INCORPORA TECHNO GLOBAL TECHNOLOGIES

MSTECH EUROPE · SMT World Wide · SMT Europe · PPE PRODUCT PROCESS EXPERTISE Electronics Reliability · OPTICBONDING

BACKEND LINE

DEPANELING

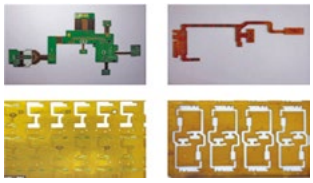
PCB LASER DEPANELING

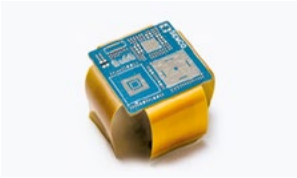
LS-NUN

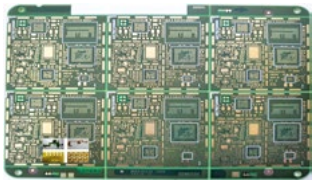
LASER DEPANELING MACHINE

Best cutting quality
Excellent performance

- PCB board routing and cutting use Laser source
- Support hybrid type PCB board (FPCB, Rigid-Flex PCB)
- Minimize particles because of non-contact cutting
- High cutting quality compare on the contact type router (100um --> under 30 um)
- Support the complex shape PCB cutting
- Stress free, Form cut free, Tooling cost free







DEPANELING

PCB LASER DEPANELING

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FEATURES

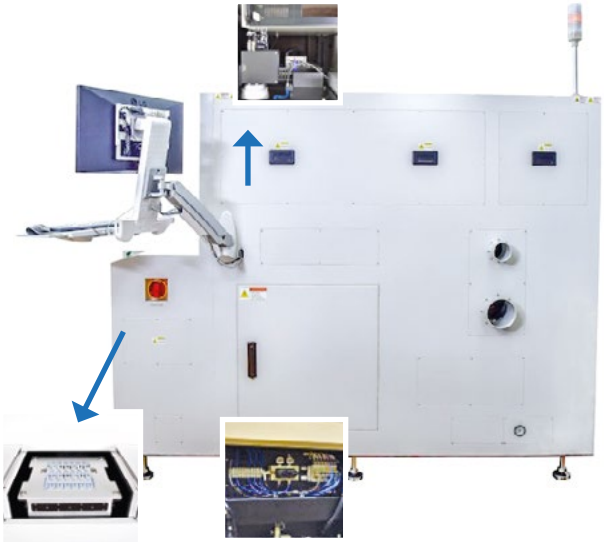
- Use various Laser source as UV, Green, IR, etc.
- Cutting materials: FR4, FPCBs, Kapton, etc.
- Thickness up to 1.2mm in case of FR4 PCB
- Pin Table, Production fixture
- Full-cut process, Support high populated PCB panel
- Best cutting quality (Minimize charring)
- Clean process of particle and fume removal

ADVANTAGES

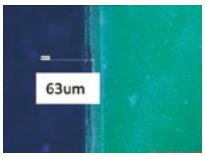
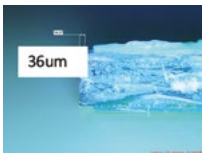
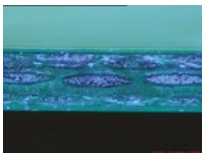
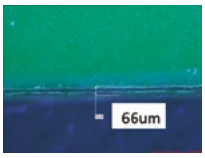
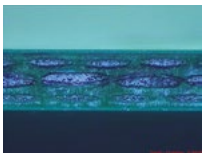
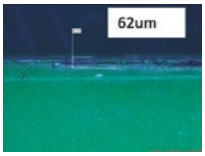
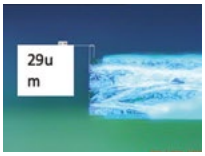
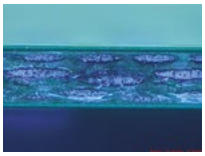
- Easy setup of BDS (Beam Delivery System)
- Automated Laser power management
- Apply the optimized optic system
- Incredible cost performance using 2 Table
- Full graphic interface and easy programming
- Real-time monitoring of key process parameters

OPTIONS

- Hybrid cutting mixed drill bit and Laser
- AL. PCB, Ceramic PCB, etc.
- In-line Laser routing
- Recognizing the finger-print



Test result (Case 1: PCB 0.8t)

