A New Generation Platform for Trim and Test Thick Film Components Size of 0201 / 01005 and Circuits

- Advanced vision and motion subsystems provide dramatically improved positioning and alignment capability
- Capability to trim from ohms (Ω) to Mega-ohms (MΩ)
- Built-in pattern recognition for auto compensation & precise alignment
- Ability totrim substrates with resistors sizes of 0201 (0.02"x0.01") and 01005 (0.01" x 0.005")
- User friendly GUI software
- Theta adjustment for clamping device for precise alignment
- Intelligent sensors to detect and isolate part defects
- Twin magazines to store additional substrates and reduce machine idle time.

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**TF-2010G SERIES 2 Y70 LASER TRIMMER SPECIFICATIONS**

### Optical System
- **Beam Positioned**: Precision high-speed galvanometer
- **Field Size**: 12 x 75mm
- **Resolution**: ±5um
- **Repeatability**: 2.5µm
- **Spot Size**: 11-25µm (Standard: 532nm)
- **Focus Len**: 102mm flat telecentric type

### Laser System
- **Laser Type**: Diode pumped Q-switched Nd: YAG laser
- **Output Power**: 3W (Average @ 7.5KHz)
- **Wavelength**: Standard 532nm
- **Mode**: TEM00
- **Frequency Range**: 1-100KHz
- **Pulse Width**: 70ns (nominal) @ 1KHz
- **Power Measurement**: Thermal pickup

### X/Y Part Positioning
- **Type**: Dual carriage mounted on brushless DC servo motor stages
- **X Axis**: Driven by high speed linear motor (carriages)
- **XY Resolution**: 1um
- **Travel Speed**: 600 mm/s
- **Prober**: High speed linear motor with pneumatic counter balance
- **Theta Control**: Motorized theta control
- **Alignment**: Pattern recognition based alignment
- **Part Transfer**: Pneumatically controlled pick and place arms
- **Part Load/Unload**: Dual set of magazines with elevators

### Switching Matrix
- **Pins per Card**: 16
- **Lines per Pin**: 3 (Force, Sense or Guard)
- **Cards per System**: 12 pcs
- **Switch Type**: Dry Reed Relay
- **Contact Life**: 1 Billion Cycles
- **Insulation**: > 10 GΩ
- **Switching Time**: 200 µsec

### Physical Characteristics
- **Dimensions**: 1820 mm x 1070 mm x 2050 mm

### Utilities Requirements
- **Power**: 220 V AC, single phase, 10A (50/60Hz)
- **Air**: 80~100 psig / flow rate 10 cfm
- **Vacuum**: 100 cmH2O factory vacuum for debris removal and substrates retention

### Controller
- **CPU**: Intel Core 2 duo processor for main application
- **Pentium processor for trimmer application

### Special Features
- Wireless probe card with very low contact resistance connectors and shielded cables for high measurement stability
- Advance sensors to detect part breakage along two edges
- Rotary control with two sets of magazines to reduce the machine idle time
- Improved pick-and-place design for efficient pick up and placing of substrates

### Software
- LTS2010 software with an easy-to-use interface running in Windows XP