GLUDITEC
Glue & Dispensing Technology

Technical Data Sheet

IGC-540AOI

Conformal Coating AOI Unit

Introducing the GLUDITEC IGC-540AOI, a cutting-edge AOI system tailored for precision in conformal coating processes. This advanced system boasts X, Y, Z three-axis motion, ensuring accurate boundary detection for a conformal coating layer of circuit board in spraying applications. The device offers customizable detection areas and alarm requirements, allowing for tailored and efficient operation. With an exceptional system accuracy of ± 0.02 millimeters, the IGC-540AOI guarantees unparalleled precision in every application.

Designed for user-friendly adaptability, the device features an intelligent electric width adjustment function, enabling seamless adjustment of board width by inputting the required dimensions into the software. Programming is effortlessly accomplished through manual teaching with a mouse and keyboard set, ensuring simplicity and convenience in operation. Moreover, the IGC-540AOI is engineered for seamless integration into production lines, supporting whole line docking by connecting to signals from other equipment. Elevate your conformal coating processes with the precision, adaptability, and connectivity of the GLUDITEC IGC-540AOI, where cutting-edge technology meets user-friendly design for superior results.

IGC-540AOI

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SPECIFICATION

Properties	IGC-540AOI
External dimensions	L1060mm x W1200mm x H1700mm
Control mode	Industrial control computer & motion integrated control board card
Running software	Independently developed control software & Windows system
Programming method	Manual teaching
Transmission height	More than 1000
Amplitude modulation method	910±20mm
Edge space	≥5mm
Transportation speed	0~3500mm/min (adjustable)
Transmission motor	Stepper motor
Conveyor rail width	50~450mm
PCB board size	Max. 450 x 450 mm
Detection area	X 450 Y 450 mm (depending on actual situation
Component height	± 110mm
Adjustable method	Intelligent electric adjustment
Driving method	Stepper motor + dual precision screw drive
Three axis drive	Servo motor + precision screw module drive
Three axis drive	Servo motor + precision screw module drive
Three axis speed	Max. 800mm/s
Repetitive accuracy	± 0.02mm
Gating port	SMEMA connector
Camera and lens types	A delivated CMOS color camera, 5 megapixel, paired with a 16mm lens
Camera light source	2 sets of light sources (blue and ultraviolet)
Detection type	Can detect boundary of the three prevention spraying effect, but cannot detect the thickness
Lighting part	Equipment comes with its own lighting source
Power supply	AC220V 50Hz 1.8kW
Total weight	About 600kg

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GUIDELINES FOR AOI TESTING IN COATING PROCESSES

- Automated Optical Inspection (AOI) equipment, also known as Automatic Optic Inspection, utilizes optical technology to identify defects commonly found in welding and conformal coating processes. The high-speed and high-precision visual processing technology of the testing equipment scans the PCB board for batch glue application using a fluorescent agent. The AOI system compares actual measurement points with preset reference parameters to detect defects such as insufficient or excessive glue application. Upon detection, the system displays these defects either visually or through automated alerts.

- During the automatic detection process, the PCB board is fed into the equipment, triggering a signal to the computer when it enters the detection area. A CMOS color camera captures images of specific areas for inspection based on predefined criteria. The system then analyzes these images to determine if the detected areas meet quality standards, providing feedback in real-time. In case of non-conformities, an alarm is activated.

- The equipment's functionality includes precise one-axis motion control (X, Y, Z) for accurate boundary detection during circuit board coating processes. Users can customize detection areas and set alarm thresholds according to their requirements. With a system accuracy of 0.02 mm, the equipment features an intelligent electric width adjustment function that automatically adapts to different plate widths specified in the software settings.

- The programming interface allows for manual teaching using mouse and keyboard inputs for seamless integration with other production line devices through signal docking capabilities.