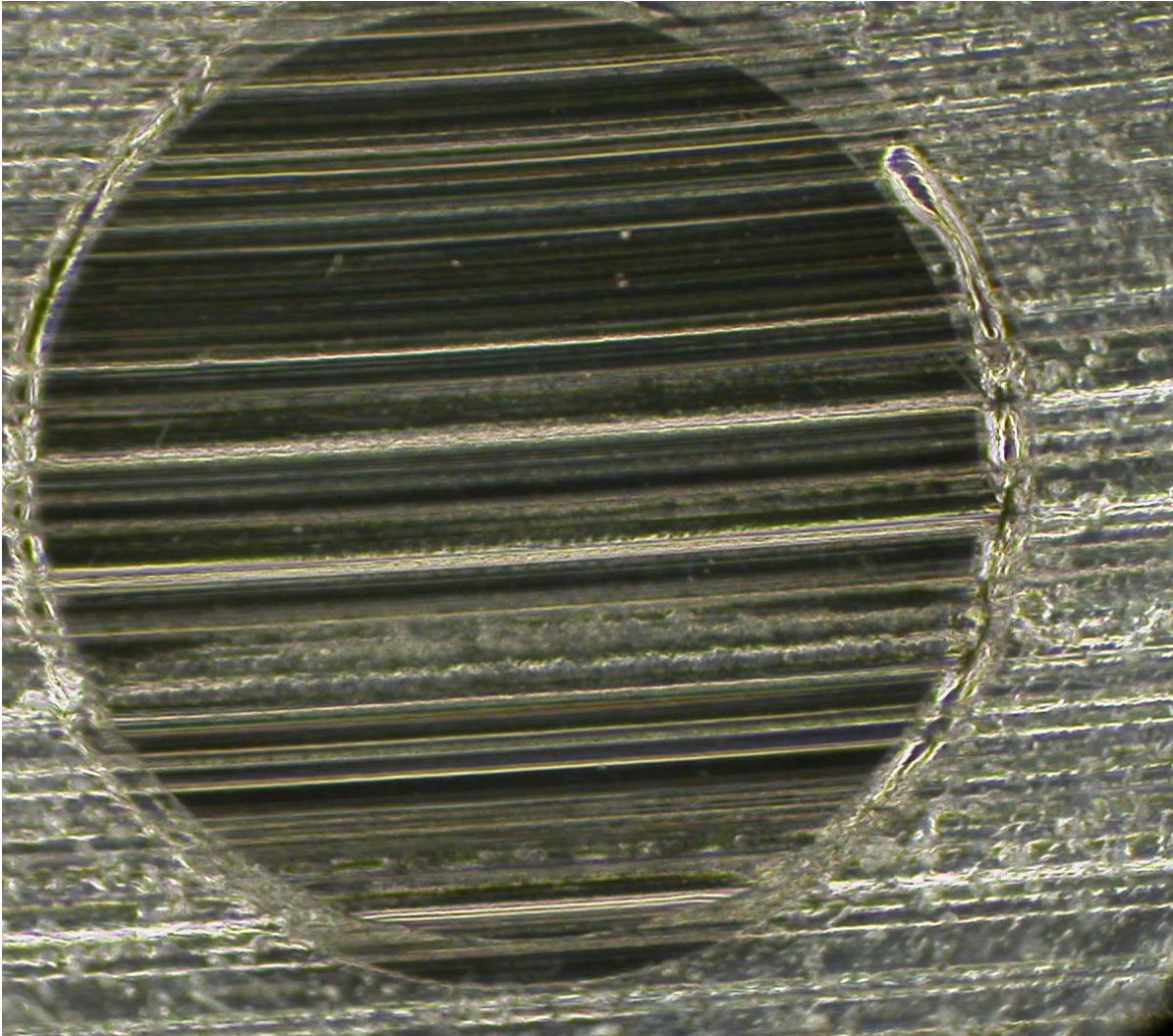
- First polish of the ferrule for a new diamond
- Doesn't look so bad with time 20 magnifying glass

