



## NxQ 4006 Mask Aligner Quick Start Guide

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**Do not use mask aligner without training.  
Book the instrument before using.**

1. Fully open CDA and vacuum valves located near the instrument. Make sure you can hear hissing noise when the CDA valves are open.
2. Turn on the aligner by pressing the Power switch on the upper right control panel for 2 seconds.
3. Turn on the UV lamp power supply (Power Switch on PSP-500 box).
4. Depress the Start switch, momentarily. NOTE: Do not press the Start switch for more than 2 seconds.
5. Allow at least 10 minutes for the lamp to reach equilibrium.
6. Prepare UV Intensity Meter and place the meter probe (sensor A) approximately in the center of the chuck.
7. On the touchpad select Controls>Manual Shutter>Expose Test. NOTE: If Expose Test does not lift the expose mirror, press CLEAR on lower right control panel and pull out the tray so the display reads "Load wafer". Then push in the tray.
8. Recommended process intensity is  $13 \text{ mW/cm}^2$  (~330 W with a new lamp). NOTE: As the lamp degrades and loses intensity, gradually increase the lamp power (up to max of 385 W), to maintain the process intensity ( $13 \text{ mW/cm}^2$ ). **Use the Power Knob to raise the power slowly.**
9. Place the glass mask or a blank glass slide (when using a plastic mask) on the mask holder and push the upper left corner into the mask stops and press the Mask Vacuum switch on the control panel to secure the mask to the mask holder.
10. Pull the tray out and load your wafer on the chuck.
11. Push the wafer tray forward slowly – the vacuum will catch the wafer; push the wafer tray slowly all the way in.
12. Press the Load button on the lower right panel.

13. If necessary perform alignment using X,Y micrometers. NOTE: Fine Align Locking Screw (Unlock for Coarse Align motion, lock for Fine Align motion).
14. Press Contact button on the lower left control panel to bring the wafer in contact with the mask.
15. If performing alignment verify that the alignment accuracy is acceptable. To adjust alignment if necessary press Separate on the left control panel and realign as required.
16. Select or verify Printing Mode parameter using the touchpad (the most common mode is Pressure Contact).
17. Set the Exposure time as required by your process using the touchpad.
18. Press the Expose button on the lower right control panel to initiate the exposure. The wafer will lower automatically when the exposure is complete.
19. Pull the tray out to unload the wafer. Remove the wafer from the chuck.

### **Shutting Down procedure**

**It is quite acceptable to leave the machine running the day should it be used regularly. Avoid switching the UV lamp ON and OFF frequently. This may result in the lamp degradation and significant intensity lost; damage or the lamp may explode. Don't leave the machine running overnight or for unnecessary prolonged periods.**

1. Turn the lamp off by switching off the main switch on the lamp power supply (Power Switch on PSP-500 box).
2. **The CDA has to keep on flowing for at least 10 minutes after turning off the lamp to cool it properly.**
3. Turn the aligner off by selecting Power Off on the touchpad.
4. Close two CDA valves and vacuum valve.