

...And Sustained Reliability

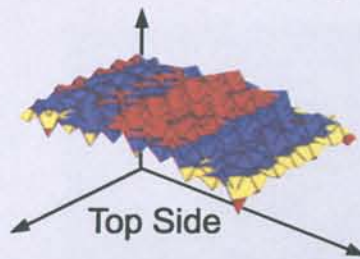
For fine line developing and etching, top to bottom and edge to edge uniformity is critical for circuit quality.

Chemcut XLi Oscillating Sprays incorporate Chemcut's patented intermittent spray technology with optimized hydraulic design to achieve unsurpassed resolution and uniformity.

Chemcut XLi design compensates for puddling and run-off etch acceleration that occur on the top of horizontally transported panels. The result is uniform processing - side to side, leading edge to trailing edge, and top to bottom.

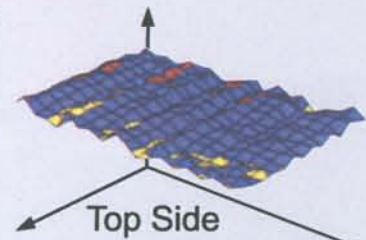
Standard Etcher

High = 2.80
Average = 2.28
Low = 1.76

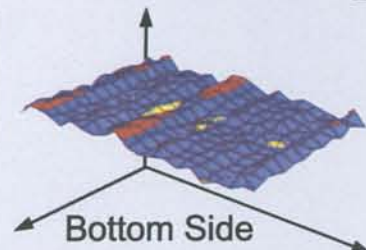


Chemcut XLi Etcher

High = 2.55
Average = 2.28
Low = 2.00

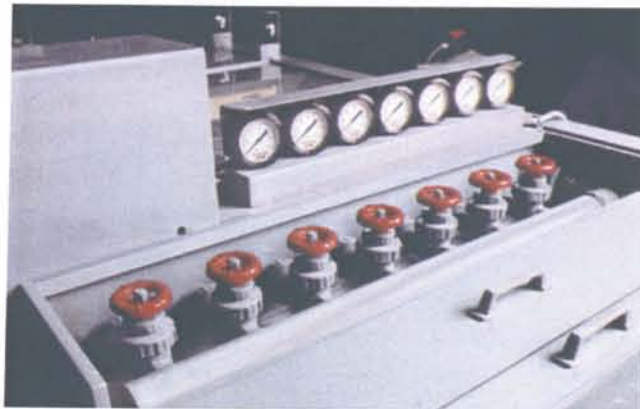


High = 2.55
Average = 2.25
Low = 2.01



The High Resolution Etch Module incorporates Chemcut's intermittent spray technology and individually valved upper spray tubes for superior uniformity control.

For processing innerlayer materials, Chemcut offers a unique combination of conveyor wheels. Today's ultra-thin materials are transported with out compromising the fluid delivery performance of the processing system.



Upper spray control on HREM



Intermittent spray control on HREM

Products

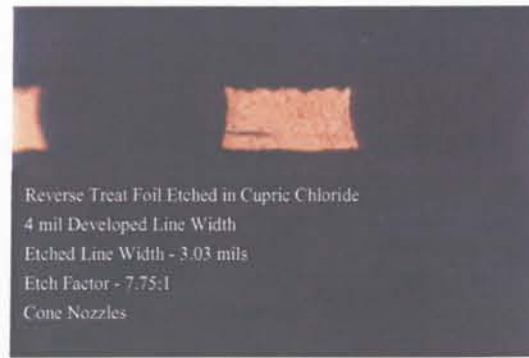


Chemcut XLi
The Benchmark for Chemical Processing Equipment

Chemcut XLi — Superior Performance...

Chemcut is the world's best known supplier of wet processing equipment for advanced electronic interconnect and photo chemical milling manufacturing. Our process and equipment manufacturing expertise provide cost-effective solutions to ever increasing technology and production requirements.

Chemcut equipment and process controls are integrated into systems that enable our customers to manufacture high performance products at high rates with excellent yields. Standard and optional conveyor systems are available to accommodate materials ranging in thickness from two mil innerlayers and metal sheets up to quarter inch (6.3 mm) stock. Chemcut systems can also be configured to operate with reel-to-reel handling systems.



Reverse Treat Foil Etched in Cupric Chloride
4 mil Developed Line Width
Etched Line Width - 3.03 mils
Etch Factor - 7.75:1
Cone Nozzles

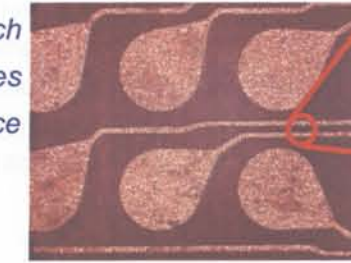
Developed fine line and space pattern

State-of-the-Art Wet Processing — Available in Four Widths



Efficient pump maintenance

3.0 mil (76 micron) pitch
1.3 mil (33 micron) lines
1.7 mil (43 micron) space



Ball grid array pads
25x enlarged



ultra-thin
conveyor

Optional PLC controls
can be machine
mounted or on the
power enclosure



Chemcut XLi System Features

- ◆ State-of-the-Art processing capability
- ◆ Dual side rails with removable bearings
- ◆ Split drive shaft in each module
- ◆ Ultra-thin transport
- ◆ 30" conveyor width standard
- ◆ Leak resistant module to module seals
- ◆ Air sealed etcher and stripper doors
- ◆ Lift out D shaft rods and high profile gears
- ◆ Molded precision ground anti-drag out rollers
- ◆ Air gap junction boxes on sump decks
- ◆ Modular PVC, and PPL construction to meet specific process needs
- ◆ Adjustable machine venting



Total pressure side
filtration option on
High Resolution Etcher



Adjustable
Oscillation Drive



Developer, etcher, and
stripper lids and doors are
sealed with Chemcut's
patented air seals for
solution and fume
containment

