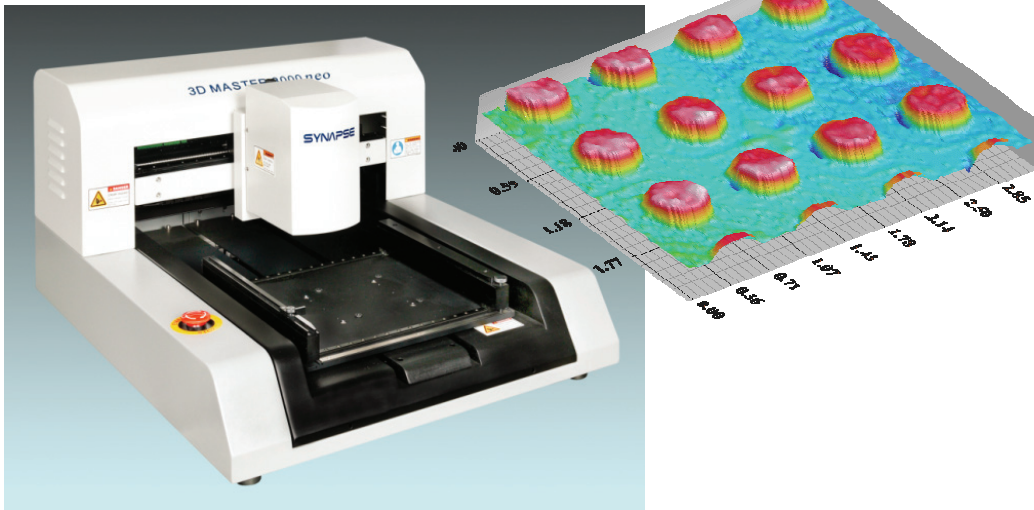


3D Solder Paste Measurement System

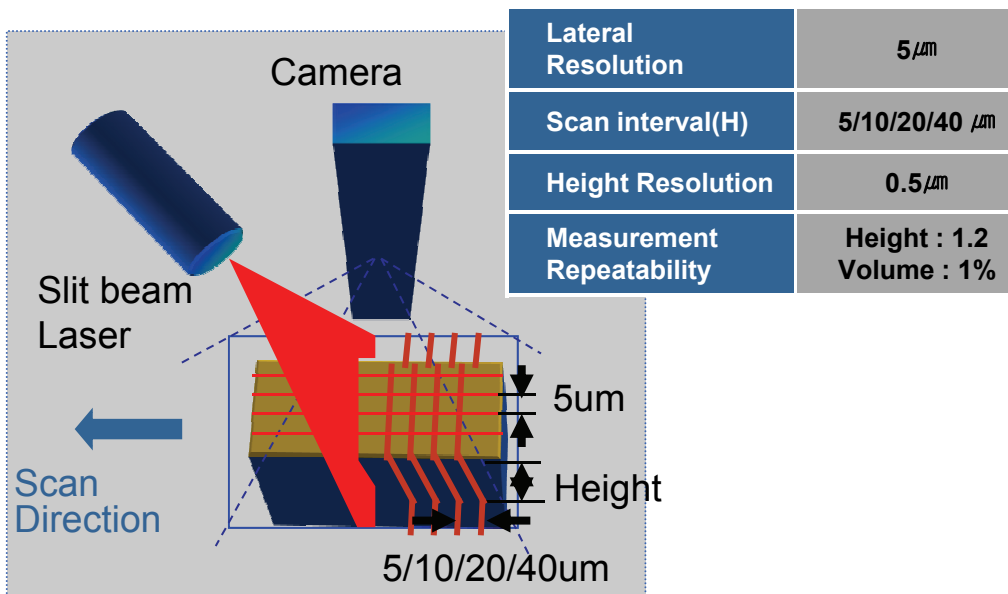
3D Master 3000



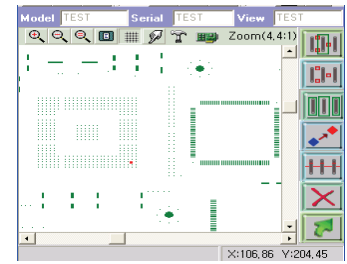
IMPORTANT OF 3D SOLDER MEASUREMENT

- At least 50% defects of SMT manufacturing process occurs during printing.
- The worse the quality of solder paste is, the more placement defects occur.
- The reliability of electronic products directly links to the solder joint quality which is effected by solder paste's height, volume and shape.
- The earlier defects are found, the less repair cost is required.
- 2D images provide only color, brightness and area information but key factors are height, volume and shape which only can be provided by 3D measurement.
- Without 3D solder measurement, no way to check exact quality of printing.

