



Pre-Drill & Post-Cut Substrates

Applications

General

- Supplier of all types of laser cut blanks per your design
- Extensive stock of raw material on hand
- Optical alignment to your circuit pattern for post print machining
- Readily combined with diamond edge sawing
- Volume production and prototype quantities
- Input CAD files via E-Mail or direct MODEM
- Careful control of cut side walls to minimize thin film blistering problems
- Very fast delivery

Types

Machined Features

- Via holes
- A/B Side Markers
- Diamond Sawed Edges

- Complex Contouring
- Tooling Flats
- Scribe Lines

- Mounting Holes
- Castellations
- Photolithography Alignment Features

Uses

- Pre-drill
 - Single part type or multiple part type on plate
- Post-cut
 - Single part type or multiple part type on plate

Materials

- 99+ % Alumina
 - As fired or polished
- Fused Silica / Quartz
- Sheet Thermoplastics and Epoxies
- Thermal Management Materials
 - Beryllia (BEO) and Aluminum Nitride (ALN)
- PTFE "soft board" materials

Design Guidelines

| Property | Nominal | Units |
|---|--------------------|-----------------------|
| Maximum Thickness | .040 | Inches |
| Minimum Radius | .003 | Inches |
| Smallest Feature | 0.004 | Inches |
| Taper Front to Back | 10% | Of Material Thickness |
| Feature Size Tolerance | +/- 0.001* | Inches |
| Feature to Feature Proximity | .010 Min. | Inches |
| Feature to Cell Edge Proximity | 1 X Material | Thickness |
| Array Cell Feature to Plate Edge Distance | 0.100 Min. | Inches |
| Acceptable CAD file formats | AutoCad .dwg, .dxf | n/a |
| Preferred Drawing Scale | 1X (1:1) | n/a |
| Cut line to Front Metal Distance | 0.002 Min. | Inches |
| Cut alignment accuracy to circuit feature | +/-0.002 | Inches |

* As measured at either Front or Back Side

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