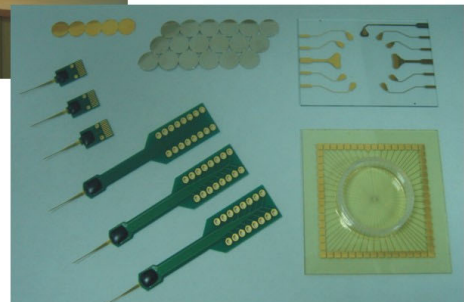
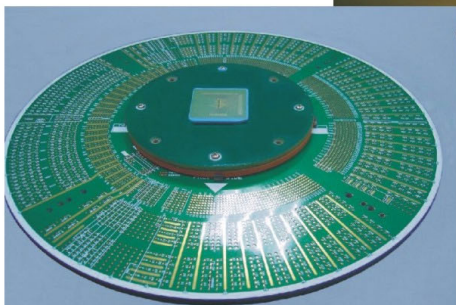
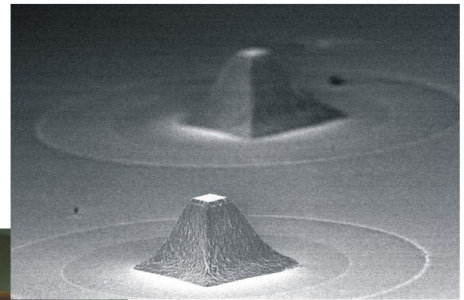
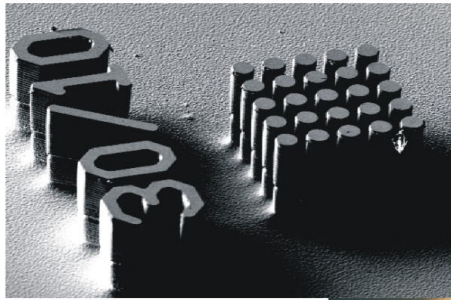




Rigidtech Microelectronics Corp.

Innovation • Efficiency • Enthusiasm



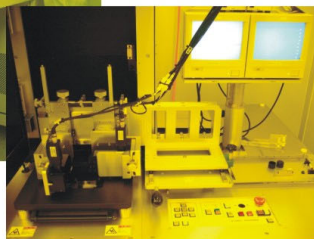
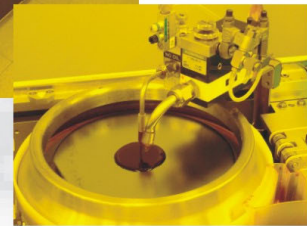
The Perfect Solution of MEMS Process

Manufacturing Technology

Photolithography

● Automatic Track

- ★ Thin & Thick PR coating
- ★ Polyimide Coating
- ★ Wafer size : 4" or 6"



● Mask Aligner

- ★ Mask layout & design
- ★ Resolution 2um
- ★ Align accuracy < 3um
- ★ Wafer size : 2" ~ 6"

Thin Film

● PVD (Physical Vapor Deposition)

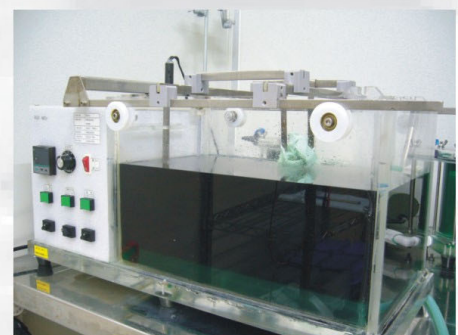
- ★ Sputtering Deposition : Cu 、 Cr 、 W 、 Ti 、 SiO₂
- ★ Substrate size :
Any Shape < 15*15cm square
- ★ Uniformity < 6%



Electroplating

● Electroplating Machine

- ★ Plating variety :
Ni 、 NiCo 、 Cu 、 Ag 、 Au 、 Pd
- ★ Min via : 20um
- ★ Aspect ratio : 1~2
- ★ Wafer size : 4" or 6"



Etching

● ICP (Induce Couple Plasma)

- ★ High density plasma Etching
- ★ Si、SiO₂、Polyimide、PR Etching
- ★ Etching profile : $90 \pm 2^\circ$
- ★ Etching rate : Si : 5um/min
Polyimide : 1.5um/min
PR : 2um/min
- ★ Backside He Cooling
- ★ Wafer size : 4" or 6"



