

# 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)

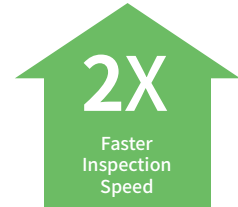


# KY8030-3 The Industry's Fastest True 3D Solder Paste Inspection Solution



## Unmatched Inspection Speed with Guaranteed Best Accuracy

- The KY8030-3 blends Koh Young's pioneering technologies with an inspection speed of 91.2cm<sup>2</sup>/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.



**KY8030-3**



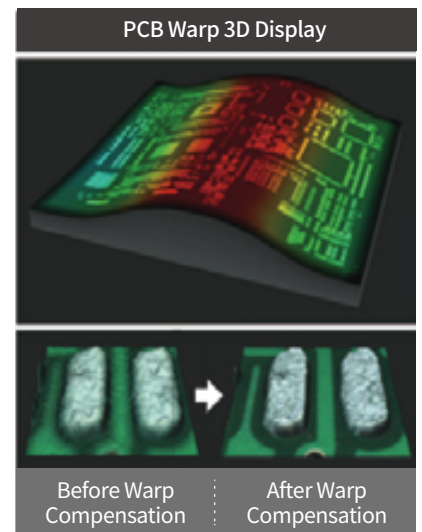
## Active Warp Compensation

### 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.

Test Results		Small Sized Pad	
		Before	
		Volume	30.24 %
		After	
		Volume	78.38 %
		Height	86.68 um
		Area	31.4 %
		Offset X	0.001 mm
		Offset Y	-0.008 mm
Test Results		BGA Pad	
		Before	
		Volume	22.4 %
		After	
		Volume	74.64 %
		Height	51.86 um
		Area	38.87 %
		Offset X	-0.001 mm
		Offset Y	0.004 mm

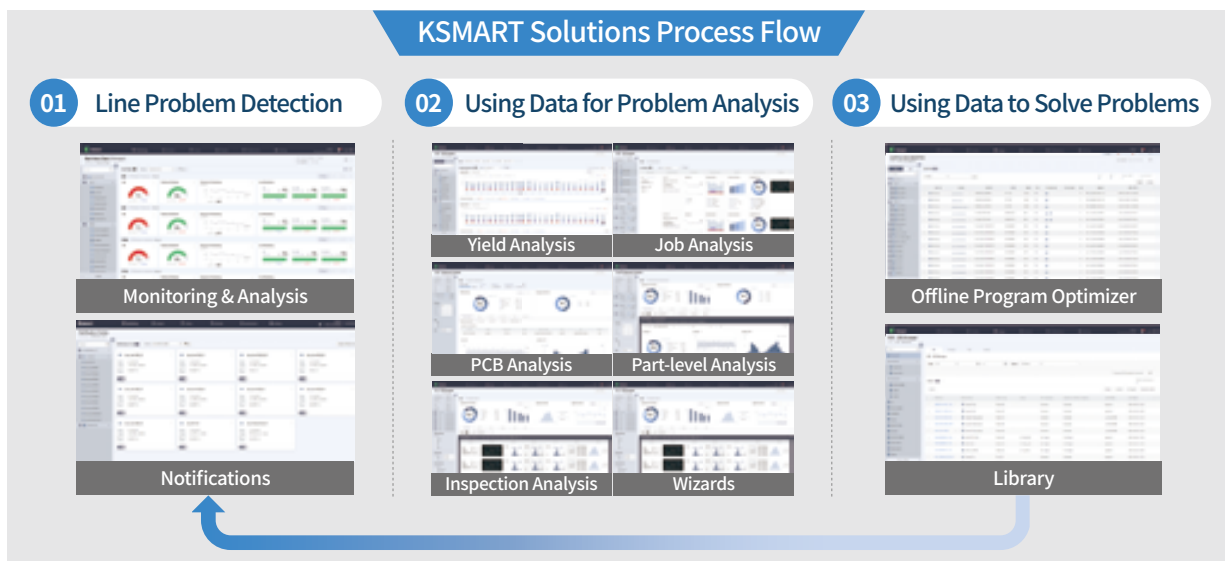


## KSMART Solutions: True 3D Measurement-based Process Control System

- 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.

