

Neon

Market Leading Inspection Yield with Uncompromised Throughput



NV-Core
INSPECTION SYSTEM



Automotive



Mobility



IoT/IoV & Optoelectronics



Computing & Network



Industrial & Medical



Consumer

Productivity

- Up to 40,000 UPH with 6S inspection
- Up to 38,000 UPH with HR / IR sidewall
- 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
- 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 6S 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 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

- WLCSP: up to 38,000 UPH including inspection
- QFN: up to 40,000 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 $\pm 10\%$, 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 μ m defect detectability
- WLCSP Sidewall inspection
 - 5 μ m crack detectability with advanced inspection algorithm and optics
 - Down to 1 μ m 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

Contactors

- Cohu offers contact sockets for all package versions and applications