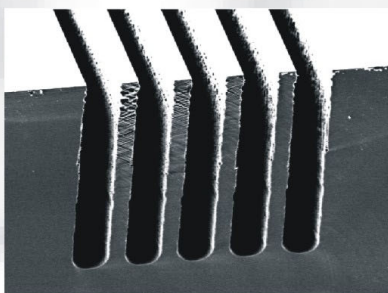
● RIE (Reactive Ion Etch)

- ★ W、SiO₂ dry Etch
- ★ Process gas : N₂、O₂、SF₆、CF₄
- ★ Contact cooling plate
- ★ Etch rate : W : 150nm/min
SiO₂ : 0.1um/min
- ★ Substrate size : Any shape < 8" wafer

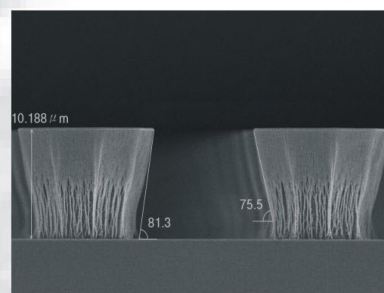
● Wet Etching

- ★ Cu、Cr、Al、ITO wet etch
- ★ Substrate size : 2"~8"

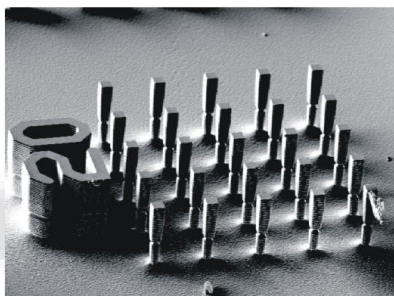
Technology Application



Silicon etch
10um features -90um deep



Polyimide etch
10um space - Angle 80°



20um Silicon island

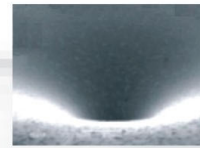


Vertical Probe - Rigid Tip

Product

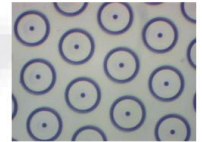
● Nozzle Plate

Material : Ni、Ni-Pd、Ni-Au
Pitch : 80um Thickness > 25um
Uniformity : $\pm 1\mu\text{m}$
Application : Medical cure
 Perfume



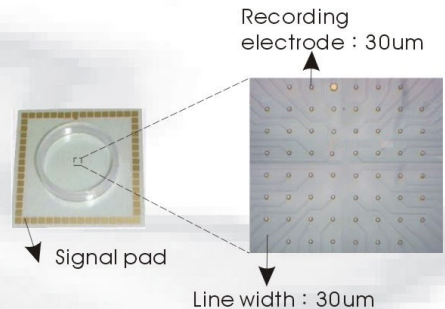
Top View

Bottom View
Via Diameter 5~6um



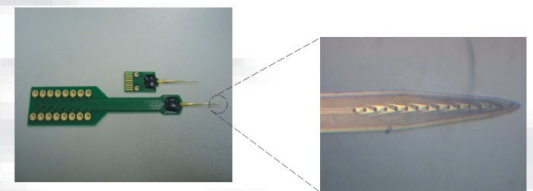
● MEP Chip (Multi-Electronics Probe)

Substrate : Glass+Polyimide
Conducting wire : Cu、ITO
Electrode : Au、Noble metal
Application : Tissue slice、Cell culture electrophysiology



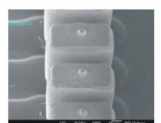
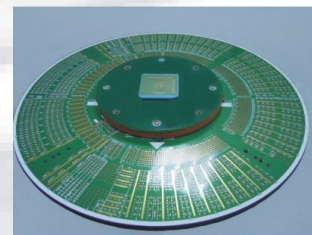
● Bio-Probe

Material : Polyimide
Conducting wire : Cu
Electrode : Noble metal
Application : Neuron electrophysiology



● MEMS Vertical Probe Card

Material : Ceramic + Rigid Tip
Min. Pitch : 10um
Application : Logic IC Solder bump testing
 LCD Drive IC gold bump testing



Tip SEM photo

● DNA Inspection Chip

● Ink Jet and Silicon Micro Process



3D Pole Probe



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