The **TF-3050 Series 3 LEP60/C** provides high accuracy performance to overcome the new challenges of smaller geometries of chip resistor trimming. Proprietary designs achieve the high accuracy mechanical positioning and ultra-stable laser beam control demanded by industry. **TF-3050 S3** utilizes vision registration theta rotation within a Windows XP operating system. These advance features are integrated with established substrate handling and automation systems.

### TF-3050 SERIES 3 LDP15TQ THICK FILM CHIP TRIMMER

**Optical System**
- **Beam Positioned**: Precision high-speed galvanometer
- **Field Size**: 12 x 90mm
- **Resolution**: 1.5μm
- **Repeatability**: 2.5 μm
- **Spot Size**: 18 - 40 μm (standard 1064nm)
- **Focus Len**: 125 mm flat telecentric type

**Laser System**
- **Laser Type**: Diode pumped Q-switched
- **Output Power**: 6W (Q-Switched Avg. Power @ 10 KHz)
- **Wavelength**: Standard 1064nm
- **Pulse Width, nominal**: 60 μsec
- **Power Measurement**: Thermal pickup

**Step & Repeat**
- **Type**: DC Brushless Linear Motor
- **Drive Type**: Linear Drive
- **Mechanism per System**: Single
- **Wafer Clamping**: Center or Side clamping
- **Travel Speed**: 1500 mm/sec
- **Acceleration**: 1.2 G
- **Resolution**: 1 μm
- **Index Time (1.5mm)**: 30 msec

**Handler**
- **Single stacked elevator**: Standard
- **Drive Type**: Stepper Drive
- **Pick & Place**: Stepper Motor
- **Transfer Cycle**: 1-2 sec
- **Cartridge Capacity**: 360pcs (0402)
- **Elevator**: Stepper Motor

**Measurement System**
- **Dual Mode**: Force Current & Force Voltage
- **Range**: 0.12 ~ 30 MG
- **Accuracy**: 0.02% Midrange
- **Repeatability**: 0.01% Midrange
- **Resolution**: 0.0005%
- **Measurement Time**: 50 μsec
- **Calibration Standards**: ± 0.01%
- **Guard Drive Current**: 100 mA
- **Guard Offset**: 1 mV

**Switching Matrix**
- **Pins per Card**: 16
- **Lines per Pin**: 3 (Force, Sense or Guard)
- **Cards per System (Standard)**: 6 pcs std, 12 pcs maximum
- **Switch Type**: Dry Reed Relay
- **Contact Life**: 1 Billion Cycles
- **Insulation**: > 10 GΩ
- **Switching Time**: 200 μsec

**Controller**
- **Intel Core 2 duo processor for main application**
- **Pentium processor for trim engine**

**Software**
- **WinLts 3 Windows XP Application Software**

**Special Features**
- **Dimensions**: 1310mm x 1028 mm x 1800mm
- **Weight**: 900kg

**Utilities Requirements**
- **Power**: 220 VAC, single phase, 10A (50/60Hz)
- **Air**: 80-100 psig / flow rate 10 cfm
- **Vacuum**: 100 CFM factory vacuum for debris removal and substrate retention