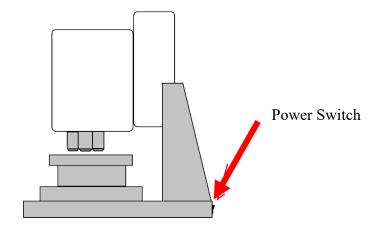


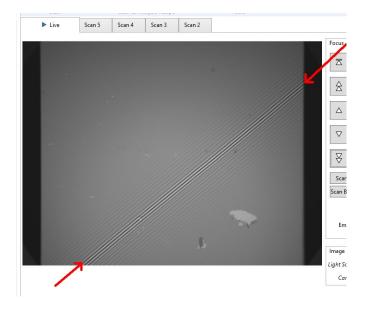
Operation manual for

FILMETRICS Profilm 3D

- 1. Turn on air pump.
- 2. Turn on power of Profilm 3D from the back side.



- 3. Open software "Profilm".
- 4. Place sample over the center of the stage.
- 5. Adjust focus using adjustment tool in the "Focus" tab. Make sure your sample does not touch the objective lens.
- 6. A fringe pattern will appear as shown in the following figure.

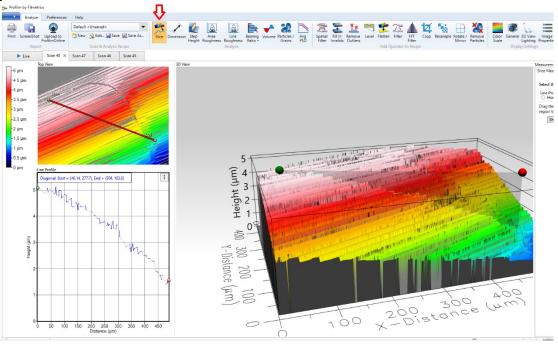




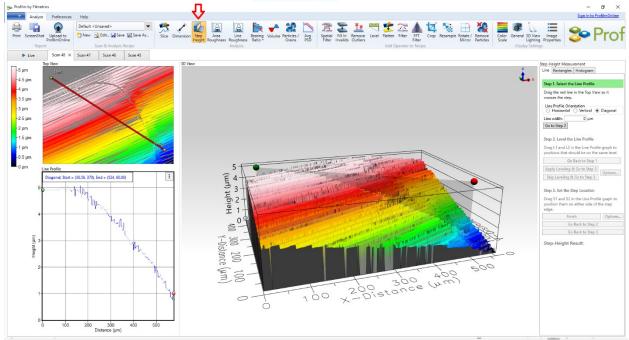
7. Move the fringe from top to bottom by adjusting the focus, record the z-position by clicking on 'scan top' and 'scan bottom', respectively.



- 8. Start measurement by click 'start'. You should receive a 3D scan of the feature of interest.
- 9. You can use the "Slice" or "Step Height" function to get a profile of a cross section of your feature of interest.







- 10. Save file and screenshots of your data.
- 11. Once you are done, exit the Profilm program.
- 12. Turn off the power of Profilm 3D. Turn off air pump.
- 13. Fill your name, date, time in and time out on logbook.

Learning materials:

- [1] Optical Profilometer introductions: https://www.nanoscience.com/techniques/profilometry/.
- [2] Application notes and introductions: https://www.kla.com/wp-content/uploads/KLA_AppNote_Optical_Profiler_Objectives.pdf