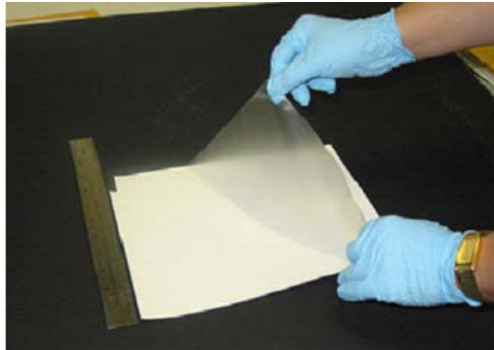
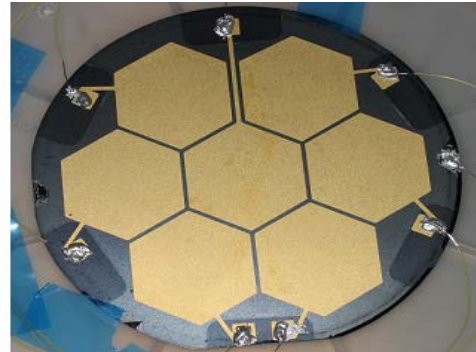


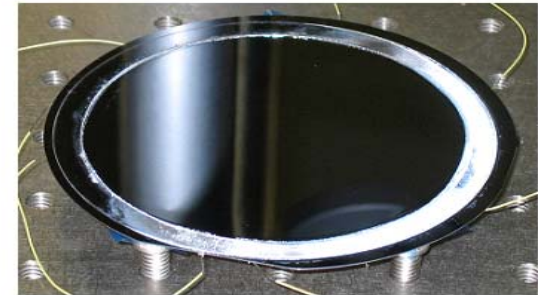
G-Elastomer/Silicon Structure and Actuation



A 5 wt % solution of g-elastomer in solvent (DMF) is prepared at an elevated temperature (50 °C). The solution is then cast on the substrate in a flow-controlled chamber.

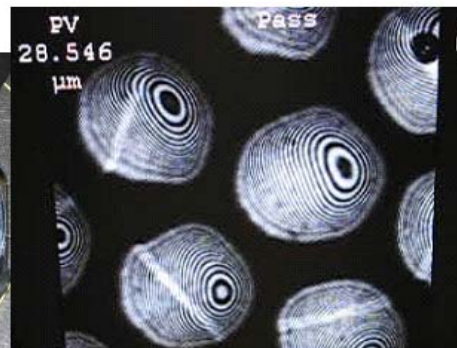
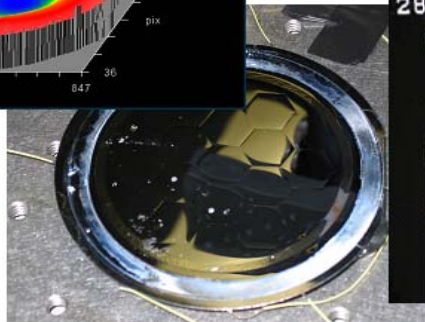
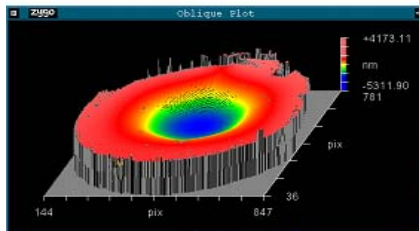


(a)



(b)

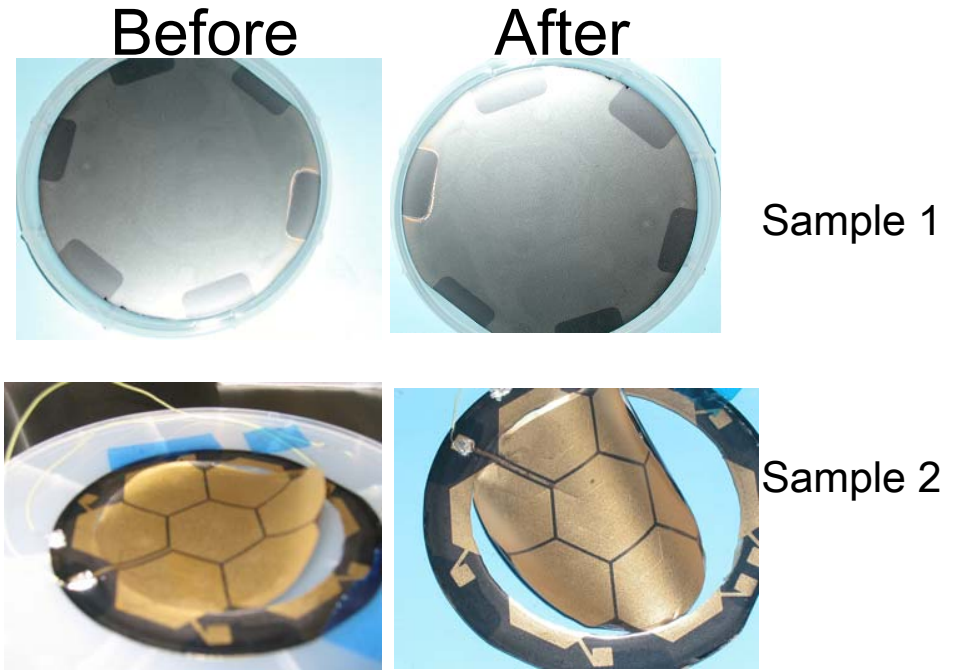
Fabricated G-elastomer-based silicon mirror membrane. The thicknesses of the silicon membrane and the G-elastomer membrane are 50 μm and 25 μm , respectively. (a) Electrode side (b) Silicon mirror side.



Thermal Cyclic Testing

Thermal testing protocol:

- High temperature is 100C
- Low temperature: -55C
- Temperature ramp rate: 5C/min.
- The dwell time at high temperature and low temperature during thermal cycling: 15 minutes.



There was no damage or degradation was observed after 75 cyclic thermal loading (1 cycle: -50 C ~ +100 C).