Semi or Fully Automatic Laser Repair System

- Accommodates panel up to 2 x 2 meters
- Flat Panel Display, Large Photomask and Color Filter Repair
- Triple Wavelength (1064, 532, 355 nm) Laser Cutting Systems
- User-Friendly Windows 95/98/NT Software
- Motorized Laser Theta Stage (+45°)
- Auto Loader/Un-loader (Optional)
Specifications

The TNP Model 6400-L offers an exceptional Laser Cutting System that exceeds the requirements for Flat Panel Display, Large Photomask, and Color Filter Repair. Fully automatic remote controlled, the 6400-L comes with single, dual or triple wavelength to achieve optimum results in the removal of Aluminum, Chromium, ITO, and Polyimide on panel before or after assembly.

**Laser System**
The TNP Model 6400-L provides a convenient laser system operation for LCD repair. Designed as a one-step operation, and accompanied with customized software, the 6400-L achieves optimum results in the precise removal of aluminum, chromium ITO, and polyimide. Fully controlled and operated away from the microscope, the 6400-L comprises a complete automated repair station.

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pulse Width</td>
<td>7 nanosecond</td>
</tr>
<tr>
<td>Energy</td>
<td>.6mJ</td>
</tr>
<tr>
<td>Cutting size:</td>
<td></td>
</tr>
<tr>
<td>50X obj.</td>
<td>50 x 50 Micron Max.</td>
</tr>
<tr>
<td>10X Obj.</td>
<td>20 x 20 Micron Max.</td>
</tr>
<tr>
<td>120X Obj.</td>
<td>1.2 x 1.2 Micron Min.</td>
</tr>
<tr>
<td>(Optional)</td>
<td>0.6 x 0.6 Micron Min.</td>
</tr>
<tr>
<td>Cooling</td>
<td>Ambient Air</td>
</tr>
<tr>
<td>Beam Mode</td>
<td>TEM₀₀</td>
</tr>
<tr>
<td>Motorized Laser Theta Stage</td>
<td></td>
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</tbody>
</table>

**Motorized Gantry System**
- **Travel**: Up to 2 x 2 meters
- **Accuracy**: ±20 μm over travel distance
- **Repeatability**: 2μm
- **Resolution**: 1μm
- **Substrate Holder**: Up to 2 x 2 meters

**Computer Control Unit**
- **Software**: Operates under Windows 95/95/NT. "Point-and-Shoot" on-screen navigation.
- **Multimedia Video**: Digitizing graphics card displays live video image on screens. Supports point-and-shoot; drag-and-drop; video image measuring, retrieval, and printing.

**Optional Features**
- Auto Loader/Un-loader
- AF-405 Auto Focus
- MT-405 Motorized Turret
- Motorized Laser Theta Stage

**Input Sources**: Reads data from KLA Acrotech, KLA Tencor, PDI, Orbotech, Hitachi Engineering Research, and Tokyo Cathode Lab. Other manufacturers also available.

**Anti-Vibration Table**
Active air provides vibration isolation for small geometry cutting.

**Size and Weight**
- **Main Unit**: For 1 x 1 meter system: 60" x 66" x 57"
- **Inst. Rack**: Approximately 800 pounds
- **Tot. Weight**: Approximately 1,200 pounds

**Facility Requirements**
- **Power**: 117/220 VAC, 50/60 Hz, Single Phase, 12 Ampere
- **Air**: 80 psi
- **Vacuum**: 18 mHg

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