KOH YOUNG TECHNOLOGY
INTELLIGENT INSPECTION

KY8030-3

The Industry's **Fastest True 3D** Solder Paste Inspection Solution

The KY8030-3 is back, faster than ever using Koh Young's 3D dual-inspection technology to eliminate critical shadow problems while enhancing productivity and speeding up the production process.

- Unmatched Inspection Speed with Guaranteed Best Accuracy
- Active Warp Compensation
- Automated Solder Paste Dispensing: Auto-Rework
- KSMART Solutions: True 3D Measurement-based Process Control System
- Zero-defect through AI-Powered Koh Young Process Optimizer(KPO)

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The Industry's **Fastest True 3D** Solder Paste Inspection Solution

Unmatched Inspection Speed with Guaranteed Best Accuracy

- The KY8030-3 blends Koh Young's pioneering technologies with an inspection speed of 91.2cm²/sec. The combination of this system's throughput and accuracy makes the KY8030-3 suitable across a vast range of applications. The latest options makes this system twice as fast as its predecessor with guaranteed measurement accuracy.

Warp Compensation

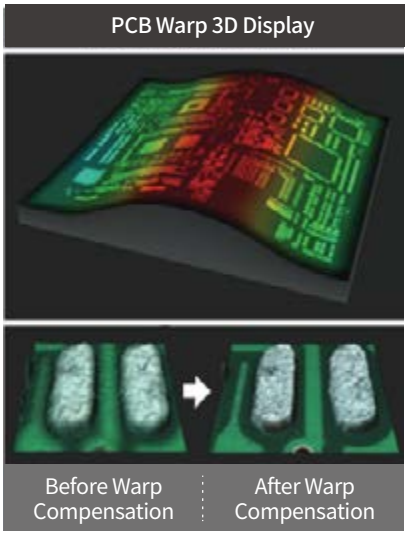
Active Warp Compensation

- **Z-tracking 3D compensation**

  The unique Koh Young warp compensation technology actively calculates and detects any substrate warpage. Using its exclusive 3D imaging and algorithms , Koh Young considers multiple elements like slope, stretch, twist, bow, and shrinkage to guarantee an accurate measurement and to meet the ultimate inspection system criteria.

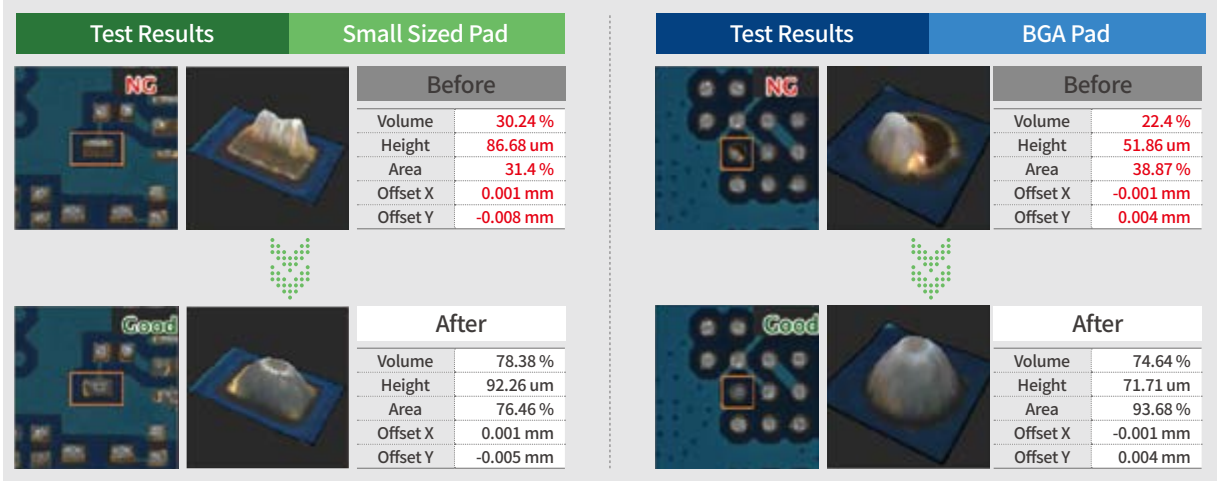
- **Pad-referencing 2D compensation (optional)**

  Real-time, automatic reference teaching uses IR lighting to compensate for non-linear inspection challenges by analyzing the PCB pad locations against the ideal PCB stencil design defined in the CAD file.



