

# Separating Silicon Probes from a Wafer

When a wafer of Olympus silicon probes is purchased, it arrives in a wafer package with all of the probes attached to the wafer. This is also true for MFM (magnetic) coated and EFM (electric) coated probes manufactured on Olympus silicon wafers. This document outlines a procedure for separating the probes from the wafer and placing them in a package convenient for use and storage.



To separate probes out of a silicon wafer (above), you will need the following:

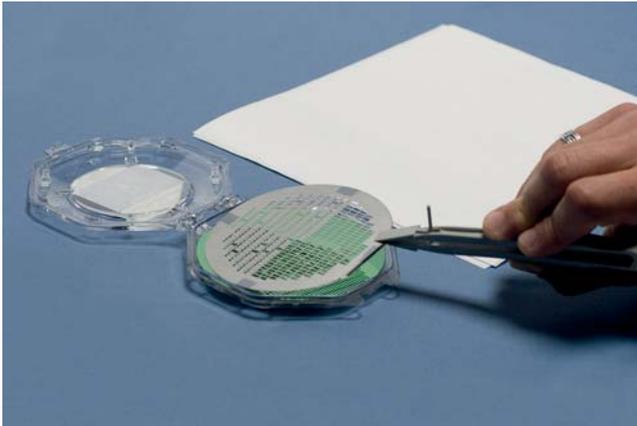
(1) GelPak boxes with either Tack 0 or 4;



(2) a sharp pair of tweezers; and



(3) a pair of wafer tweezers (tongs).

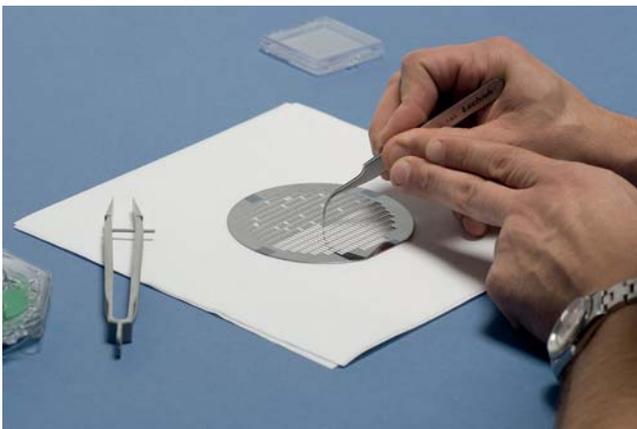
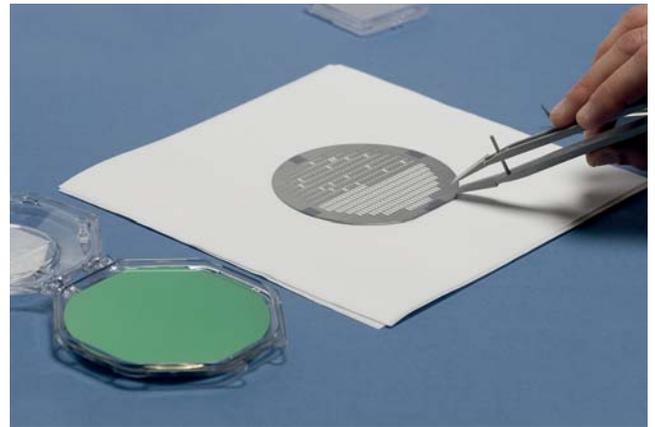


### Step 1

Start by carefully opening the wafer package and use the tongs to gently grab the edge of the probe wafer. Do not grab the dummy support wafer below the probe wafer. Lift only the probe wafer out of the package.

### Step 2

Place the probe wafer on a soft clean mat or perhaps a clean soft wipe. The soft surface will be necessary to be able to gently dislodge the probe chips from the silicon wafer. Do NOT flip the wafer over. The tips are on the top side of the wafer as packaged and damage WILL occur if the wafer is placed tip-side down.