3d ferrule polish



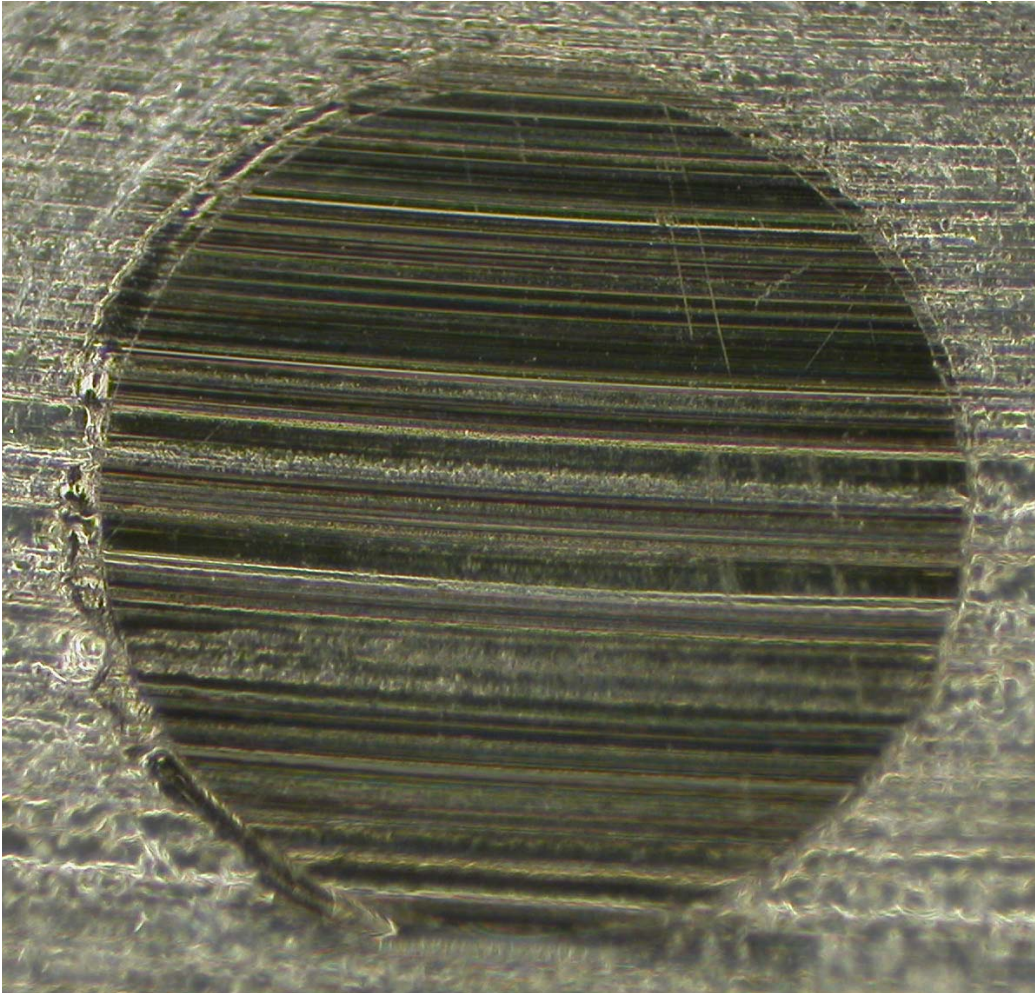
- Third polish of the diamond
- Diamond cuts into ferrule

