



ALD6700S SERIES 3D Solder Paste Inspection systems

GREAT PERFORMANCE, SIMPLE OPERATION

- Precise measurement simultaneously in 2D and 3D
- Automatic real-time warpage compensation
- Programming time of less than 5 min
- ► Training time less than 1 hour
- ► Fast inspection
- ► Exceptionally high MTBF



THE BEST SOLUTION FOR HIGH LEVEL SMT LINES

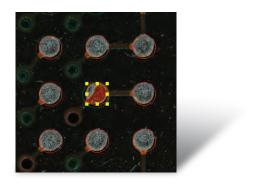
The unique optical system developed by ALeader delivers an accurate, reliable 3D measurement and top-quality high-resolution 2D image

- Bi-directional structured light (advanced phase-shifting digital projection system, developed in-house)
- Multi-directional (360° horizontal, 0-90° vertical) LED illumination system
- High-speed camera

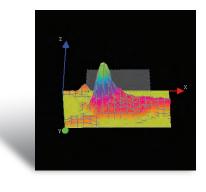


Simultaneous 2D and 3D inspection guarantees full inspection coverage with the most accurate measurement of the paste deposits height, area and volume

The superior high-resolution image, generated by the high-speed camera and the unique lighting system, clearly distinguishes between the pastes, pads, silkscreen and the board.



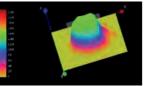
Precise height measurement based on Phase Measurement Profilometry (PMP). Bi-directional phase shifting projection system ensures accurate and noise resistant measurement of the paste height and volume.



Innovative, real-time automatic warpage compensation and measurement floor recognition method. The system identifies the pads as a zero level for the paste height measurement for each board and FOV. Such a capability completely eliminates the influence of PCB warpage on the inspection result. The process is completely automatic and user-independent, no bare board or any special procedures are required.

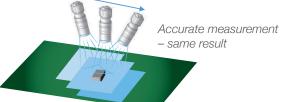
PCB warpage does not affect the measurement result, system provides precise paste height from the pad level





FOV uniformity

Over 90% brightness uniformity across the FOV. High measurement accuracy is consistent throughout all parts of the PCB





ALeader's SPI advanced optical system guarantees the same superior level of performance on PCBs of any color





Easy and fast, wizard based programming

- Less than 5 min to start production for a new product, with a friendly and intuitive user interface.
- Takes less than an hour to train a new user to program and operate the system.
- Possible to create a program without Gerber using a good board sample only (auto programming).
- Global quality settings based on paste size and stencil thickness are automatically adopted for each new program, delivering the same high-quality programs despite having been written by a different user.





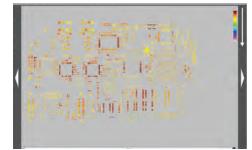
Structured and clearly defined access level

- Operator Production, Process
- Programmer Production, Process, Setup
- Administrator Production, Process, Setup, Config, HW and Diagnostic

Real-time built-in SPC as a standard

- Height map for each PCB
- · Real-time monitoring charts for height, volume, area and offset
- History review and analysis