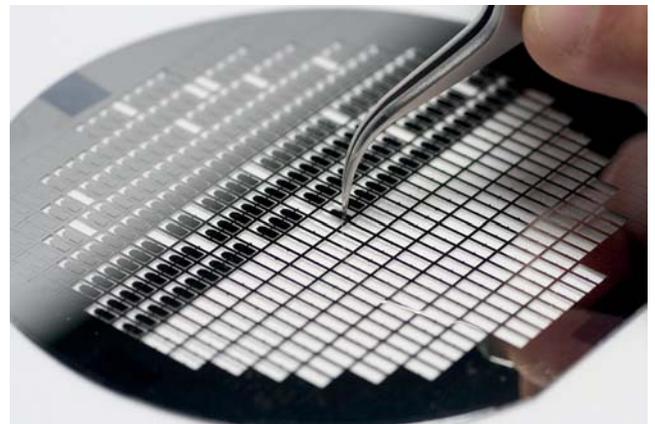


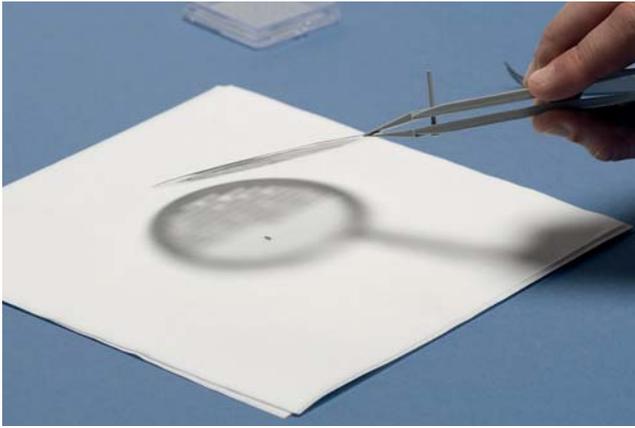
### Step 3

Use the pair of tweezers and locate the tip over a probe chip attached to the probe wafer. If necessary, use your second hand to steady your tweezers over the desired probe chip.

### Step 4

Gently push straight down on the CENTER of the probe chip until you see it break free from the wafer. Note that there are two small silicon tabs holding the chip to the wafer and it does not require much force to break the probe free. Also take care not to laterally move the chip or the wafer so that the cantilever does not break off the chip.



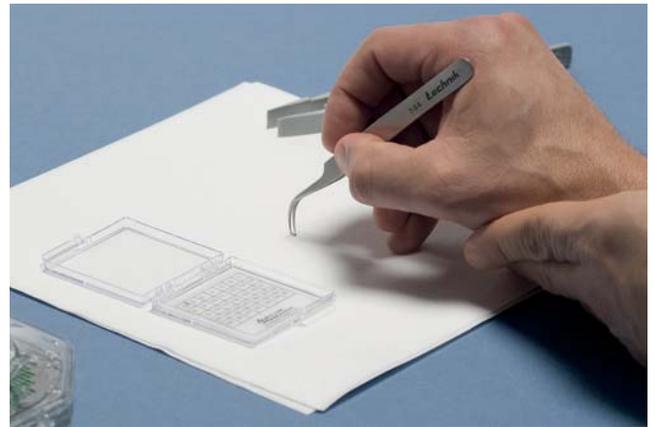


### Step 5

Use the tweezers to carefully pick the wafer straight up without disturbing the separated probe chip left behind on the clean soft mat.

### Step 6

Use the sharp tweezers again to pick up the probe chip off the mat. Note that you do not need much pressure with the tweezers as you grab each side of the chip. Too much pressure can break off pieces of the chip causing debris to possibly land on the tip and/or cause you to drop the chip.



### Step 7

Carefully place the probe chip in a GelPak box. Note that if the probe is dropped on a hard surface and lands on the tip/cantilever side, it is very possible that the tip will be damaged (dull) and/or the cantilever will be broken off the chip.