5th polish by the diamond



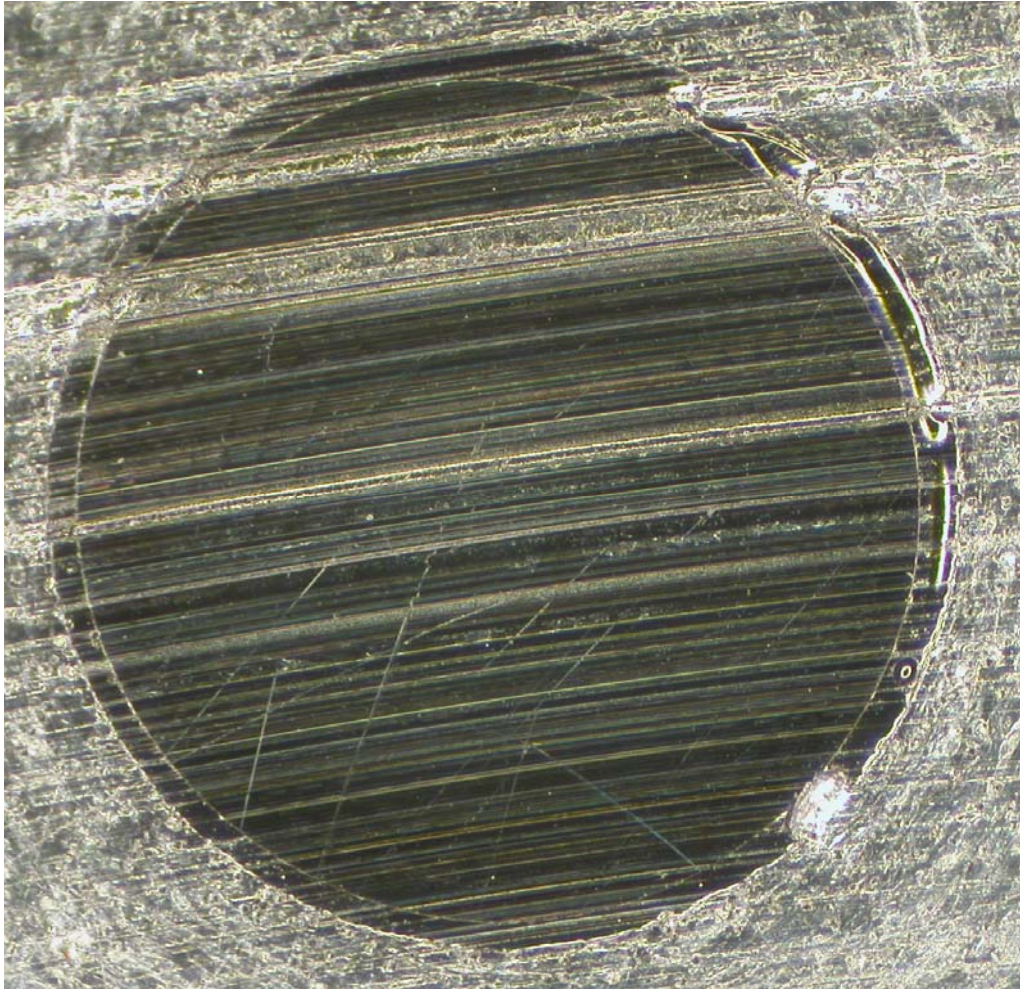
- 5th polish by the new diamond
- Doesn't look so good with times 20 magnifying glass

