

# SMD

I Systems, Inc.

# 3-D



The SMD-3D system provides accurate and repeatable 3D measurements of Solder Paste, BGA Devices and other surfaces critical to SMT Manufacturing. The SMD-3D system is automatic and provides the operator with both numeric and graphical data to quickly analyze measured features.

The SMD-3D System gives you all the tools and data collection capability necessary to make meaningful process improvements through SPC analysis.

## Automated 3D Measurement & Inspection System

### Features:

- ◆ Automatic Measurements
- ◆ Accurate & Repeatable
- ◆ Easy to Use
- ◆ Cost Effective
- ◆ Multiple Stripe Laser for True 3D Measuring
- ◆ Measures: Length, Width, Height and Volume
- ◆ Image Capture and Storage
- ◆ Report Printout Capability
- ◆ Cross Section & 3D Graphical Profiles
- ◆ X, Y, Rotary Work Table Eliminates Handling

### Optional:

- ◆ Real-Time SPC Data Collection and Charting Software.
- ◆ 2D Automated Measuring Software Perfect for Measuring Stencil Apertures Automatically.
- ◆ NIST-Traceable Calibration Standard.



## Specifications:

The SMD-3D system features laser and CCD imaging technology coupled together to provide accurate three dimensional measurements.

The system use a 6.5:1 zoom lens which makes it easy to select a magnification that best fits the feature size to be measured. The lens is calibrated over the entire zoom range. When the magnification changes the appropriate calibration is loaded and the system is ready to go.

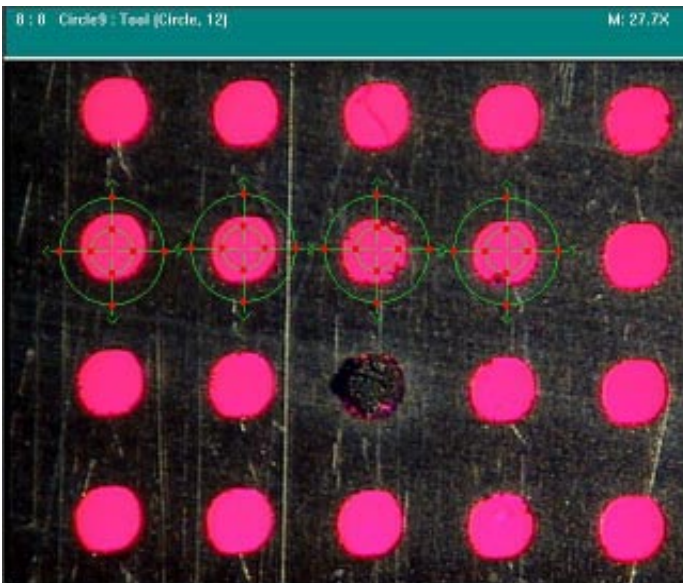
The laser generates a pattern of 5 lines with a fan angle that provides for one inch of laser light. To make a measurement the operator simply draws a box around the pad to be measured and the software does the rest. The resulting measurement is displayed numerically as well as graphically.

The X, Y, Rotary Work Table makes it easy to position the work piece under the optics. The table has 12.0 inches of travel in each direction and has locking and drag capability on each axis.

Category	Specifications
Optics	6.5:1 Zoom Lens 9 Pre-Calibrated Zoom Positions
Laser	Multiple Stripe (5 Lines)
Camera	1/3" High Resolution Color CCD.
Field of View Size	0.039" - 0.250"
Measurement Accuracy	0.1 mil @ Maximum Magnification
Image Capture	Save Live Images as Bitmaps
Measuring Method	Automatic or Manual.
Working Distance	Approx. 4.0" from Specimen
Stage Travel	12.0"
Throat Depth	14.5"
Data Storage	Data Stored by Feature Size, Part Number, Time, Date & Operator
CPU	Pentium or Equivalent
Hard Disk Storage	4.3 GB (minimum)
Video Display	15" Monitor with SVGA Computer Graphics
Lighting	Variable Intensity Halogen
Power	120 VAC, 2.5 Amps

Measurement data is collected and stored in an easy to access format. In addition, SPC software can be added to the system for real-time control charting of key process variables. The software is designed with the operator in mind . The Interface to the inspection machine is seamless.

# KEEP AN I ON YOUR PROCESS



## AVM 2D Measurement Software for Stencil Apertures

I Systems offers a dimensional measurement software package that makes it easy to measure stencil apertures as well as any other two dimensional feature within the field of view. The software utilizes sophisticated gray scale edge detection algorithms to make accurate and repeatable measurements.

A backlight can be embedded in the base of the SMD-3D system. Transmissive lighting provides excellent contrast for applications such as stencil apertures. Blocked stencil apertures are easily detected.

The AVM software package combined with the 3D measuring software makes the SMD-3D system a universal tool to help control the screen printing process.