- Closed loop with the printer
- Communication with the P&P
- Alerts



Inspection method Phase Measurement Profilometry Camera 12M pixel high-speed camera. Telecentric lens Lighting system Top and 360° steep LED light, bi-directional structured light projection Program creation Import Gerber (274X, 274D) file , auto programming (w/out Gerber) Inspection coverage Volume, area, height, offset, insufficient, excessive, bridge, joint, contamination, etc Operation system Windows 10 Professional 64 bit Inspection board specification PCB type PCB type All colors and all pad finishes PCB type All colors and all pad finishes PCB size range 0.2mm to 5mm Underside/topside clearance Top 3mm, bottom 3mm PCB weight up to 3 kg Underside/topside clearance 60/30mm (ALD6710S, ALD6730S), 65/40mm (ALD8750S), 30/40mm (ALD6710D, ALD6730D), 30/65mm (ALD6750G) Min paste size 0.125mm xont25mm Min paste size 1000µ Max paste size 10mm x 10mm Max paste size 100µ Inspection performance E Easolution/ranges/speed 15µ, FOV: 61.44 x 45mm (7µ, FOV 28.62 x 21mm - option), Test speed 400 ms/FOV Height <	Functional specification	
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Inspection board specification All colors and all pad finishes PCB type All colors and all pad finishes PCB size range Min 50x50mm, Max 450x710mm(ALD6710S) 620x710mm(ALD6710S 2-stage) 650x710mm(ALD6730S) 820x700mm(ALD6730S 2-stage) 1500x450mm(ALD6750S) 450x330/610ALD6710D) 650x330/610mm (ALD6730D) PCB thickness range 0.2mm to 5mm Clamping system edge clearance Top 3mm, bottom 3mm PCB weight up to 3 kg Underside/topside clearance 60/30mm (ALD6710S, ALD6730S), 65/40mm (ALD8750S), 30/40mm (ALD6710D, ALD6730D), 30/65mm (ALD6750S) Min paste size 0.125mm x 0.125mm Max paste size 10mm x 10mm Max measurement height 1000µ Inspection performance Esolution/ranges/speed Resolution/ranges/speed 15.µ, FOV: 61.44 x 45mm (7µ, FOV 28.62 x 21mm - option), Test speed 400 ms/FOV Height Resolution 0.25µ Reproducibility Height <1% at 3\sigma, Volume <1% at 3\sigma		
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PCB size range Min 50x50mm, Max 450x710mm(ALD6710S) 620x710mm(ALD6710S) 2-stage) 650x710mm(ALD6730S) 820x700mm(ALD6730S 2-stage) 1500x450mm(ALD6750S) 450x330/610(ALD6710D) 650x330/610mm (ALD6730D) PCB thickness range 0.2mm to 5mm Clamping system edge clearance Top 3mm, bottom 3mm PCB weight up to 3 kg Underside/topside clearance 60/30mm (ALD6710S, ALD6730S), 65/40mm (ALD8750S), 30/40mm (ALD6710D, ALD6730D), 30/65mm (ALD6750C) Min paste size 0.125mm x 0.125mm Max paste size 100mm x 10mm Max paste size 1000µ Min paste pitch 1000µ Inspection performance Resolution/ranges/speed Resolution/ranges/speed 15µ, FOV: 61.44 x 45mm (7µ, FOV 28.62 x 21mm - option), Test speed 400 ms/FOV Height Resolution 0.25µ Reproducibility Height <1% at 3σ, Volume <1% at 3σ		
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Max paste size10mm x 10mmMax measurement height1000μMin paste pitch100μInspection performanceResolution/ranges/speed15μ, FOV: 61.44 x 45mm (7μ, FOV 28.62 x 21mm - option), Test speed 400 ms/FOVHeight Resolution0.25μReproducibilityHeight <1% at 3σ, Volume <1% at 3σ	Underside/topside clearance	60/30mm (ALD6710S, ALD6730S), 65/40mm (ALD8750S), 30/40mm (ALD6710D, ALD6730D), 30/65mm (ALD6750S)
Max measurement height1000μMin paste pitch100μInspection performanceResolution/ranges/speed15μ, FOV: 61.44 x 45mm (7μ, FOV 28.62 x 21mm - option), Test speed 400 ms/FOVHeight Resolution0.25μReproducibilityHeight <1% at 3σ, Volume <1% at 3σ	Min paste size	0.125mm x 0.125mm
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Inspection performanceResolution/ranges/speed15μ, FOV: 61.44 x 45mm (7μ, FOV 28.62 x 21mm - option), Test speed 400 ms/FOVHeight Resolution0.25μReproducibilityHeight <1% at 3σ, Volume <1% at 3σ	Max measurement height	1000µ
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Height Resolution0.25μReproducibilityHeight <1% at 3σ, Volume <1% at 3σ	Inspection performance	
ReproducibilityHeight <1% at 3σ, Volume <1% at 3σGR&R<10% at 6σ	Resolution/ranges/speed	15µ, FOV: 61.44 x 45mm (7µ, FOV 28.62 x 21mm - option), Test speed 400 ms/FOV
GR&R<10% at 6σFeatures and optionsSupports auto change program, multiboards and multiprograms inspection modesSpecial featuresSupports auto change program, multiboards and multiprograms inspection modesBarcode systemAuto read barcode 1D and 2D. External reader reads back side barcode (option)Server modeCentral server, multiple machines, data handlingRemote controlRemote control through TCP/IP for verification, system operation and program adjustmentAdditional OptionsSPC repair station, Offline program, External barcode scannerHardwareFlat belt conveyor, automatic clamp (pneumatic), auto load and unload, automatic width adjustment	Height Resolution	0.25µ