Position \ Point	Total HAZ	Cross-section	Section	Bottom
Left				
Bottom				
Top				

BACKEND LINE

DEPANELING

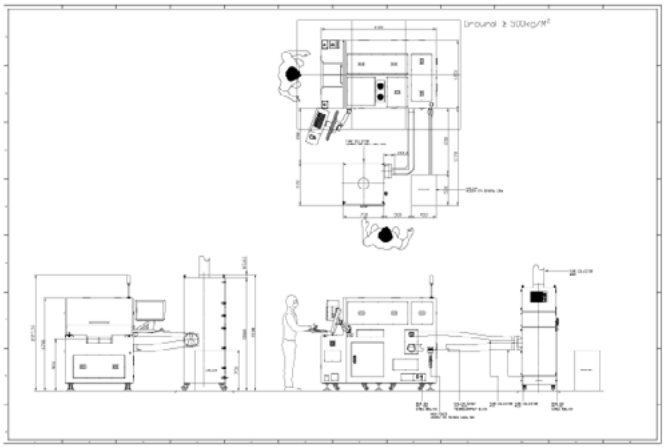
PCB LASER DEPANELING

LS-NUN

SPECIFICATIONS

Category	Item	Specification
Work area / Panel	Work area (X x Y, mm²)	250 x 300
	Panel length (mm)	300
	Panel width (mm)	250
	Panel thickness (mm)	0.1 to 1.6 (TBD)
Scanner	Scan field (mm²)	100 x 100
	Scan speed (mm/s)	2,500 mm/s
	Readable codes	QR Code & Bar Code
Laser	Laser Power (W)	20
	Laser Wavelength (nm)	355
	Diameter of focused laser beam	≤Ø50μm
	Accuracy	≤±5μm
Axis	Axis speed (X)	Max 1,000 mm/s
	Axis speed (Y)	Max 1,000 mm/s
	Axis speed (Z)	Max 18 mm/s
	Axis Repeatability (X)	≤±1μm
	Axis Repeatability (Y)	≤±1μm
	Axis Repeatability (Z)	≤±2μm
Machine	Machine Size (W x H x D, mm)	1250 x 2100 x 1700
	Weight	2,800 Kg
	M/C Air	0.7Mpa, 800L/min, Ø12 Tube
	M/C power supply	AC220V 1PH 50/60Hz 6.6Kw 30A

LAYOUT



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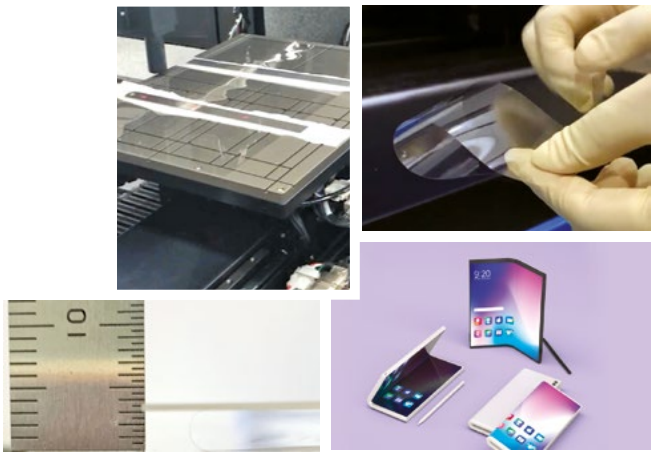
DIFFERENT TYPES OF LASERS ACCORDING TO APPLICATION

LS-UTG: UTG (ULTRA THIN GLASS) CUTTING MACHINE

LASER TYPE: IR LASER 20W

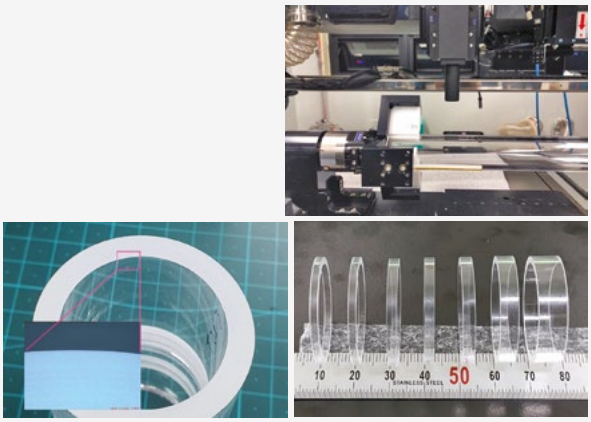
- **Stage:** 300 x 300 mm vacuum chuck
- Stress and crack free process
- **Cutting Thickness:** 30um ~ 100um
- Support Round Cutting
- **Bending test:** 1R, 400K



LS-QTZ: QUARTZ TUBE ROD CUTTING MACHINE

LASER TYPE: IR LASER

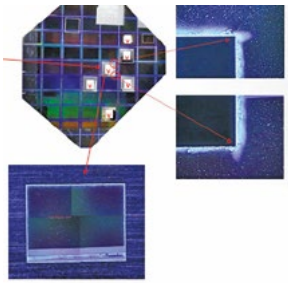
- **Chip size:** <30um
- No need Cleaning, Dry and fire polishing process
- **Cutting Thickness:** ~ 6T
- Stress, crack and particle free process



LS-WFR: WAFER CUTTING MACHINE

LASER TYPE: UV LASER

- **Cutting Thickness:** ~ 800um
- **Cutting width:** <100um
- **Chip size:** <30um
- Stress and crack free process



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