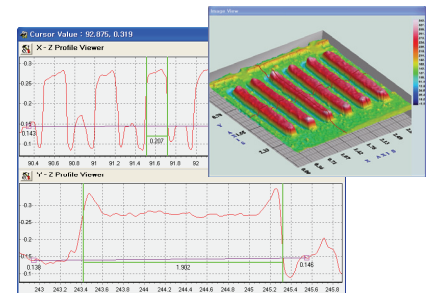
LASER TRIANGULATION BY STRUCTURED LINE LASER



- ✓ Easy & Fast Teaching by Gerber Image Navigator



- ✓ Precise Data Analysis (3D Scan & Single Cross-Section)

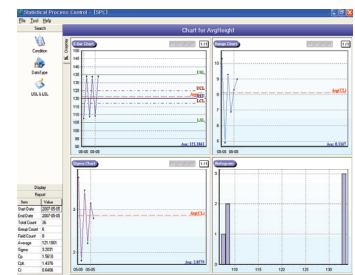


- ✓ 3D NG Inspection Function by Parameter Set-up

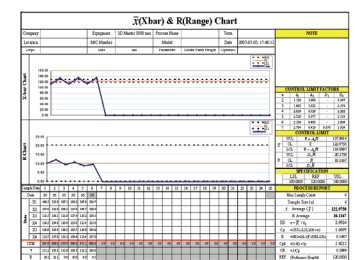
<input checked="" type="checkbox"/> Use Inspection		Height Threshold(High) : 5 (µm)		Height Threshold(Low) : 20 (µm)	
<input checked="" type="checkbox"/> Height		Reference	Upper Tolerance	Lower Tolerance	
		150.0 (µm)	50.0 (µm)	50.0 (µm)	
<input checked="" type="checkbox"/> Volume		Reference	Upper Tolerance	Lower Tolerance	
		100 (%)	40 (%)	40 (%)	
<input checked="" type="checkbox"/> Coplanarity		Reference	Upper Tolerance	Lower Tolerance	
		10 (%)	10 (%)	10 (%)	
<input type="checkbox"/> Pad Offset		Pad Height Offset : 0.0 (µm)			
<input type="checkbox"/> Apply Current Package		<input type="checkbox"/> Apply All Package			
Load		Cancel			

Item	Height (µm)	Volume (%)	Coplanarity (%)	Pass/Fail					
1	0.3447	0.0473		OK					
2	0.3408	0.0465		OK					
3	0.3371	0.0461		OK					
4	0.3379	0.0473		OK					
5	0.3379	0.0469		OK					
6	0.3456	0.0487		OK					
7	0.3407	0.0473		OK					
Total	1.363	22.0	168.4	1.300	1.190	0.3407	0.0473		OK

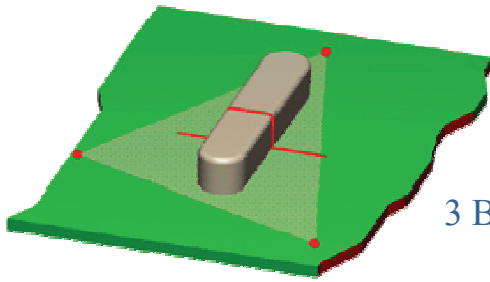
- ✓ Statistical Process Control (SPC) Software



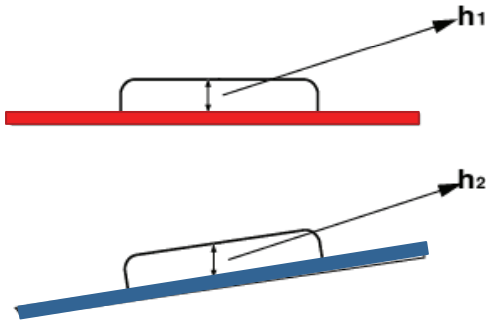
- ✓ User Friendly Chart and Report Support



