

S3088 *ultra chrome* | SPI system



High Throughput 3D Solder Paste Inspection with Maximum Inspection Quality

The S3088 *ultra chrome* is a 3D SPI system that offers unbeatable advantages to maximize cost efficiency in SMT production. Key features include an inspection speed of 90 cm²/s and a field of view size of 58.2 mm by 58.2 mm. The orthogonal optical resolution is 10 μm and is combined with four angled views to deliver perfect, shadow-free inspection results – which are key for very small inspection areas. Viscom’s optional FastFlow handling offers extremely high throughput rates. Assemblies are synchronously infed and outfed at high speed.

This system, configured to meet optimum cost/benefit aspects, is based on the unique and proven XM camera technology from Viscom and combines precise defect detection with the highest inspection speed. The S3088 *ultra chrome* inspects all quality criteria for solder paste deposits, including volume, shape, surface, height, offset, paste bridges and paste smearing.

Evaluating the 3D measurement data and linking the results via Quality Uplink with the paste printer, placement system, AOI and AXI allows for effective process control and sustainable quality improvement. In this way, Viscom’s 3D SPI system delivers indications of process weaknesses that can be automatically adapted, e.g. adjusting the screen cleaning cycles or correcting print displacement or placement offset.

Extremely high throughput due to FastFlow handling

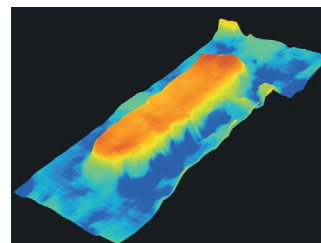
Enhanced quality and speed of inspection

Four angled views for shadow-free inspection images

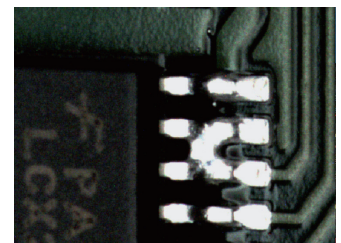
High reproducibility

Very easy operation: color images for verification and efficient program generation

Viscom Quality Uplink for best first-pass yield results



Color-assisted 3D solder paste volume calculation



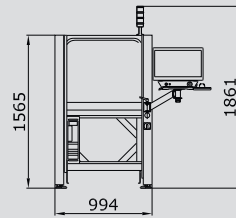
Paste bridge after soldering

3D SPI

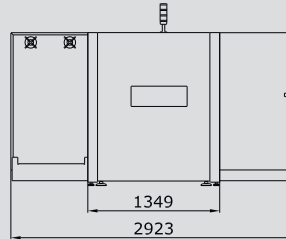
Technical Specifications



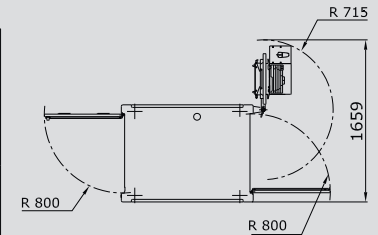
Front view



Side view



Top view



Dimensions in mm

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Inspection scope	3D SPI	Inspection of solder paste deposits (stencil printing or dispensing technology, up to pad sizes for 01005 components) as well as sinter paste inspection. Inspection of component presence, surface, height, print displacement (X/Y offset), paste smearing and, as options: shape, coplanarity, open area analysis, OCR and DCM
Camera technology	3D camera technology	
	Measuring procedure	Fringe projection process
	Z-resolution	0.1 µm
	Angled view cameras	
	Number of megapixel cameras	4
Orthogonal camera		
	Resolution	10 µm high resolution, 20 µm standard resolution
	Field of view size	58.2 mm x 58.2 mm (2.3" x 2.3")
Performance data	Repeat accuracy of height measurement	2 µm (on certification target), height <<10% @ 6 σ (on certification target)
	Paste height	Up to 4,000 µm
Software	User interface	Viscom vVision/EasyPro
	Statistical process control	Viscom SPC/vSPC, open interface (optional)
	Verification station	Viscom vVerify/HARAN
	Remote diagnosis	Viscom SRC (software remote control) (optional)
	Programming station	Viscom PST34 (optional)
System computer	Operating system	Windows®
	Processor	Intel® Core™ i7
PCB handling	Transport concept	Single lane (dual lane as S3088 DT system)
	Printed circuit board size (L x W)	508 mm x 508 mm (20" x 20"), longboard option available
	Transfer height	850 - 950 mm ± 20 mm (33.5" - 37.4" ± 0.8")
	Width adjustment	Automatic
	PCB clamping	Pneumatic
	Upper transport clearance (max.)	50 mm (2")
Lower transport clearance	45 mm (1.8"), up to 85 mm (3.3") optional; 40 mm (1.6") with PCB support	
Inspection speed		Up to 90 cm ² /s
Other system data	Positioning unit	Synchronous linear motors
	Interfaces	SMEMA (standard), IPC Hermes standard, other interfaces on request
	Power requirements	400 V (other voltages on request), 3P/N/PE, 8 A, 4 - 6 bar working pressure
	System dimensions	994 mm x 1565 mm x 1349 mm (39.1" x 61.6" x 53.1") (W x H x D)
	Weight	720 kg (1587 lbs)

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