



# LADYBIRD

*AOI Unit for Parts Side Inspection*



Zero false alarm usefulness created on an actual production site !!

**LADYBIRD · LADYBIRD SERVER**

\* The photograph shows an example in which the product is installed on a cell line work table.

SANKO  
Universal Neo Zeal  
**SUNZ**

# Inspection items

Various types of inspection are possible including the typical inspection of parts shown below:



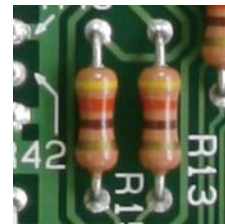
Polarity and existence of clear parts



Polarity and existence of electrolytic capacitor



Polarity and existence of diodes



Existence of resistors



Existence of parts



Polarity and existence, wrong pin number for IC



Wrong connector color



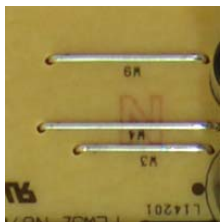
Polarity and existence, wrong pin number for connectors



LED color and brightness



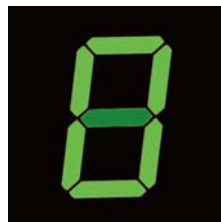
Existence of parts with the same color on white boards



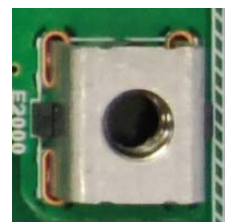
Existence of jumper leads



Excessive inclination of parts



Brightness and lighting failure in each segment



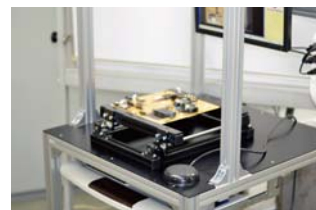
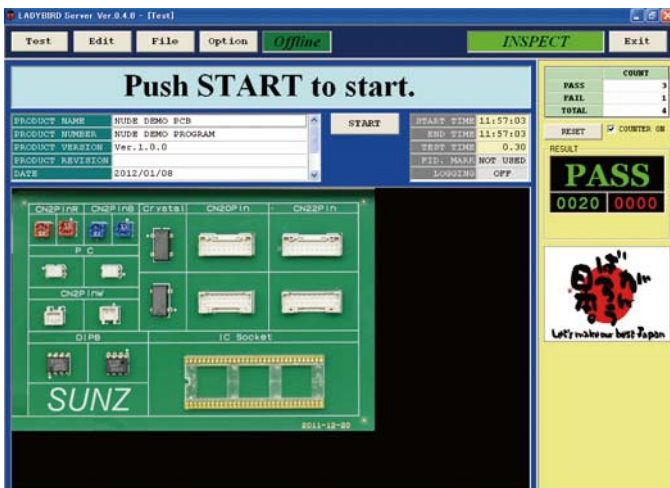
Screw existence



Polarity and existence of white photo couplers

# Features

With all useless functions and parts eliminated, inspection is possible only by installing the product on an existing work table. The existing lights on the work table can be used as the light source unless there are special reasons.



The operator required is to push the start switch only.



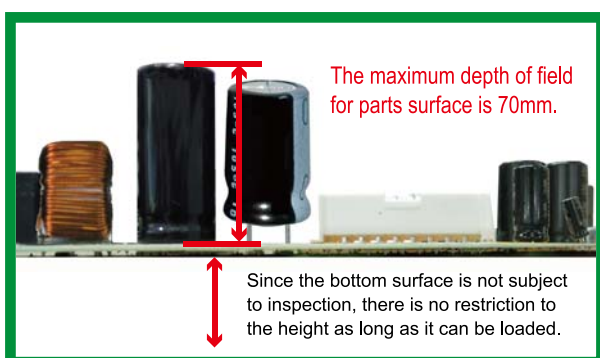
High-resolution Camera unit



\* In-line type

A scene from utilization on site  
Zero false alarm realized

Adopts the **FuzzicalZ** engine which succeeds the genealogy of DIPSTAR. Anyone with experience in using DIPSTAR will know what to do.

