

Smarter, Faster, Flawless

TrimCore Pro

Thin-film Laser Trimmer 2nd

- Wide Measurement Range: 100mΩ~1GΩ
- High Measurement Precision: ±0.01%
- High Trimming Speed: ±0.1μm
- Plentiful Channels Available: 4T channels can support up to 192 channels

Equipped With Self-developed Solid-state Laser + Measurement System
Full Dimensional Coverage of Trimming and Blocking Monitoring, Stable and Efficient Dual Online!



MECHANICAL

Items	HiPA Specification	Optional
Machine Model	LTS-TNF-A6	/
Machine Dimension	1050mm × 1400mm × 1750mm (Excluding tri-color alarm light)	/
Machine Weight	1.2T	/
Loading and Unloading Methods	Module + Cylinder	/
X/Y Axis Working Distance	X: 350mm Y:200mm	/
X/Y Axis Repeat Position Accuracy	±2μm	/
Magazine	HiPA Detachable Magazine	/
Substrate Size	5060 / 6070 / 8084	Customized
Stage(Fixture) Type	Central positioning+θ axis	/
Dust Extraction Type	Dust Collection Type	/
Probe Cleaning Method	HiPA Standard Brush	/
Power Meter	1~20W(Beside the stage)	/
Real-time laser power monitoring, power range	1~30W	/
BP Camera	Electric Adjustment	/
PR Camera	Recognizing Mark Point, or Resistor	/
AOI inspection	Inspecting trim kerf, Independent XYZ platform	/
Height sensor, resolution	1μm	/
Noise	< 85dB	/

MEASUREMENT

Items	HiPA Specification	
Measure Range	100mΩ ~ 1GΩ	Support external standard meters or instruments, such as resistance meters, voltmeters, etc.
Probe Card	Support 4T/2T, Downward of probe pin(Standard GT7)	
Measurement Resolution	0.0015%	
Channels Number	16 pcs of relay card, 384 channels(2T) or 192 channels (4T)	
Measurement Stability	Single standard resistor: 1R: < 0.1%; 1M: < 0.05%; 500M: < 0.25% A row of standard resistors: 1R: < 0.1%; 1M: < 0.1%; 500M: < 0.5%	
MSA	< 10%	

SYSTEM

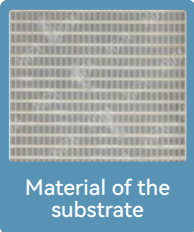
Items	HiPA Specification	Optional
Operating System	Win10 professional edition(Chinese/English)	Win11 professional edition(Chinese/English)
Voltage	AC 220V 50Hz/60Hz	The voltage varies around the world, HiPA will provide a voltage regulator or UPS
Pressure	0.4Mpa ~ 0.6Mpa	/
Dust Extraction Nozzle	Φ50mm	Customized according to the size of the customer's requirement
Working Temperature Range	23°C±3°C	/
Working Humidity Range	50%±10%	

PROCESS & VISION

Items	HiPA Specification	Optional
Product Specification	Chip Resistor: 01005~2512	/
Trim Range	100mΩ~1GΩ	
Trim Accuracy	±0.05%, ±0.1%, ±1%	
Laser Power	IR > 30W; GR > 2W; UV≥0.8W	
Scanning Range	IR: 12mm × 75mm GR: 12mm × 60mm UV: 12mm × 60mm	IR: 12mm × 100mm
Cutting Speed	1mm/s ~ 2000mm/s	/
Pitch Accuracy	≤±1.5μm	
Kerf Width	IR: 17μm ~ 25μm GR: 8μm ~ 12μm UV: 6μm ~ 10μm	IR: 30μm ~ 50μm
Kerf Accuracy	≤±1μm	/
Cut Numbers	1~300	
Cut Type	Single Cut, L-shaped Cut, Double Cut, IL Cut, Multi Cut (snake cut), U-shaped Cut, Stacked Cut, J-shaped Cut	
PR Vision Range	7mm × 9mm	3mm × 4mm
PR Resolution	8μm	4μm
BP Vision Range	4.8mm × 6.4mm	5.5mm × 7.5mm
BP Resolution	4μm	4.6μm
AOI Vision Range	7mm × 5mm	14mm × 10mm
AOI Resolution	1.25μm	2.5μm
AOI Inspecting Type	Upper margin, Botton margin, Left margin, Right margin Trim kerf Length, Kerf Width, Pitch, Cuts edge bending, The leaky cut, Cuts inside resistor, Holes in resistor	/

- ◆ The self-developed software operating system can be customized for scanning code and MES system to meet customized requirements
- ◆ Supports a variety of optional modules (AOI inspection, BP electric adjustment, Automatic resistor positioning)
- ◆ Supports multiple intelligent monitoring (Real-time laser power monitoring, Probe pressure monitoring, Measurement supply-voltage monitoring)
- ◆ Support online calibration and inspection of resistance value
- ◆ The linear motor uses high precision grating scale with resolution 0.1μm
- ◆ Supports a wide range of resistor specifications (01005~2512) and is compatible with a wide range of substrate sizes (5060,6070,8084)
- ◆ There are many types of trimming algorithms (single cut, L cut, double cut, IL cut, multi cut (snake cut), U-shaped cut, folding cut, J-shaped cut)
- ◆ Supports network trimming and string trimming (Edge Sense)

Using IR/GR/UV laser in thin-film laser trimmer 2nd which can be used for laser processing on chip resistor (Substrate size is 5060).



High Precision & Accuracy

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