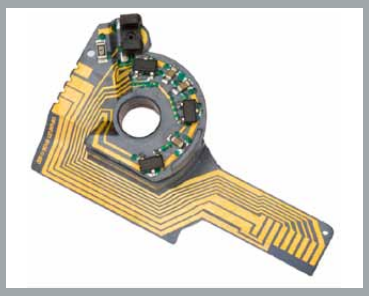
VISCOM
vision technology

S6056 MID



MID electronic assembly (Source: Continental, Harting Mitronics)

Multi-panel carrier for MID (Source: Lehrstuhl FAPS)

Reliable quality assurance of MID products

This high-end inspection system is based on the proven Viscom platform S6056 and has been designed especially for inspection of three-dimensional electronic assemblies. The AOI system has high performance 8M color camera technology with orthogonal and angled views. The resolution is adapted to the respective inspection task and enables reliable inspection of the smallest structures.

The inspection takes place in two steps: after metallization, the 3-D MID objects are inspected for foreign material and correctness of the circuit tracks, e.g. for interruptions, completeness, short circuits and neck downs. Geometric measurements and color verification of the module are also carried out. In the second step, after completion of the entire MID product the component placement is checked for such features as presence, polarity, correct variant and position. The soldered connections are inspected for tombstones, short circuits and characteristics on the circuit track. Furthermore, the automatic inspection of solder mask, dispensing points or even a wire-bond inspection can be conducted. Naturally an inspection can also take place before metallization, directly after the laser direct structuring (LDS).

The handling is individually tuned to the respective product and inspection task. Normally transport is in workpiece carriers. In addition to a single-track system, double-track configuration for optimized throughput are also offered. The high precision XY linear motor axis system ensures accurate positioning. In addition, the system is equipped with a Z-axis to facilitate inspection on the different 3-D MID levels.

AOI

Technical Specifications

	S6056 MID ST1	S6056 MID DS1W
Transport system	Single track	Dual track
Inspection concept	Single inspection	Single inspection

Application

Solder joint, assembly, solder paste, metallization, laser direct structuring (LDS)

Camera technology

Orthogonal camera module 8M (white LEDs)

Field of view	57.6 x 43.5 mm (2.3" x 1.7")
Resolution	23.5 µm (standard), 11.75 µm (high) switchable
Number of mega pixel cameras	4
Z-axis	Lift 40 mm (1.6")

Angled view camera module 8M (white LEDs)

Resolution	16.1 µm (standard), 8.05 µm (high) switchable
Number of mega pixel cameras	4, 8 (optional)
Z-axis	Lift 40 mm (1.6")

Software

User interface	Viscom EasyPro/EasyAuto/ViscomVisionPilot (VVP)
Verification station	Viscom HARAN (optional)
SPC	Viscom SPC (statistical process control), open interface (optional)
Remote diagnosis	Viscom SRC (optional)
Off-line programming	Viscom PST34 (external Programming Station) (optional)

System computer

Operating system	Windows®
Processor	Intel® Core™ i7

PCB handling

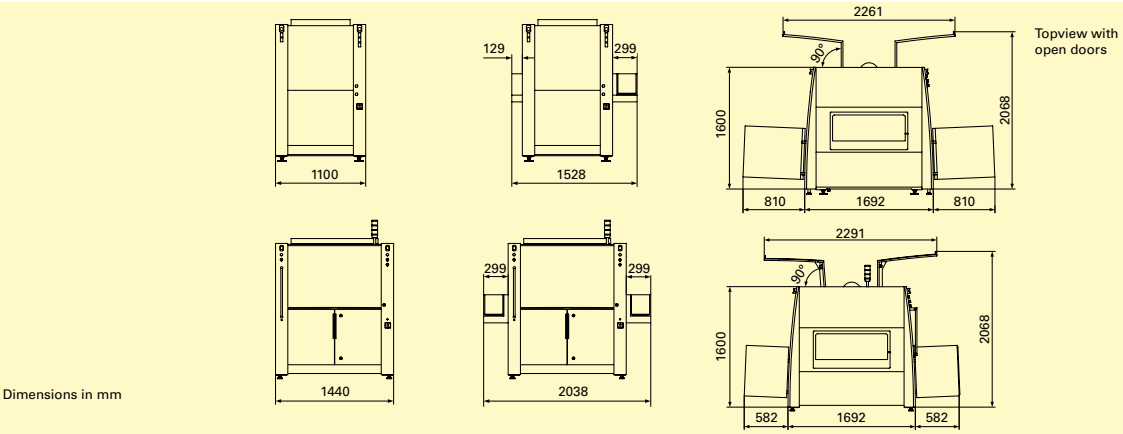
	ST1	DS1W
PCB dimensions (L x W)	420 x 356 mm (16.5" x 14")	420 x 356 mm (16.5" x 14")
PCB carrier	1 - 5 mm (0.04" x 0.2")	
Transport height	850 to 960 mm ± 20 mm (33.5" x 37.8")	
Width adjustment	Automatically with set-up	
Handling unit	Linear motors	
PCB clamping	Pneumatic during inspection	
PCB contact area	3 mm (0.12")	
Upper transport clearance	35 mm (1.39") (50 mm (1.97") optional)	
Lower transport clearance	60 mm (2.36") (other heights upon request)	

Inspection speed

ST1	DS1W
20 – 40 cm^2/s	20 – 40 cm^2/s no handling time

Other system data

	ST1	DS1W
Interfaces	SMEMA, SV70, customer specific	
Power requirements	400 V, 50/60 Hz, 110 V/60 Hz (optional), < 3 kW, 6 bar compressed air	
Line gap requirements	System width approx. +30 mm (1.18")	
System dimensions (W x D x H)	1100 x 1692 x 1616 mm (43.3" x 66.7" x 63.6")	1528 x 1692 x 1650 mm (60.2" x 66.7" x 65.0")
Weight (max.)	1350 kg (2976 lbs)	1450 kg (3197 lbs)



Dimensions in mm

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