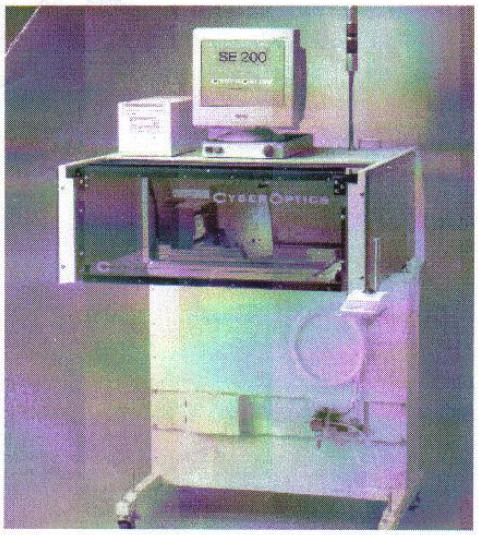
SE 200™



Sampled Solder Paste Inspection

The Speed You Need

SE 200 provides an affordable alternative to expensive board-scanning systems, offering the same benefits – repeatability and continuous process monitoring – at a fraction of the cost.

SE 200 calculates true volume based on 3D measurements, producing more precise, repeatable results than 2D systems.

Typically the SE 200 performs 100% 3D inspection of a 13 x 13, 50 mil pitch BGA site in 8 seconds. 100% inspection of a 160-lead, 20 mil pitch QFP site takes approximately 12 seconds.

Monitors Fine Pitch & BGA

SE 200 is a practical method of measuring solder paste on fine-pitch and BGA sites where inspection is crucial. In many cases the system can inspect all critical sites on all boards with no reduction in throughput.

Cost-Effective Solder Paste Inspection

SE 200 unique over-the-line design fits into almost any SMT assembly line, existing or new. Installed immediately following the screen printer, SE 200 inspects wet solder paste and notifies the operator of any printing irregularities. By identifying potential problems before the PCB is populated, adjustments can be made before yield is affected.

SE 200 adds value at every step in the SMT assembly process, to maximize yield, minimize re-work and reduce scrap:

- When evaluating a new process or benchmarking an existing one, SE 200 collects data for establishing norms and ranges.
- When setting up the screen printer, SE 200 data aids the operator in determining the optimal combination of printer settings.
- During production, SE 200 continuously inspects user-specified sites on each board; if paste starts trending outside the pre-set ranges, the operator is notified.
- Measurement data in 32-bit ODBC (Open Database Connectivity) format can be saved to the built-in disk or Zip drive for transferring to a PC or network for further analysis.

System Features

- Windows NT® operating system and Intel Pentium® III processor
- Collects accurate, repeatable data on paste height, area and volume
- Configures to suit almost any line, regardless of conveyor height, travel direction and orientation
- Uses standard SMEMA communications
- Accepts barcode reader input

System Includes

- Scanning sensor head mounted on automated, programmable robot
- High-performance Ethernet card, network port and two serial ports
- Iomega® Zip™ drive, disk drive and CD-ROM drive
- 9 gigabyte Ultra-Wide SCSI hard drive
- Programmable warning light tower
- 15-inch color monitor
- Industrial-grade trackball
- Conveyor alignment panel

Options

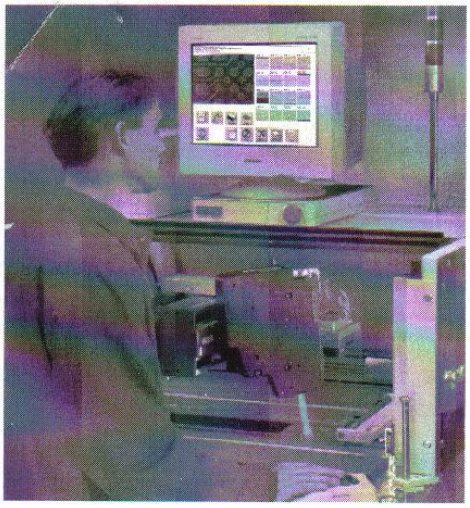
- Applied Stats™ SPC software
- NIST-traceable calibration standard
- SECs/GEM

Support and Training

To ensure the proper installation and maintenance of your CyberOptics system, we have a dedicated team of professionals available to help you with your support and training needs. Our factory-trained applications engineers specialize in CyberOptics SMT systems and software.

CYBEROPTICS®

SE 200



System Specifications

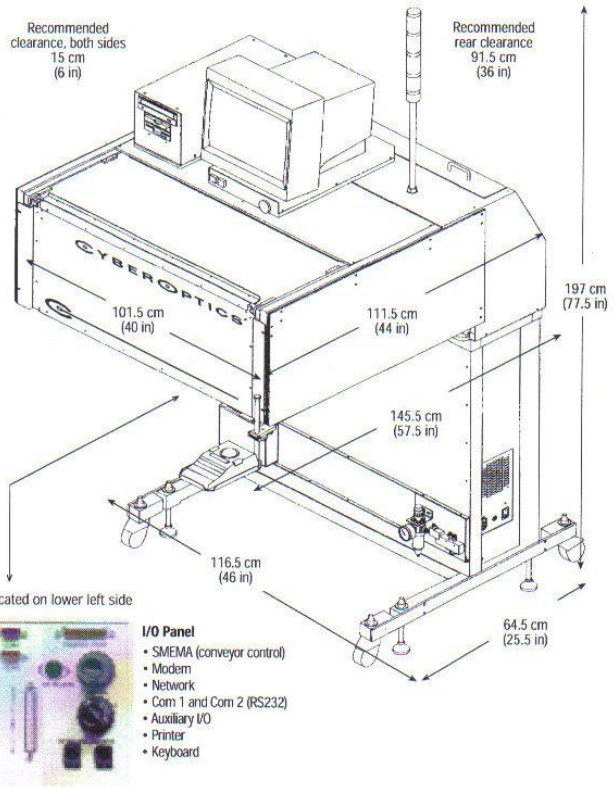
Height repeatability and accuracy	
Solder paste repeatability	2 microns (0.08 mil) @ 1 sigma
Height repeatability on solder paste applies to all conventional PCB pad types including chip scale packages of 20 mil or greater diameter. For performance on smaller or odd-shaped targets contact the factory.	
NIST-traceable standard	
Repeatability	1 micron (0.04 mil) @ 1 sigma
Accuracy	5 microns (0.20 mil)
Maximum board size (configuration dependent)	460x560 mm (18x22 in)
Maximum Field of View (FOV)	90x6.7 mm (350x265 mils)
Depth of Field	±2 mm (79 mils)
Typical inspection speed (per FOV)	0.75 seconds
System controller	Pentium® III processor
Power requirements	100-120/220-240 volts, 50/60 Hz, 6/3 amps
Compressed air (for board stopper)	580-825 kPa (80-120 psi)
Dimensions (w x l x h)	116.5x145.5x197 cm (46x575x775 in)
Weight (uncrated)	225 kg (500 lbs)
(crated)	423 kg (930 lbs)

3D Profiling and True Volume Measurement

Most experts agree that volume is the best predictor of solder paste quality and precise volume measurement is the key to printing process control.

But many inspection systems only estimate volume based on a single mid-pad height measurement. This method can overlook flaws, particularly dog ears and stencil blockages which tend to occur at the end of the pad. Results are often not repeatable.

SE 200 reports true volume measurements calculated from thousands of data points captured from a 3D topographical map of the entire pad to provide repeatable, precise volume measurements.



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