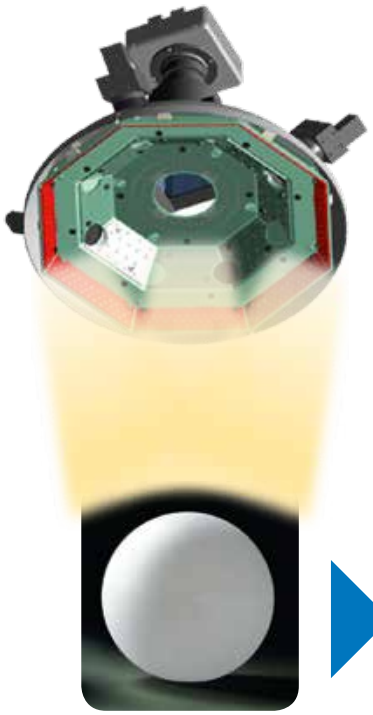
smart.fast.modular.

INSPECTION SOLUTION

RV-2 SPI

Printer Paste Inspection

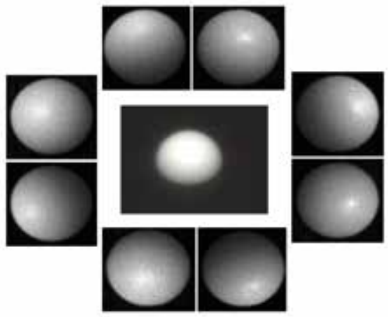
I3D MEASURING HEAD

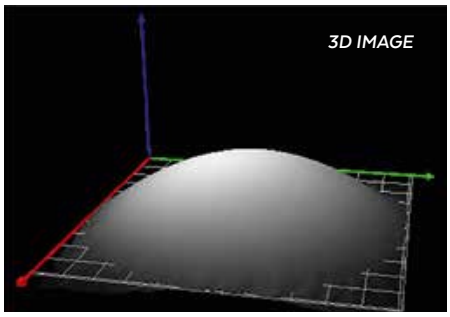


i3D MEASURING PRINCIPLE

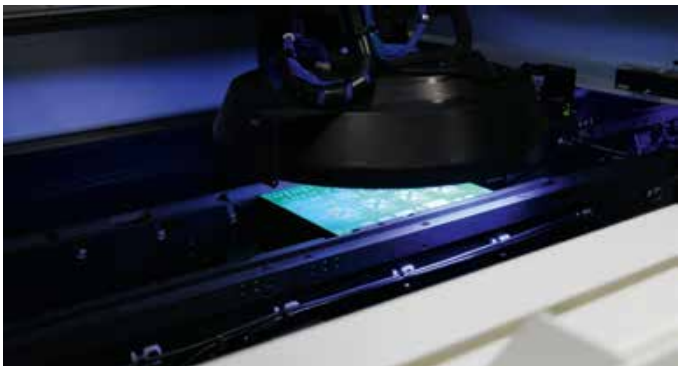
Light from all sides

RV-2 SPI does without delicate and expensive projector technology. Instead, it uses the principle of photometric stereo technique. With quick sequential light exposure from different angles and image capturing, the printed circuit board is measured three-dimensionally. If required, the durable illumination unit can be replaced at a reasonable price.





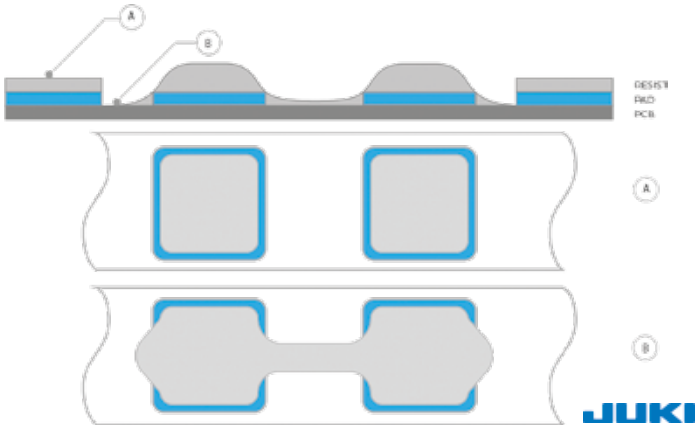
The measuring head in action



The visualised result

ACCURATE DETECTION OF SOLDER BRIDGES BY REAL PAD HEIGHT MEASUREMENT

Unlike it is the case with other systems, RV-2 measures a reference height for every single pad. The level that has been defined in this way constitutes the correct reference for the solder depot height measurement (B). In case of an incorrect height reference, the solder paste below this level would no longer be measured. As a result, solder bridges will remain undetected (A).



SPEED AND FLEXIBILITY

RAPID PROGRAM CREATION

It only takes about five minutes to create a program. Working with standard measurement algorithms is possible. Whenever complex measurement tasks have to be completed, these algorithms can also be customised. Pseudo errors can thus be avoided.

AVAILABLE OPTIONS

Closed-loop SPI

RV-2 can be connected to JUKI screen paste printers. Print misalignments will be compensated automatically during production. Stencil cleaning can be activated, if required.

TOPSS (Total Operation System Software)

Using TOPSS, it is possible to operate several RV-2 units from one workspace. One single operator can analyze several SPI systems in semi-automatic operation.

TOPSS

Central Confirmation Control (CCC)	Online Repair (OLR)	Quality Trace (QT)	Repair Station (RP)	Statistical Process Control (SPC)
Central control of several machines	Display of defects in an in-line repair station	Visualisation of the measurement results of several machines	Display of defects in an offline repair station	Statistical analysis of measurement results over a desired period of time

SPECIFICATIONS

	Specifications RV-2 SPI
PCB handling and transport	
Min. / max. PCB size in mm	50 × 50 / 410 × 360
Max. PCB weight in kg	4.0
Min. / max. solder pad dimensions	01005 (inch) up to 15 × 15 mm
PCB feed height in mm	900 -20/+70
Measurement system	
Measurable solder depot properties	No/too little solder paste, print misalignment, depot volume, depot height, foreign objects, etc.
Camera system	400 MPix CMOS
Measuring principle	i3D photometric stereo technique
Measurement resolution	15 µm/pixel (standard) / 10 µm/pixel (high resolution)
Field of view (FOV) in mm	30 × 30 / 20 × 20
Image processing speed	0.2 s/FOV
Machine properties and dimensions	
Dimensions (L × W × H in mm)	940 × 1276 × 1530
Weight in kg	1000
PC and software	
Operating system	Windows 7, 64 bit
Interfaces	SMEMA, OK/NG, USB, Ethernet
Operating requirements	
Power supply	380 V, three phases
Compressed air	5 bar
Ambient conditions	15–30° C, 30–65 % RH
Standards (selection)	
	AWC, code recognition on PCB, true zero measurement reference, automatic calibration
Available options and accessories (selection)	
	Closed-loop with screen paste printer, grid tools for supporting the PCB, TOPSS connection for remote analysis, long board option

Specifications and design subject to change without notice.

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