



The ND 680 is an advanced Automated Optical Inspection (AOI) machine developed by Neodentech. It is designed with a range of features to ensure comprehensive and accurate testing and analysis of PCBs. The machine supports automatic programming, manual programming, and CAD data import, and automatically corresponds to the component library. It uses optimized detection technology to cover the entire circuit board and can handle jointed boards and multiple marks. The ND 680 is capable of detecting a wide variety of potential defects in components, mounting, solder joints, and PCBs. Its image recognition feature automatically sets parameters according to different inspection requirements. This state-of-the-art AOI machine from Neodentech represents a significant advancement in PCB inspection technology.

TECHNICAL FEATURES

Programming mode	: Automatic programming, manual programming, CAD data import, and automatic corresponding to component library.
Test mode	: Optimized detection technology covering the whole circuit board. Jointed board and multiple marks, with Bad Mark function.
Detection type	: Component defects such as whether there is solder paste, offset, insufficient solder, excess solder, open circuit and contamination; mounting defects such as missing part, offset, skewing, tombstone, mounting on side, turnover, wrong parts, damage and reversal, etc.; solder joint defects such as excess solder, insufficient solder, pseudo soldering, and solder bridge, etc.; and PCB defects such as copper foil contaminated, black pad, de-lamination, copper foil missing, and oxidation, etc.
Image recognition	: Automatically set the parameters (e.g. shift, polarity, short circuit, etc.) according to different inspection requirements.
SPC statistical function	: Record the test data in the whole process and carry out statistics and analysis, and production status and quality analysis can be viewed in any area.
PCB dimension	: 50*50mm (Min) - 400*360mm (Max)
PCB degree of curvature	: < 5mm or 3% of the diagonal length of PCB
PCB component height	: Above: < 30mm, Below: < 50mm
PCB transmission system	: Bottom-up fixing, automatic compensation of PCB deformation, automatic getting in and out of board, and automatic adjustment of width
Positioning accuracy	: < 16um
Movement speed	: 800mm/sec
Image processing speed	: 0402chip < 12ms
Camera and lighting system	: Full-color high-speed digital CCD camera, with resolution of lens of 10, 15, 18 and 20um, three-channel RGB light source
Driving system	: AC servomotor system, precision grinding ball screw
Minimum part test	: 0402chip & 0.4 pitch IC
Software system	: Windows XP
Calculation method	: Color operation, color extraction, gray level operation, image contract, etc.
Output display	: 22-inch wide-screen ((16:10, 1680*1050 resolution) monitor
Output signals	: OK / NG signal, equipment running state signal, alarm signal
Network communication	: Supported
Data transmission tool	: Support multiple common formats such as CAD, Excel and Txt
Equipment weight	: 560KG
Overall dimension of equipment	: 1000*950*1580mm (LxBxH)
Air pressure requirement	: Pipeline compressed air, ≥0.49MPa

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