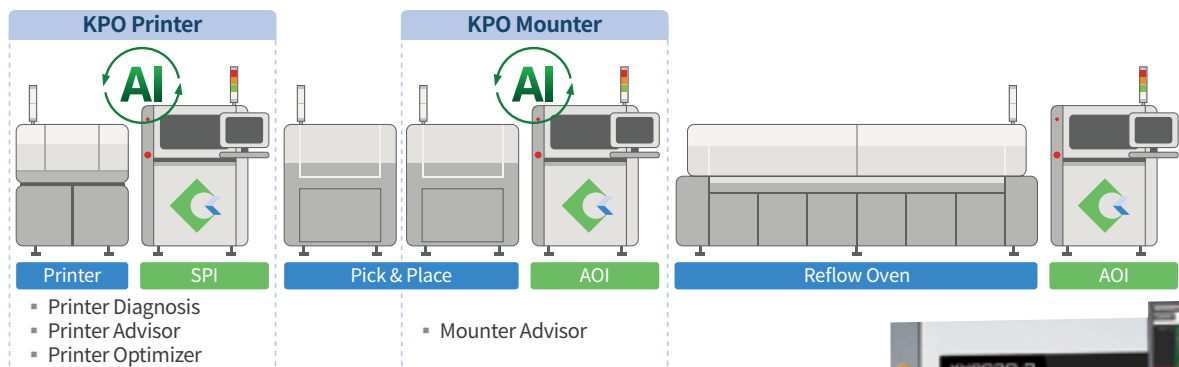
### “KSMART Solutions is the Gateway to a Smart Factory”

- 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



# Specification

Requirements	Solutions
Solution to Shadow Problem	3D Shadow Free Moiré Technology & Dual Projection
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	3D Foreign Material Inspection

Inspection Items	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

KY8030-3 Inspection Performance	Model	Camera & Resolution	FOV Size	Full 3D Inspection Speed	Minimum Distance Between Pads	Inspection Height (Max & Min)	
	KY8030-3	4M 10um	4M 15um	20 x 20	13.3cm <sup>2</sup> /sec (0.30FOV/Sec)	10um: 100um 15um: 150um 20um: 200um	2000um / 400um 78.8mils / 15.8mils
		4M 20um		30 x 30	28.1cm <sup>2</sup> /sec (0.32FOV/Sec)		
				40 x 40	47.1cm <sup>2</sup> /sec (0.34FOV/Sec)		
	KY8030-3 (HS)	8M 10um	8M 15um	28 x 28	23.8cm <sup>2</sup> /sec (0.33FOV/Sec)		1800um / 450um 70.9mils / 17.7mils
		8M 20um		42 x 42	53.5cm <sup>2</sup> /sec (0.33FOV/Sec)		
				56 x 57	91.2cm <sup>2</sup> /sec (0.35FOV/Sec)		
	Illumination		IR-RGB Led Dome Styled Illumination				
	Max Inspection Size		< FOV				
	Multi-Colored PCB Inspection		Possible				
	Optional		4-Way Projection Inspection Range (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)
	Programing 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 Operator	Library Manager & KYCAL (Auto Camera Calibration, Auto Illumination Calibration, Auto Height Calibration)
	Operating System	WINDOWS 10 IoT ENTERPRISE LTSC 2019

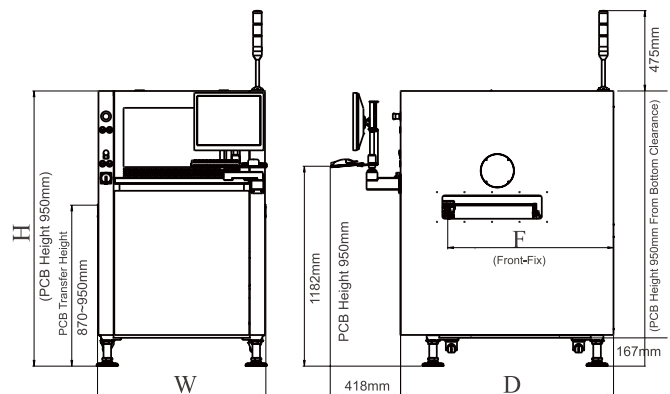
Add-On Solutions	1D & 2D Handy Barcode Reader	- Offline Programming Station	- KSMART Solutions
	1D & 2D Inline Barcode Reader	- ODB++	(Monitoring and Analysis, Remote Access, Offline Program Optimizer, Link Data Analysis, Notification)
Auto-Verification	- SPC Plus for Remote Computer	- Offline SPC Plus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

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

<sup>o</sup> Please contact us for more information about PCB Sizes. (The above specifications are subject to change without notice.)



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