Automated Solder Paste Dispensing: Auto-Rework

- KY8030-3 dispenses solder paste automatically as an optional add-on solution. The high-precision and user-friendly dispensing system helps eliminate costly mistakes due in large part to insufficient solder in open joints, lean fillets, and weak joints. The automatic dispensing option reduces operational costs, improves line efficiency, and strengthens profitability by eliminating board scrap and rework. Once Koh Young's SPI is configured with the Auto-Rework option, it becomes more than an inspection system. It becomes a true process optimizer.

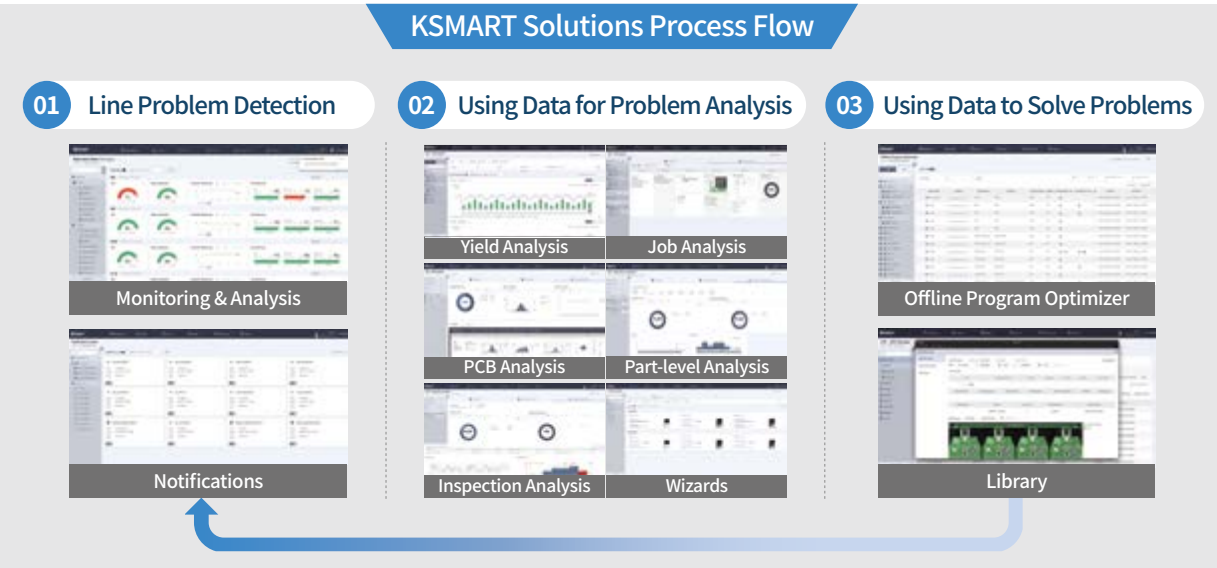


The Gateway to a Smart Factory

- Koh Young pioneered True 3D measurement technology 20 years ago to create a zero-defect future. This gave rise to KSMART Solutions and its continuous efforts to leverage data and connectivity.
- KSMART Solutions uses Artificial Intelligence to help automate process control while focusing on data management, analysis, and optimization. It collects data from across the factory line for defect detection, real-time optimization, enhanced decisions, and traceability to improve metrics, increase quality, and lower costs by eliminating variance, false calls, and escapes.

