

NSpecDL

automatic optical inspection



- ❑ Inspects
 - SMT & through hole components
 - Reflow & wave soldering joints
 - 2D solder paste & solder fillet
 - Missing components, component type & extra parts
- ❑ High-speed digital XGA color camera (CameraLink® interface)
- ❑ DOAL (diffused on axis lighting), side & main lighting using LED's
- ❑ Telecentric lens STANDARD
- ❑ Analysis via synthetic imaging (color), grayscale & histogram
- ❑ Imports PnP data and Gerber files
- ❑ Programmable with library or golden board
- ❑ First article mode for quick set up
- ❑ Automatic custom library generation
- ❑ Choose from different resolution/field of view combinations
- ❑ Available for medium and large PCB sizes
- ❑ Software for all NSpec versions fully compatible

because inspection matters

Specifications	NSPEC DL14	NSPEC DL18	NSPEC DL26
Includes	Macintosh computer, 17" Monitor, Software, DOAL (Diffused on Axis Lighting), Red LED Light, 2 Days On-Site Training, PCB Lift Plate (DL26 only)		
Dimensions	29.5 x 30 x 12"	34.5 x 36 x 12"	46.85" x 40" x 18.75"
Weight	113 lbs.	196 lbs	231 lbs.
Power Source	110 / 240 Volts (switchable), 60 Hz (3 outlets)		
Programming	"Golden" Board or Centroid Data Import		
Positional Accuracy	< +/- 0.0012"		
Board Clearance (over/under)	40/35mm	40/60mm	
Average Inspection Speed	75,000 - 85,000 CPH		
Maximum Inspection Area	9.8 x 13.75"	13.75 x 17.5"	25.6" x 21.7"
Minimum Component Size	0201 (optional 01005)		
Camera	Digital Color CCD Array, Self-Calibrating, Multi-Mega Pixel		
Camera Interface	CameraLink®		
Camera Interface Speed	5,000 Mbps		
Camera Movement	X Direction	X + Y Direction	
PCB Movement	Y Direction	Stationary	
Field of View	34mm x 25mm		
Magnification	10x/20x Switchable On the Fly (Optional 12.5/25x or 20/40x)		
Lighting	Omni-directional Triple LED: Side, Main, DOAL (Diffused on Axis Lighting)		
Operating Variables	Brightness, Hue Saturation, Color, Lighting		
Operating Principle	Pattern Matching, Wave Analysis		
Defects Detected	Missing Components, Skew, Component Polarity, Offset, Bridging, DIP Switch Position, Component Type, Solder Paste (2D), Solder Fillet, Extra Parts		

Defects Detected

Service & Support

	Chip CR1006	Diode	Melf	Transistor	SOP/QFT/ Connector	Axial Chip	Radial	DIP IC	DIP Switch	2D Paste Inspection
Missing Components	●	●	●	●	●	●	●	●	●	
Polarity		●	●	●	●	●	○	●	●	
Offset	●	●	○	●	○					
Bridges				●	●					
Other								on/off	●	
Solder Fillet	●	●	●	●	●			●		

● Measurable
 ○ Measurable depending on conditions

The inspection function is one of the most complex in the manufacturing process. Christopher Associates offers over 20 years of experience in inspection and quality control and delivers technical and applications support that is among the best in the industry. Training is thorough and in-depth support is available either from our engineers or on line at our website 24 hours a day, 7 days a week

All of the NSpec systems come with a standard 18 months warranty against manufacturer's defects.