WARPAGE COMPENSATION

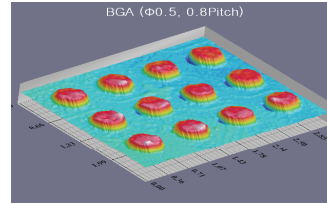


3 BASE POINTS

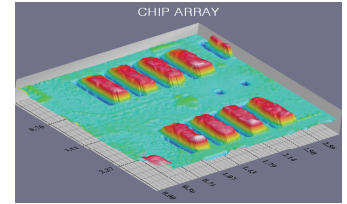


ZERO REFERENCE SECTIONS

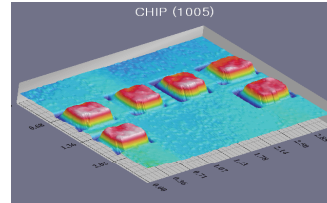
3D IMAGE SAMPLES



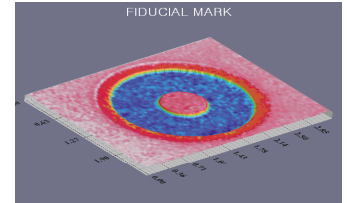
BGA



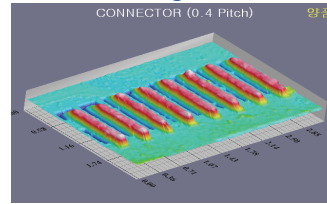
Chip Array



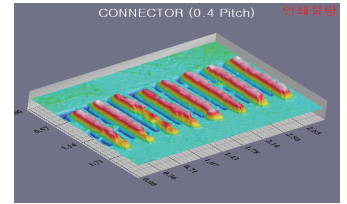
Chip



Fiducial Mark



Connector (Good)

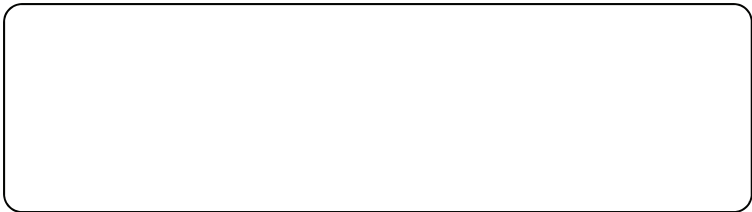


Connector(Bad)

Items	3D MASTER 3000 neo / 3D MASTER 3000 Wide	
Target Objects	Solder Paste, Stencil, IC Lead, Bare PCB, BGA/CSP/FC	
Measurement Items	Height, Volume, Length, Width, Area, 3D Shape etc.	
Measurement Principle	Structured Line Laser with X-Y Scan Mechanism	
Optical System	Color CCD Camera with Field of View(FOV : 3.2 x 2.4 mm)	
Measurement Speed	Max 60 profiles	
Height Measurement Range	20 ~ 500 μm	
Resolution	Height (Z) : 0.5 μm	
Repeatability[1]	Height : below 1.2 μm , Volume : below 1%	
Measurement Range	300(X) x 300(Y) x 28(Z) mm / 510(X) x 460 (Y) x 28(Z) mm ※ (X, Y : Auto, Z: Manual)	
Object Load & Unload	Manual	
Main Functions	<ul style="list-style-type: none"> - Automatic 3D scan measurement - Single profile 3D measurement - 2D dimension check - 3D scan image view & analysis 	<ul style="list-style-type: none"> - Cross-section view & analysis - Repeated measurement by just one click - Multiple object measurement by just one click - NG inspection function
SPC software	<ul style="list-style-type: none"> - Cp, Cpk, Sigma, Histogram - Chart : X bar R&S, Trend, Scatter, C, P - Data report to Excel&Text 	
Computer System	<ul style="list-style-type: none"> - OS: Windows XP Professional Edition - CPU: Pentium IV 3GHz - Memory: 512 MB - Monitor: 17" TFT LCD 	
Power	AC 110 / 220V, 50/60Hz	
Dimension & Weight	3D MASTER 3000 neo : 650(W) x 737 (D) x 354 (H) mm / 60 Kg 3D MASTER 3000 Wide : 860(W) x 1,030 (D) x 390 (H) mm / 90 Kg	
Option	Standard Gage block	



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Above specifications may change without prior notice.