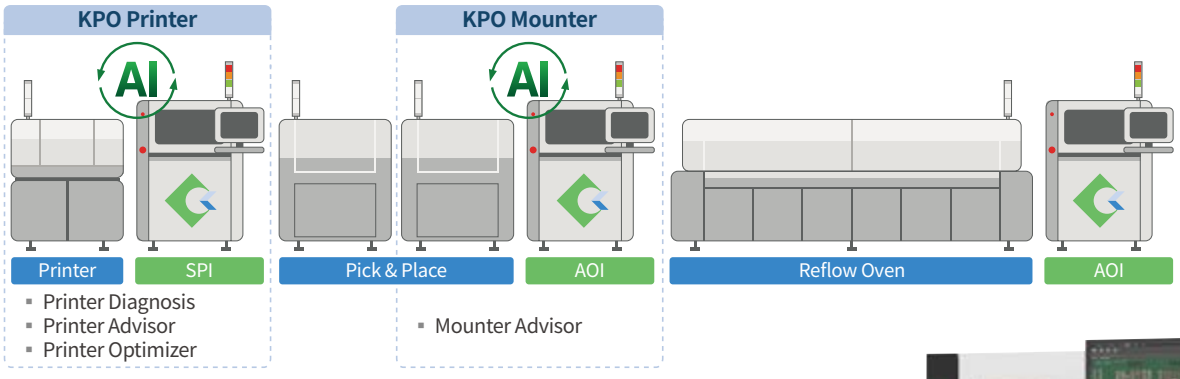
KSMART Solutions: True 3D Measurement-based Process Control System

- Converts data into knowledge for effective and quality-driven actions
- Delivers an AI-powered process analysis and optimization tool
- Achieves an autonomous process optimization facility



Zero-defect through AI-Powered Koh Young Process Optimizer (KPO)

- Koh Young is driven to help customers achieve a Zero-defect print process scenario. The AI-powered Koh Young Process Optimizer (KPO) solution automatically exercises complex algorithms to develop and implement print process improvements. By actively monitoring the print process, KPO sends operators real-time performance diagnostics and threshold alerts – it even implements process change automatically. KPO ensures real-time print process reliability without dedicated experts.



"We evaluated many inspection machines on the market and Koh Young proved to be the most reliable. The software was very stable and implementation was quick and easy. The machine caught defects that none of the other competitors could."

- Global EMS Company

Must-check Requirements of a 3D SPI System

Requirements	Solutions
Solution to shadow problem	3D shadow free moiré technology & dual projection
Real-time PCB warp compensation (2D + 3D solution)	Active warp compensation (Z-tracking & pad-referencing (Optional))
User-friendly operation	Renewal GUI, real color 3D image
Whole-board Foreign Material Inspection (WFMI)	3D foreign material inspection

Inspection Task	Metrology Capability	Volume, area, height, offset, bridging, shape deformity, paste offset, coplanarity
	Types of Defects	Insufficient, excessive, missing paste, bridging, shape deformity, paste offset, coplanarity

Inspection Performance	Model	Camera	Pixel Resolution	Full Speed Inspection Speed	Min. Distance between Pads	Max. Inspection Height
	KY8030-3 (HS)	8M	20μm 15μm 10μm	91.2cm²/sec (0.35Sec/FOV) 53.5cm²/sec (0.33Sec/FOV) 23.8cm²/sec (0.33Sec/FOV)	20 μm: 200 μm / 7.9 mils 15 μm: 150 μm / 5.9 mils 10 μm: 100 μm / 4.0 mils	450 μm / 17.7 mils
	KY8030-3	4M	20μm 15μm 10μm	47.1cm²/sec (0.34Sec/FOV) 28.1cm²/sec (0.32Sec/FOV) 13.3cm²/sec (0.30Sec/FOV)		
	Illumination	IR-RGB Led Dome Styled Illumination				
	Z Resolution	0.37 μm/ 0.01 mils				
	Height Accuracy (on KY Calibrated Target)	1 μm / 0.04 mils				
	01005mm Inspection Capability	Gage R&R < 10% at 6 sigma (±50% Tolerance)				
	Max. Inspection Size	< FOV				
	Multi-Colored PCB Inspection	Possible				
	Optional	4-Way Projection (Max. Inspection Height up to 2mm)				

PCB Handling	Conveyer Width Adjustment	Automatic
	Conveyer Fix Type	Front / Rear fixed (Factory setting)
Software	Supported Input Format	GERBER Data (274X, 274D), ODB++ (Optional)
	Programming Software	ePM-SPI
	Statistical Process Control Tool	SPC Plus (Histogram, X-bar & R-Chart, X-bar & S-Chart, Cp & Cpk, % Gage R&R / Real Time SPC & Multiple Display / SPC Alarm / Automatic Report from Remote Computer)
	User-friendly Features	Library Manager & KYCAL (Auto Camera Calibration, Auto Illumination Calibration, Auto Height Calibration)
	Operating System	WINDOWS 10 IoT ENTERPRISE LTSC 2019

