



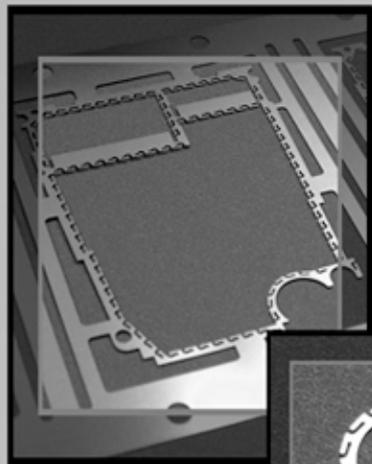
# COMPOSIDIE INC

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Visit us at [www.composidie.com](http://www.composidie.com)

MACHINING ◆ TOOLING ◆ STAMPING ◆ ETCHING ◆ PLATING ◆ ASSEMBLY

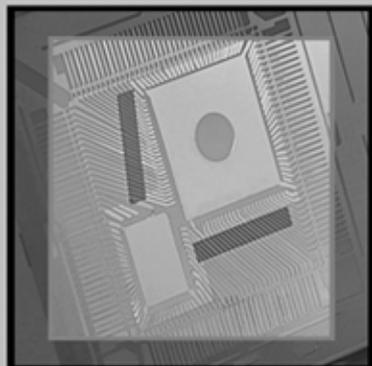


## REEL-TO-REEL CHEMICAL ETCHING

Chemical etching is a low-cost alternative to stamping tools utilized for prototyping and low-volume production. Composidie can support your production requirements with our Leading Technologies, Inc. etching facility.

We offer:

- High-Speed, Continuous Process
- Non-Contact Glass Mask
- 0.002" to 0.025" Thick Materials
- Dry Film Type Photoresist
- Automated vision alignment system for exposure assures +/- 0.0005" (0.0127mm) offset mismatch
- Accurate unit-to-unit progression tolerance of +/- 0.001" (0.025mm)
- Leadframe, Connector, RF/EMI Products
- Major benefit in prototyping designs due to inexpensive tooling costs and shorter lead times



## ETCH DESIGN GUIDELINES

Material Thickness	Typical			Advanced		
	Minimum Channel Size	Minimum Hole Size	Minimum Radius	Minimum Channel Size	Minimum Hole Size	Minimum Radius
.003"	.0029"	.0059"		.0026"	.0053"	
.004"	.0034"	.0064"		.0031"	.0058"	
.005"	.0039"	.0068"	.0046"	.0035"	.0062"	.0040"
.006"	.0046"	.0074"	.0057"	.0039"	.0067"	.0050"
.007"	.0049"	.0079"		.0044"	.0072"	
.008"	.0052"	.0084"	.0068"	.0047"	.0076"	.0060"
.010"	.0062"	.0095"	.0069"	.0056"	.0086"	.0065"

Note: Each product's features must be evaluated individually. This chart is only intended to provide capability guidelines.

Typical Material Thickness: .005" to .010" | Top-to-Bottom Mask Registration: .0005" Maximum  
 Advanced Material Thickness: .002" to .004" & .011" to .023"  
 Unit-to-Unit Progression Tolerance: +/- .001" | Strip Pitch Tolerance: +/- .002"  
 Maximum Stair Step Tolerance: .0015" | 1/2 Etch Depth Tolerance: 30% to 60% of Material Thickness  
 Min. Part (Strand) Width: .500 +/- .002" | Max. Part (Strand) Width: 5.000 +/- .002"

## ETCH TOOLING GUIDELINES

Mylar Tool	vs.	Chrome/Glass Tool
Low Cost ***** Best for Low-Volume Production ***** Fast Delivery (2-3 Days) ***** Geometry Confirmation Prior to Chrome Tool	PROS	Permanent ***** Best for High-Volume Production ***** Highest Precision & Accuracy ***** Greatest Clarity/Flatness
Scratches Easily ***** Not Capable of Highest Resolution (Accuracy) ***** Less Stable (Guaranteed for 1500')	CONS	Higher Cost ***** 1-Week Leadtime
We can provide the right tool for every job!		



Workers utilize a Class 1000 clean room for exposing dry film photoresist in the etching process.