7th polish by the new diamond



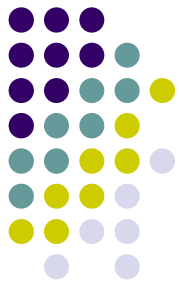
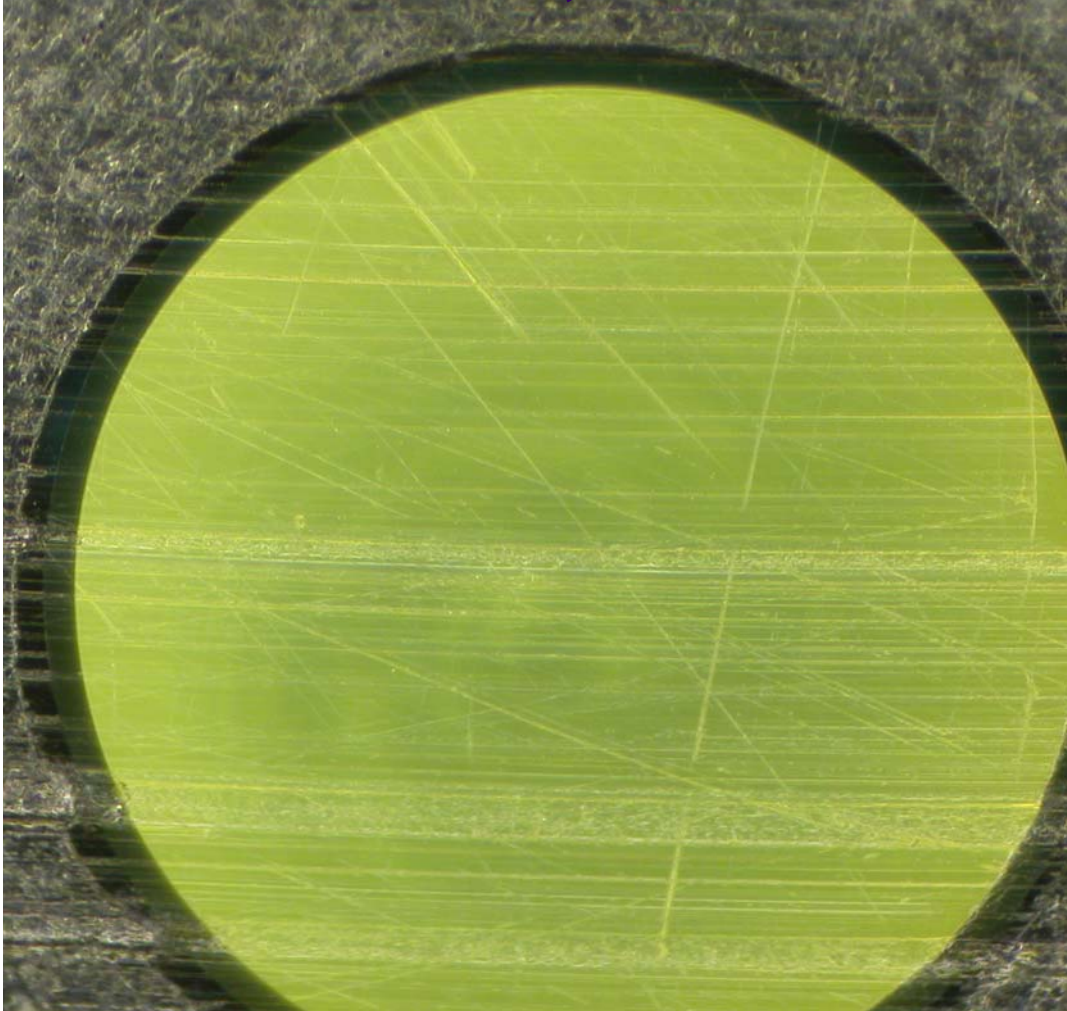
- 7th polish by the new diamond
- Doesn't look so good with times 20 magnifying glass

Older diamond

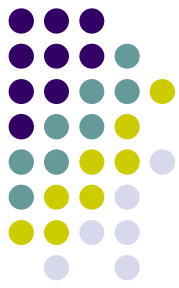


- Before we left Paul put on a new diamond. The previous pictures show polishes with this new diamond.
- This is a polish with an old diamond, but the diamond probably has had not too many polishes. The number of polishes is not known

