Neon

Inspection & Metrology - up to 5% Higher Inspection Yield


Automotive


Mobility


IoT/IoV & Optoelectronics


Computing & Network


Industrial & Medical


Consumer

Productivity

- Up to 50K UPH for devices ≤1 x 1 mm (45K ≤2 x 2 mm) with HR Visible or Infrared Top, Bottom, and Sidewall Inspection
- Run WLCSP and QFN devices and processes on the same system
- Unique force limitation control for thin and fragile handling at high speed
- Wafer management and Mapfile processing for enhanced traceability
- Cassette loading / unloading designed for Industry 4.0

Flexibility

- Wide Film Frame Carrier applicable device range 0.2 x 0.4 mm to 12 x 12 mm. Down 70 µm to ultra-thin die picking technology
- Available in 16 or 32 pickup arms for process optimization
- Up to 23 available turret positions to accommodate required process
- Complete integrated solution for back-end finishing process
  - Flip and Non-Flip process capable
  - Detaping to Tape process capable
  - Multi-Taping output capable
  - Full 6 Side Inspection

- **Lowest overkill rate for microscale defect inspection**
- **Infrared inspection for improved production yield**
- **3D Flex® for True Ball/Bump co-planarity**
- **Down to 70 µm ultra-thin die picking technology**
- **Flip and non-flip capable on same process**
- **Designed for Industry 4.0**

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Specifications

Platform

Wafer Input Media
- Film frame carrier: 4" to 12"
- Round and rectangular / plastic and metal frame
- Wafer cassette: 25 x 8", 13 x 12"

Device Range
- WLCSP & QFN: 0.2 x 0.4 mm to 12 x 12 mm / thickness ≥0.070 mm

Index Time
- Down to 80 ms, depending on device and process

Performance Characteristics
- ≤1 x 1 mm : up to 50,000 UPH including inspection
- ≤2 x 2 mm : up to 45,000 UPH including inspection
- MTBA: typ. >2 h
- MTBF: typ. >168 h
- Conversion time: typ. <45 min

Interface
- TTL parallel interface for Tester and Laser
- RS232, GPIB (optional)
- Network: Ethernet capability
- Wafer Mapping: SECS GEM
- (SEMI E4, 5, 30, 37 SEMIG84)

ESD
- According to ANSI / ESD SP10.1
- ESD Class 0 (optional)

Facility Requirements
- 1 x 230 VAC ± 10%, 50 / 60 Hz
- Avg. 2.9 kW with vacuum pump and hot air blower
- Air Pressure range: 5-10 bar ± 0.5 bar
- Air consumption: 70 l/min maximum
- Vacuum (input) 500-700 mbars abs
- Consumption: approx. 400 l/min
- Clean room level: 10k class

Dimensions
- Overall dimension for Std Die Sort: 2.1 x 1.6 x 2.0 m
- Overall dimension with Reel input & ARC: 2.7 x 1.7 x 2.0 m
- Floor space requirement: 3.0 x 2.0 x 2.0 m
- Weight: net typ. 1400 kg / gross typ. 1600 kg

Specifications subject to change without notice.
For detailed performance specifications, please contact Cohu.

Standards
- CE
- SEMI S2/S8 assessment
- 2006/42/EC Machinery
- 2014/30/EU Electromagnetic compatibility (EMC)

Process Capabilities

Input
- Wafer Frame, Reel input

Output
- Tape & Reel

Processes
- Device Flip
- X-Y-T touchless precisor
- 6 Sides Vision inspection
- Infrared inspection
- Dual Tape & Reel with flip-flop
- Automatic rejection & replacement in-tape
- Input & Output Wafer map with full device traceability

Options
- Non-Flip
- Reel input
- Auto Reel Changer
- O/S Test
- Laser Marking

NV-Core Inspection System
- Full wafer map traceability & skeleton check with ViewMap®
- 2D/3D ball/bump height & co-planarity with 3D Flex®
- Full 6 Sides inspection with 10 µm defect detectability
- WLCSP Sidewall inspection
  - 5 µm crack detectability with advanced inspection algorithm and optics
  - Down to 1 µm crack detectability with Infrared inspection
- Top, Bottom, Side & In-Tape Infrared inspection capable
- Dimensional, Mark, Surface, 5S, Color Vision
- 1D/2DMC code reader
- Pre-Tape, In-Tape, Post Sealing inspection

Contactor
- Cohu offers contact sockets for all package versions and applications

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