

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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One company. Many solutions.



# **Prototyping**

WHO IS BUYING PROTOTYPING MATERIALS?

#### 4 Education institutes

Secondary schools
Post secondary schools

- 4 Technical institutes
- 4 Engineers

Automotive Aerospace Electronics

4 Hobbyists







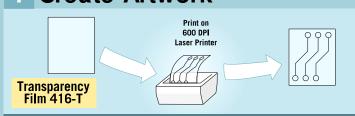
#### WHAT IS PROTOTYPING?

It is the process of creating your own circuitboard. Computer generated artwork defines the copper traces on the resulting board, making virtually any design possible.

# COMPLETED BOARD

# THE PROCESS

## 1 Create Artwork





Artwork from Step 1 (Facing Down) Copper Clad Board Presensitized
Copper Clad Boards
600 Series

Peel protective

**Exposure Kit 416-X** 

## Photofabrication Kit 416-K

covering before use

3 Develop

1-2 min

Wear Gloves

Brush board lightly with
Smoother Brush

1 Part Developer
10 Parts Water

4 Etch

10 - 30 min Wear Gloves

# Select an Etchant Warm to 50°C Ferric Chloride Cat # 415

Warm to 40°C Cat # 410 Transparent

Sodium Persulphate
Cat # 4101
Transparent

ISO 9001 Registered

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Chemicals

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## Merchandise Guide

## **Prototyping Kits**



Boards 1 / 16"



Stock Code	Product Name	Form	Case Qty
416-K	Photofabrication Kit	Kit	1
416-X	Exposure Kit	Kit	1
416-ES	Etching Process Kit - Student	Kit	1
416-E	Premium Etching Kit	Kit	1

Stock Code	Product Name	Size	Form	Case Qty
503	Single Sided Copper Clad Board	3 X5	CCB	5
506	Single Sided Copper Clad Board	4 X6	CCB	5
509	Single Sided Copper Clad Board	6 X6	CCB	5
512	Single Sided Copper Clad Board	6 X9	CCB	5
515	Single Sided Copper Clad Board	8 X1 0	CCB	5
550	Double Sided Copper Clad Board	6 X6	CCB	5
555	Double Sided Copper Clad Board	12X12	CCB	5
603	Single Sided Copper Clad Board Presensisitized	3 X5	CCB	5
606	Single Sided Copper Clad Board Presensisitized	4 X6	CCB	5
609	Single Sided Copper Clad Board Presensisitized	6 X6	CCB	5
612	Single Sided Copper Clad Board Presensisitized	6 X9	CCB	5
630	Single Sided Copper Clad Board Presensisitized	8 X1 2	CCB	5
650	Double Sided Copper Clad Board Presensisitized	6 X6	CCB	5
660	Double Sided Copper Clad Board Presensisitized	6 X9	CCB	5

## Prototyping Chemicals



Developel				
Stock Code	Product Name	Size	Form	Case Qty
418-500ML	Developer	17 oz	Liquid	10

Ferric Chloride Copper Etchants				
Stock Code	Product Name	Size	Form	Case Qty
415-115G	Ferric Chloride Powder, makes one pint	4 oz	Powder	5
415-500ML	Ferric Chloride Solution	17 oz	Liquid	10
415-1L	Ferric Chloride Solution	33 oz	Liquid	6
415-4L	Ferric Chloride Solution	1 gallon	Liquid	1

#### Sodium Persulphate Copper Etchant

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Stock Code	Product Name	Size	Form	Case Qty
4101-1KG	Sodium Persulphate	2.2 lbs.	Crystals	6

### **Ammonium Persulphate Copper Etchant**

Stock Code	Product Name	Size	Form	Case Qty
410-1KG	Ammonium Persulphate	2.2 lbs.	Crystals	6

#### Liquid Tin

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421-500ML	Liquid Tin	17 oz	Liquid	4
Stock Code	Product Name	Size	Form	Case Qty

## Prototyping Accessories



Stock Code	Product Name	Size	Form	Case Qty
416-T	Transparency Film, 5 Per Envelope		Sheets	1
416-RP	Etch Resist Pen		Pen	2
8420-P	Silver Print - Conductive Pen	8.5 grams	Pen	2
842-20G	Silver Print	20 grams	Liquid	1
843-250G	Silver Coated Copper Print - Bulk	250 grams	Liquid	1
840-20G	Nickel Print	20 grams	Liquid	5

Refer to website www.mgchemicals.com/prototyping for more prototyping products

E-mail:: salesusa@mgchemicals.com

none Fa

 www.mgchemicals.com

For technical specifications, MSDS, tech support and more



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