Add-On Solutions

- 1D & 2D Handy Barcode Reader
- 1D & 2D Inline Barcode Reader
- Auto-Verification
- Auto-Rework*
- UPS
- Integrated Calibration Target
- Long Board Option
- Review Station
- Offline Programming Station
- ODB++
- SPC Plus for Remote Computer
- Offline SPC Plus Station
- Panasonic APC Interface (FF/FB)
- Panasonic iLNB Interface
- Closed Loop Interface
- IPC-CFX Interface
- KSMART Solutions (Monitoring and Analysis, Remote Access, Offline Program Optimizer, Link Data Analysis, Notification)
- KPO Printer (Printer Diagnosis, Printer Advisor, Printer Optimizer)
- Fuji Nexim Interface
- iTAC Interface
- ASYS OIC

The above specifications are subject to change without notice.
* Machine dimensions, PCB size, and clearance will change if the Auto-Rework option is selected.

	M		L		XL	
	Single Lane	Dual Lane	Single Lane	Dual Lane	Single Lane	Dual Lane
Max. PCB Size (X x Y)	330 x 330 mm (12.9 x 12.9 in)	Single Mode ° 330 x 580 mm (12.9 x 22.8 in) Dual Mode 330 x 325.5 mm (12.9 x 12.8 in)	510 x 510 mm (20.0 x 20.0 in)	Single Mode ° 510 x 580 mm (20.0 x 22.8 in) Dual Mode 510 x 320 mm (20.0 x 12.5 in)	850 x 690 mm (33.4 x 27.1 in)	Single Mode 850 x 580 mm (33.4 x 22.8 in) Dual Mode 850 x 320 mm (33.4 x 12.5 in)
Min. PCB Size	50 x 50 mm (1.9 x 1.9 in)				70 x 70 mm (2.7x2.7 in)	
PCB Thickness	0.4 ~ 4 mm (0.01 ~ 0.15 in)		0.4 ~ 5 mm (0.01 ~ 0.19 in)		0.6 ~ 8 mm (0.02 ~ 0.31 in)	
Max. PCB Weight	Standard : 2 kg (4.4 lbs), Heavy weight option : 5 kg (11.0 lbs)				10 kg (22.0 lbs)	
Machine Weight	550 kg (1212.5 lbs)	600 kg (1322.7 lbs)	600 kg (1322.7 lbs)	700 kg (1543.2 lbs)	850 kg (1873.9 lbs)	900 kg (1984.1 lbs)
Bottom Clearance	50 mm (1.9 in)					
Supplies	220 Vac ± 10%, 50/60Hz , 1 Phase, 5Kgf/cm² (0.45 MPa)					
W	820 mm (32.2 in)		1000 mm (39.3 in)		1350 mm (53.1 in)	
D	1265 mm (49.8 in)	1445 mm (56.8 in)	1265 mm (49.8 in)	1445 mm (56.8 in)	1445 mm (56.8 in)	
H	1627 mm (64.0 in)					

° Please contact us for more information about PCB Sizes.
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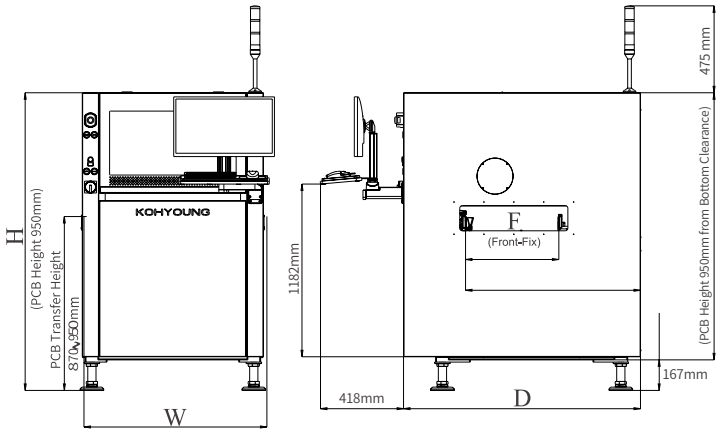

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