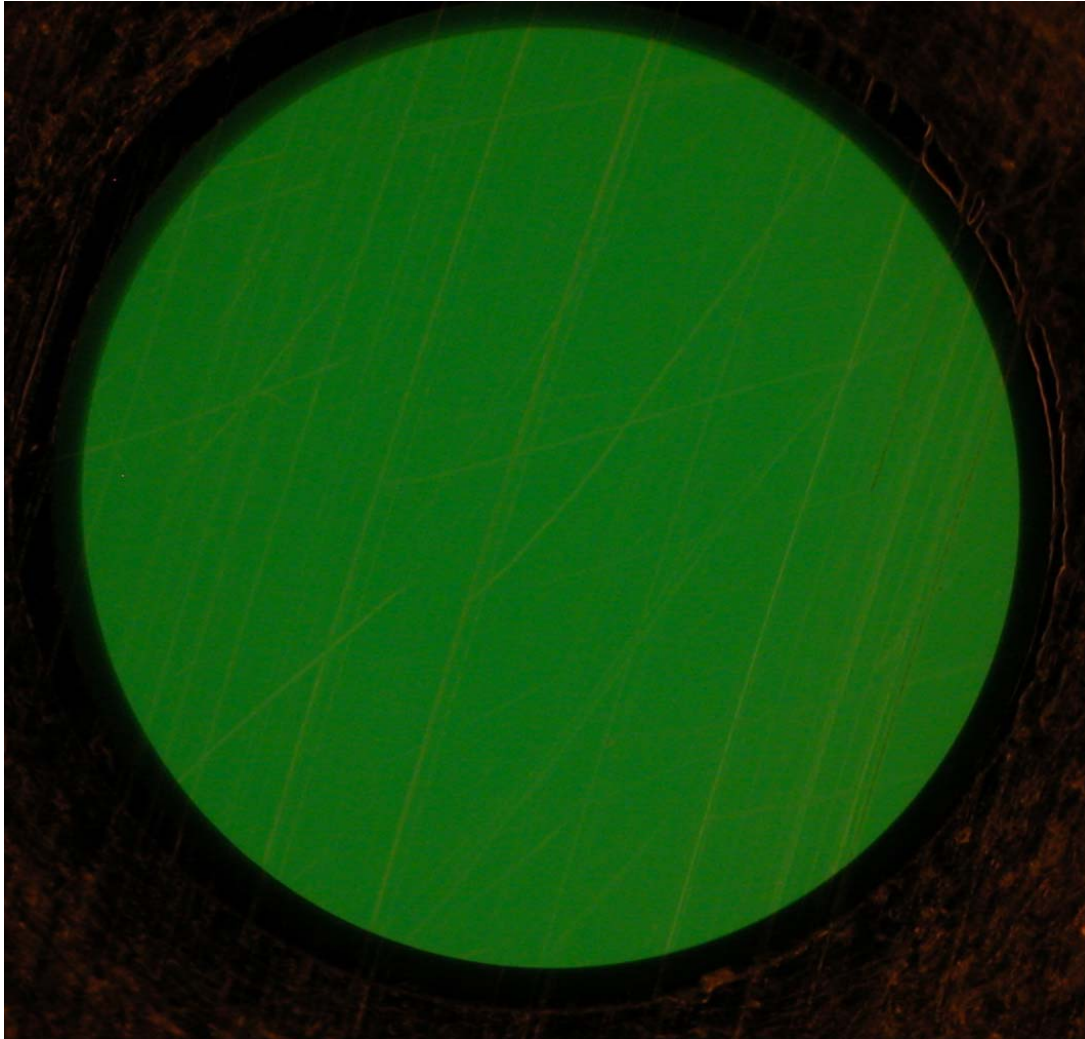
Old diamond, WLS fiber



- Older diamond, but not that many polishes, but the number of polishes is not known
- Scratch structure similar to picture on previous page
- The Wave length shifter illuminates the fiber from the back and the scratches are less evident.
- To look at the quality polish it probably better to use clear fiber



Old ferrule, Polished in the past



- We claimed the polish with the ferrules was fine. To see why we made this statement we found a old polished ferrule. This ferrule are clearly not the new ferrules as they do not have the burr. In looking at them with the microscope, the polish looks fine. I don't know if this the ferrule from which we make the statement the material polished well



Conclusion

- The polishes don't look so good.
 - With times 20 magnifying glass there is a clear difference between the 1st ferrule in which the ferrule is polished and the 7th ferrule polished.
 - They both look worse than the epoxy polish
- To visually determine the quality of the polish one should probably look at it with clear fiber too.