



AVT PI-1000T Trim Inspection Station

Comprehensive, Fast and Flexible Solution

PI-1000T Trim Inspection Station, one of AVT *Package Vision Products*.

Benefits

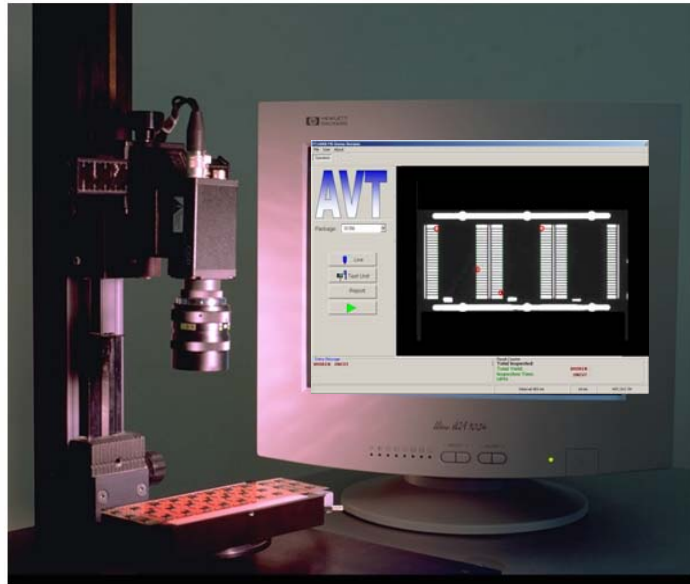
The PI-1000T is a non-contact, high speed, machine vision inspection system, for monitoring the IC, lead and dambar. The system is built on *standard components* for openness, flexibility of use, ease of integration and trouble free maintenance.

The PI-1000T is based on Microsoft Windows and has the familiar user-friendly menus and screens for ease of use. Pre stored package information minimises operator set-up time.

The application's high speed and ability to detect even very subtle defects, like slivers, (which most other applications cannot detect), improves your manufacturing yield.

The PI-1000T's flexibility ensures ease of integration to your current environment. It supports both back light and front light configurations; (this is especially useful when space is a constraint). Further, it is capable of interfacing with external devices easily through its input/output capability.

Perhaps, the biggest benefit to you would be increasing your manufacturing yield through process control using the PI-1000T.



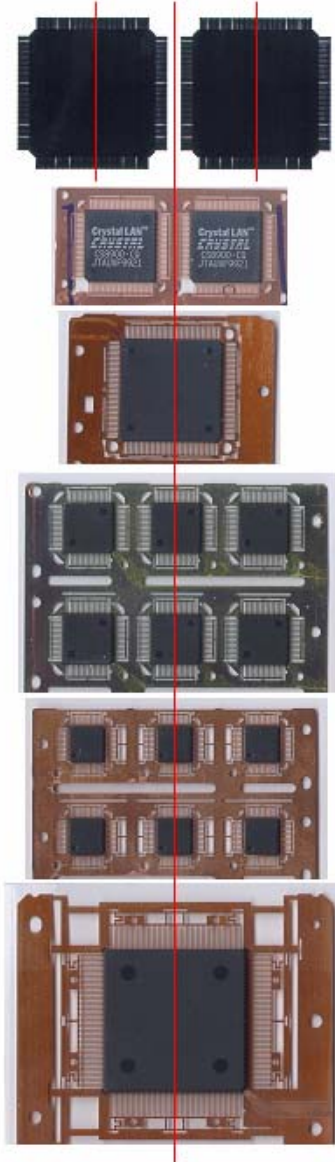
Applications Supported

1. Integration into *Trim & Form Machine* to monitor
 - dambar cut quality by detecting slivers and burrs
 - dambar cut process
2. Used in a stand alone leadframe inspection system

Application Features

2. Able to check in a single pass
 - Dambar cut/uncut
 - Intrusion/Protrusion dambar cut
 - Burr
 - Lead missing/broken
 - Lead bent
 - Sliver
 - Mold flash
 - Body Size
 - Mold incomplete fill
3. Able to inspect
 - singulated IC or IC in a leadframe
 - multiple IC in a matrix leadframe
 - single IC after leadframe singulation with +/- 5 degrees of rotation
 - odd shape, non symmetrical ICs
 - beyond dambar area such as lead
4. Frontlight or Backlight configuration
5. Able to specify different inspection tolerance for different segments within the same ROI (*Region of Interest*)
6. User controllable parameters for individual defects, fully customisable for each user
7. High inspection speed (typical data for TQFP 100L leadframe) of up to
 - 200 inspections per minute using a standard resolution camera
 - 180 inspections per minute using a high resolution camera
8. Up to 50 set-ups can be saved as Package Types
9. *Consecutive Failure Feature* – User settable to exit or alert on settable consecutive error

1. Drivers for X-Y sliders for stepping or continuous inspection



Defect Specifications

Inspection defect coverage

Defects	Sensitivity (typical data) ¹
<u>Dambar</u>	
Cut/uncut	Min 3 pixels
Intrusion/Protrusion	Min 3 x 3 pixels
Burr ²	Min 3 x 3 pixels
<u>Lead Area</u>	
Missing/Broken	Min 3 pixels
Lead Bent	Min 3 pixels (in X or Y)
Sliver ²	Min 3 x 3 pixels
<u>IC Body</u>	
Mold Flash ²	Min 3 pixels
Body size ³	Min 5 pixels
Incomplete fill ³	Min 10 x 10 pixels

Note:

1. Typical data is affected by type of lighting schemes used and other physical inspection conditions
2. Burr, Sliver, and Mold Flash defects can only be detected if they protrude from dambar/leads
3. Body size and incomplete fill coverage applies when entire IC body is inspected

For more information please contact us at

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