Micron Laser Technology is a leading laser service provider for the printed circuit board industry.

From single sided to multi-layer, rigid and flexible circuits, MLT’s PCB laser services are a cost-effective, outsourced solution for circuit board manufacturers. As an integral manufacturing partner, MLT’s advanced laser material processing enables product technology and a competitive edge.

**Microvia Drilling**
MLT provides microvia laser drilling processes for both copper clad and unclad laminates to IPC high density interconnect standards. Laser vias can be produced to a minimum diameter of 30um.

**HDI Via Configurations:**
- BLIND VIA
- STEP VIA
- STacked VIAs
- THRU VIA

**Laser Routing**
MLT’s PCB laser routing services have a real cutting edge.
- 25um or better tolerances
- Minimal visual discoloration
- Radius-free internal edge profiles
- No mechanical stresses
- No expensive dies and punches

**Applications:**
- Excising or depaneling
- ZIF connectors
- B-stage adhesives
- Coverlay or coverfilm
- Hold-in tabs, scoring
- Thermal management preforms
- Stencils and masks

**Laser Skiving**
MLT’s PCB laser skiving services allow for controlled material removal to a limited depth or targeted layer.

**Applications:**
- Cavity formation
- Floating contacts (fingers)
- Squeeze-out removal
- Dryfilm or polyimide removal
- Circuit formation and isolation
- Buried wirebond pads
- Selective soldermask removal

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PCB Laser Rework
MLT offers a range of precision laser rework and recovery services of non-conforming product to minimize scrap and fulfill timely deliveries.

Applications:
- Solder mask removal
- Pad isolation
- Coverlay / adhesive over SMT pads
- Trace trimming
- Gold plating shorts between SMT pads
- BGA decapsulation
- Squeeze-out removal

Laser Marking, Barcodes and Serialization
Utilizing both ultraviolet and infrared lasers, MLT produces permanent, high resolution, non-contact markings, logos, bar codes, and serialization.

Standards:
Markings are compliant to standards MIL-STD-130M for defense and SEMI M12/M13 for semiconductors.

Laser Service Advantages:
- Same day turns
- Optical alignment
- Production overflow
- ITAR registered
- Up to 10um tolerances
- AS9100C / ISO9001

PCB Materials for Laser Services

### Dielectrics
- FR4 all types
- Isola
- Getek
- Nelco
- Hitachi
- Gore
- Taconic
- Ceramics
- Soldermask
- Rogers
- Duroid
- Teflon
- Glass
- Silicon
- Kapton
- ARLON CLTE

### Reinforcements
- Woven glass (106, 1080, 2213)
- Aramid (Thermount®)
- Ceramic
- Non-woven glass
- PTFE

### Chemistries
- BCB
- Polyester
- PEEK
- PPE
- FEP
- Cyanate ester
- LCP
- Polyimide
- Epoxy
- Acrylics
- Epoxy blends
- BT resins
- BCT resins

Positional and Dimensional Tolerances
- Infrared (CO2): +/-0.002” (50um)
- Ultraviolet (UV): +/-0.001” (25um)