

S3016

Solder Joint Inspection Underneath the Printed Circuit Board

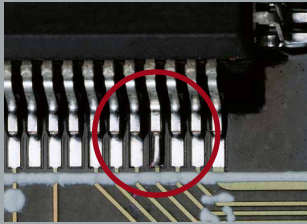


AOI

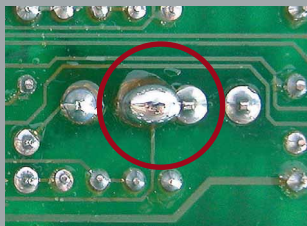
Flip Station for Assemblies can be Eliminated

Intelligent Inspection of Solder Joints, THT and SMD Components

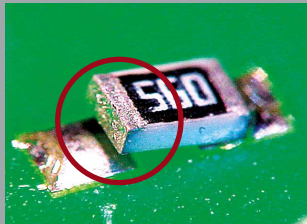
Inspection scope:



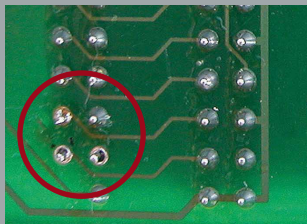
QFP with lifted lead



Solder bridge



Chip Tombstoning



No solder

Inspection on the bottom side

Robust inspection strategies using the Viscom standard library for solder joint inspection

Inspection in PCB carrier is possible

Compatible with Viscom solutions for the electronics industry

Minimal conversion effort between inspection modes

Customized models for special applications available

Quick program creation with EasyPro

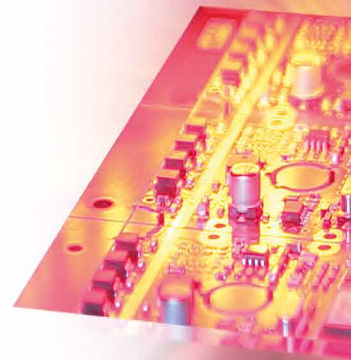
Auxiliary modules: verification, off-line programming and SPC process evaluation

Inspection at production line rates

Worldwide competent service on site, by hotline or remote maintenance

Viscom Support Website

Today, the industry standard quality assurance in electronics production is automatic optical inspection of SMD components on printed circuit boards. PCBs are also assembled with THT devices such as connectors, capacitors and circuit breakers, and even populated with selectively-soldered special components. Now such assemblies can be optically inspected completely from below – without the time-consuming need to rotate the assembly. Production defects – insufficient solder, missing leads, solder bridges and others – are detected reliably and cost-effectively.



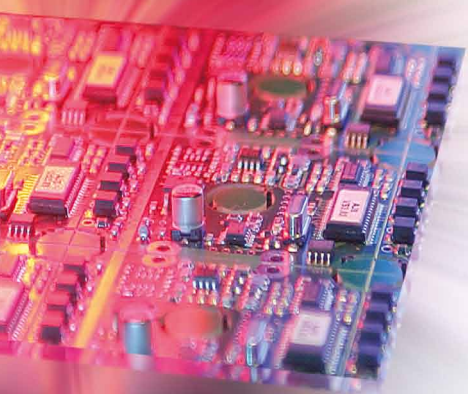
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S3016, the system for flexible and robust inspection of printed circuit boards with bottom side components, especially after wave or selective soldering

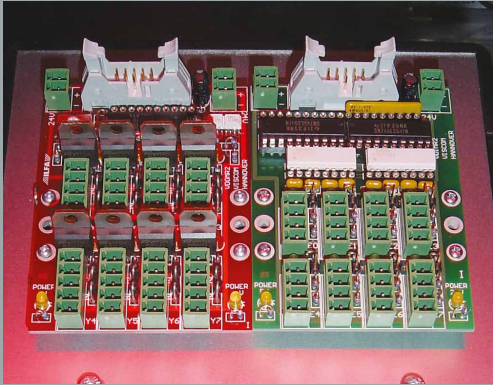
The S3016 now makes it possible to inspect selective solder joints, THT and SMD components on **PCBs populated on both sides**. This **robust, cost-effective inspection concept** reliably detects open solder joints, solder bridges, missing leads or other defects, **from the bottom side**. Significant cost savings result, because **expensive flip stations to rotate the board are eliminated**. Depending on inspection and production concept, only the THT devices can be inspected from below, or complete reflow-soldered PCBs can be inspected with the addition of angle view cameras.

The S3016 utilizes **high-performance 8M camera technology** to guarantee the maximum inspection depth and high inspection speed, at extremely fast line rates. An X/Y positioning unit guides the camera module beneath the PCB and uploads the required images from specified locations, **switching illumination flexibly** to suit the individual inspection task. Images are evaluated while the camera moves to its next position, to further reduce cycle time.

Image evaluations are based on proven Viscom inspection algorithms for solder joint inspection, and the **user interface EasyPro brings convenient, robust solder joint quality control**. Of course this system can be seamlessly combined with the optional **Viscom verification station HARAN**, and statistical process control (SPC). **For special applications** above and beyond selective solder joint inspection of THT components, or for special mechanical environments, Viscom manufactures made-to-measure customized solutions.



VVP (ViscomVisionPilot)



Printed circuit board with selectively-soldered components

Technical Specifications

S3016

Application

Selective and special solder joints, standard solder joint according to IPC

Camera technology

Orthogonal camera module 8M (red LEDs)

Field of view	576 x 43.5 mm
Resolution	23.5 µm (standard), 11.75 µm (high) switchable with OnDemandHR
Number of megapixel cameras	4

Software

User interface	Viscom EasyPro/EasyAuto/VVP
Verification station	Viscom S6002 HARAN (optional)
SPC	Viscom SPC (statistical process control) , open interface (optional)
Remote diagnosis	Viscom SRC (optional)
Programming station	Viscom PST34 (optional)

System computer

Operating system	Windows®
Processor	Intel® Core™ i7

PCB handling

PCB dimension	430 x 406 mm (16.9" x 15.9") (L x W) (optional) (other sizes upon request)
Transport height	850 bis 960 mm ± 20mm
Width adjustment	Automatically with set-up
Handling unit	Synchro-linear motors
PCB contact area	3 mm (0.12")
Upper transport clearance	50 mm (1.97") (optional) (other heights upon request)
Lower transport clearance	29 mm (1.14")

Inspection speed

Typical connector with 100 pins in 15 seconds including handling

Other system data

Interfaces	SMEMA, SV70, customer specific
Power requirements	3 x 400 V 50/60 Hz, 110 V/60 Hz (optional), usage < 3 kW
System dimensions	994 x 1850 x 1720 mm (39.1" x 72.8" x 67.7") (W x D x H) (without monitor bracket)
Weight	Approx. 1100 kg (2425 lbs)