Features and optionsSpecial featuresSupports auto change program, multiboards and multiprograms inspection modesBarcode systemAuto read barcode 1D and 2D. External reader reads back side barcode (option)Server modeCentral server, multiple machines, data handlingRemote controlRemote control through TCP/IP for verification, system operation and program adjustmentAdditional OptionsSPC repair station, Offline program, External barcode scannerHardwareConveyorConveyorFlat belt conveyor, automatic clamp (pneumatic), auto load and unload, automatic width adjustment	Reproducibility	Height <1% at 3 σ , Volume <1% at 3 σ
Special featuresSupports auto change program, multiboards and multiprograms inspection modesBarcode systemAuto read barcode 1D and 2D. External reader reads back side barcode (option)Server modeCentral server, multiple machines, data handlingRemote controlRemote control through TCP/IP for verification, system operation and program adjustmentAdditional OptionsSPC repair station, Offline program, External barcode scannerHardwareConveyorConveyorFlat belt conveyor, automatic clamp (pneumatic), auto load and unload, automatic width adjustment	GR&R	<10% at 6σ
Barcode systemAuto read barcode 1D and 2D. External reader reads back side barcode (option)Server modeCentral server, multiple machines, data handlingRemote controlRemote control through TCP/IP for verification, system operation and program adjustmentAdditional OptionsSPC repair station, Offline program, External barcode scannerHardwareImage: ConveyorConveyorFlat belt conveyor, automatic clamp (pneumatic), auto load and unload, automatic width adjustment	Features and options	
Server modeCentral server, multiple machines, data handlingRemote controlRemote control through TCP/IP for verification, system operation and program adjustmentAdditional OptionsSPC repair station, Offline program, External barcode scannerHardwareFlat belt conveyor, automatic clamp (pneumatic), auto load and unload, automatic width adjustment	Special features	Supports auto change program, multiboards and multiprograms inspection modes
Remote control Remote control through TCP/IP for verification, system operation and program adjustment Additional Options SPC repair station, Offline program, External barcode scanner Hardware Conveyor Flat belt conveyor, automatic clamp (pneumatic), auto load and unload, automatic width adjustment	Barcode system	Auto read barcode 1D and 2D. External reader reads back side barcode (option)
Additional Options SPC repair station, Offline program, External barcode scanner Hardware Flat belt conveyor, automatic clamp (pneumatic), auto load and unload, automatic width adjustment	Server mode	Central server, multiple machines, data handling
HardwareConveyorFlat belt conveyor, automatic clamp (pneumatic), auto load and unload, automatic width adjustment	Remote control	Remote control through TCP/IP for verification, system operation and program adjustment
Conveyor Flat belt conveyor, automatic clamp (pneumatic), auto load and unload, automatic width adjustment	Additional Options	SPC repair station, Offline program, External barcode scanner
	Hardware	
Conveyor direction/time Screw and AC serve driver, precision 0.25/P DCP fix, campra moves V/V	Conveyor	Flat belt conveyor, automatic clamp (pneumatic), auto load and unload, automatic width adjustment
סטוויפיטט מווסטמטוע מוווס סטופיע מווע אט פרויט מוועדו, ארפטאטוו ט.בטא, דיס ווג, נמוועדמ ווטעפיג איז	Conveyor direction/time	Screw and AC servo driver, precision 0.25µ; PCB fix, camera moves X/Y
X/Y driver Left to right or right to left in/out time 4 sec	X/Y driver	Left to right or right to left in/out time 4 sec
Power supply AC230V 50/60Hz <1.5KVA	Power supply	AC230V 50/60Hz <1.5KVA
Compressed air 0.4-0.8 MPA	Compressed air	0.4-0.8 MPA
Equipment communication SMEMA	Equipment communication	SMEMA
Dimension and Weight	Dimension and Weight	
Weight 980kg (ALD6710S), 1050kg (ALD6730S)	Weight	980kg (ALD6710S), 1050kg (ALD6730S)
Dimensions 1000x1540x1610mm (ALD6710S), 1000x1540x1610mm (ALD6710D), 1200x1540x1610mm (ALD6730S, ALD6730D), 2100x1210x1550mm (ALD6750S)	Dimensions	
Conveyor height 870-970mm	Conveyor height	870-970mm

Above specifications are subject to change without notice. Images used in the brochure are for illustrative purposes only

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1200

System footprint dimensions are shown for model ALD6730S.

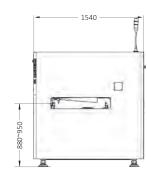
For other models please refer to the specification table



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08.2021

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