

Automated
Optical
Inspection

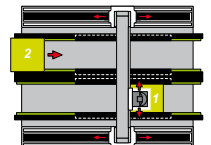
Vi-5000 series

Single and Dual Lane AOI Systems

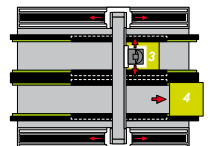
The **Vi5000 SERIES** are one of the most accurate AOI machines worldwide; they are powered by Vectoral Imaging. This system can be placed at any location of the board assembly line providing ever better flexibility and is ideal for Zero-defect Line applications. It is very often chosen by industry leaders for implementation. Inspection capabilities include presence, absence, polarity, placement accuracy, solder joint inspection, OCV and OCR, lifted lead inspection and more.



Dual lane conveyor principle



During the board inspection (1) on the lane 1, a board (2) is loaded on the lane 2.



While the board loaded on the lane 2 is inspected (3), the board of lane 1 is unloaded (4).

- ▶ For more accuracy, the system is based on:
 - › An XY gantry of granite structure with steel sub-frame
 - › Dual X axis motors for high speed
 - › High-speed linear motor and granite beam for Y-Axis
 - › Closed-loop linear motors with high resolution linear encoders

Vi TECHNOLOGY

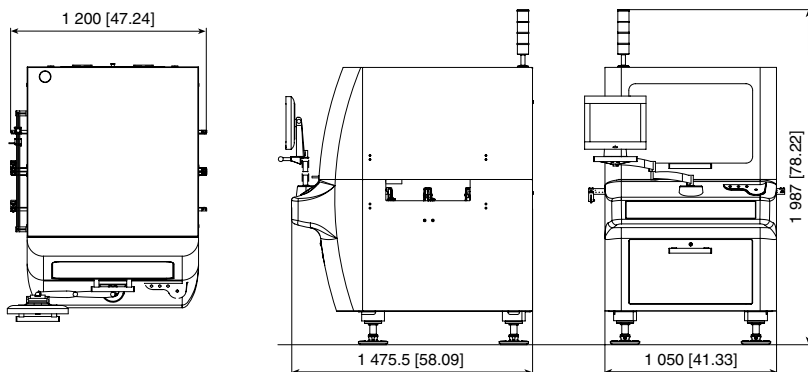
CREATING VALUE

SPECIFICATIONS

TYPE

Mechanical system (dimensions in mm [inches])	Vi-5000 Single Lane Series	Vi-5000 Dual Lane Series	
Maximum board dimension	508 [20] x 458 [18]	SL: 1 x (508 [20] x 420 [16.53]) DL: 2 x (508 [20] x 216 [8.5])	
Minimum board dimension	50 [1.96] x 50 [1.96]		
Board thickness (minimum to maximum)	0.7 to 5 [0.02 to 0.19]		
Maximum board weight	7 kg [15.4 lb]	5 kg [11.2 lb]	
Clearance under camera	34 [1.33]		
Clearance under board	40 [1.57] (10 [0.39] close to clamp blades)		
Clamping system edge	3 [0.12]		
Board positioning	Board and panel fiducials		
XY table	Linear motors and coders		
Frame type	Granite		
Optical heads	Camera resolution	Pixel size (Sub-pixel technology)	Field size
Vi-5000 and Vi-5000-DL	1 376 x 1 040	12 µm	44.5 [1.75] x 33.6 [1.32]
Vi-5000-2 and Vi-5000-2-DL	1 600 x 1 152	8 µm	41.6 [1.63] x 29.9 [1.18]
Vi-5000-3 and Vi-5000-3-DL	2 048 x 2 048	8 µm	53.2 [2.10] x 53.2 [2.10]
Lighting system			
Vi-5000 and Vi-5000-DL		Amber, green, blue	
Vi-5000-2 and Vi-5000-2-DL and Vi-5000-3 and Vi-5000-3-DL		Green, white, blue	
Lighting types		Axial and peripheral	
Average inspection speed			
Inspection time per component		4 - 20 ms	
Average inspection speed for solder paste (contacts per minute)			
Vi-5000 and Vi-5000-DL		12 000	
Vi-5000-2 and Vi-5000-2-DL		14 000	
Vi-5000-3 and Vi-5000-3-DL		17 000	
Average production cycle time (components per hour)			
Vi-5000 and Vi-5000-DL		170 000	
Vi-5000-2 and Vi-5000-2-DL		200 000	
Vi-5000-3 and Vi-5000-3-DL		250 000	
Type of components inspected		01005 up to exotic	
Software			
Operating system		WINDOWS 2000	
Vision2008 integrated software suite		Standard	
JEDEC library		Standard	
Off-line programming software		Optional	
Off-line DefectViewer software		Optional	
Communication			
Upstream / downstream		SMEMA 2	
Network		TCP/IP, RJ45 plug	
Facilities (dimensions in mm [inches])			
Electrical supply		115 / 230 V, 50 / 60 Hz, 26 / 13 A	
Electrical consumption		3 000 VA	
Pneumatic supply		6 bars / 75 PSI	
Machine dimensions W x D x H		1 200 [47.24] x 1 475.5 [58.09] x 1 987 [78.22]	
Weight		1 900 kg [4 190 lb]	
PCB Transport height		95.0 ± 5.0 [37.4 ± 2] (option 85.0 ± 5.0 [33.5 ± 2])	
Options			
Bar code & Data Matrix readers		2 x 2 maximum	
Internal data matrix		Top	

DIMENSIONS



Vi5000
SERIES

Vi TECHNOLOGY

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