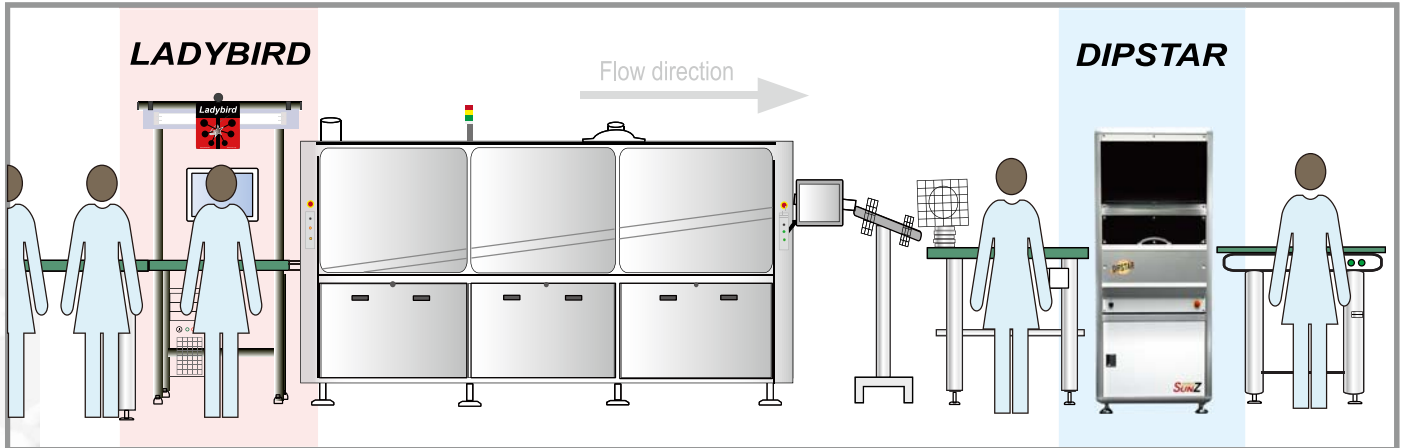


- It does not apply pattern matching at all for inspection method.
- Adopting the proprietary **FuzzicalZ** engine to make judgments by color analysis, it practically realizes "zero false alarm (zero false detection)."
- The basic inspection speed is 5 seconds per board including image pickup and inspection. There is sufficient time even for high-speed lines with tact time of 20 seconds or shorter.
- Since the large depth of field, polarity of electrolytic capacitor with height of 70mm can be inspected without problem.
- Since program preparation and debugging is conducted on SERVER, there is no need to stop the inspection terminals.
- All of the inspected images can be stored.

# Automation of DIP line inspection

Appearance of strong hand in measures to replace  
【visual inspection with focused points】!

In the past, it was considered difficult to automate the inspection of “DIP manual insertion line,” and visual inspection was nearly taken for granted. If defects are missed, the countermeasure was [visual inspection with focused points]. Although there were various reasons that prevented automation of inspection, it did not address customer satisfaction. By installing LADYBIRD “Before Wave Soldering Machine” and DIPSTAR “After Wave Soldering Machine,” 100% test coverage can be addressed. The data collection function also delivers analysis reports on defect tendencies, which allows quick feedback in process / design improvement and development of a “line without defects.”



## System configuration outline

### 【Programming server】

Model: LADYBIRD SERVER



#### Roles of a server

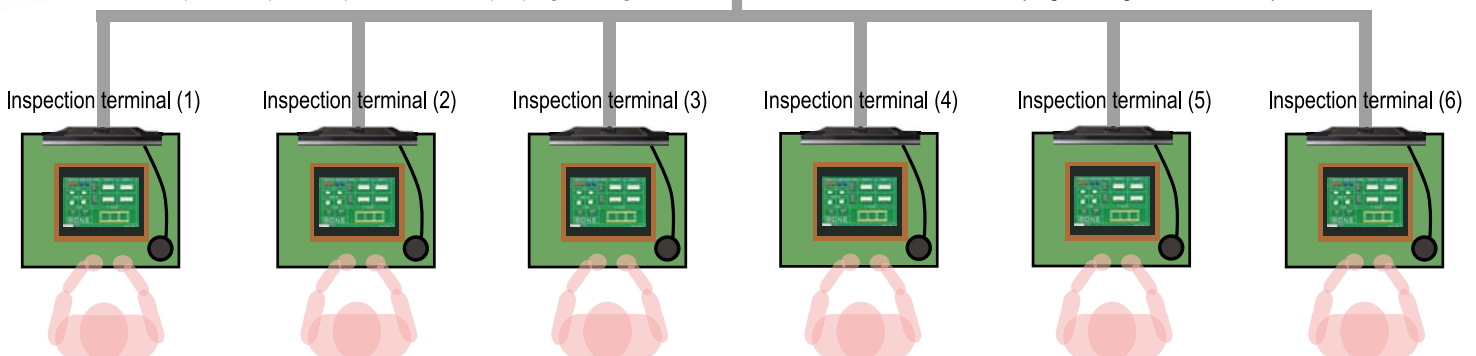
- (1) Preparation of test programs
- (2) Debugging of test programs
- (3) Storage of test programs
- (4) Management of test terminals

### 【Inspection terminal】Model LADYBIRD

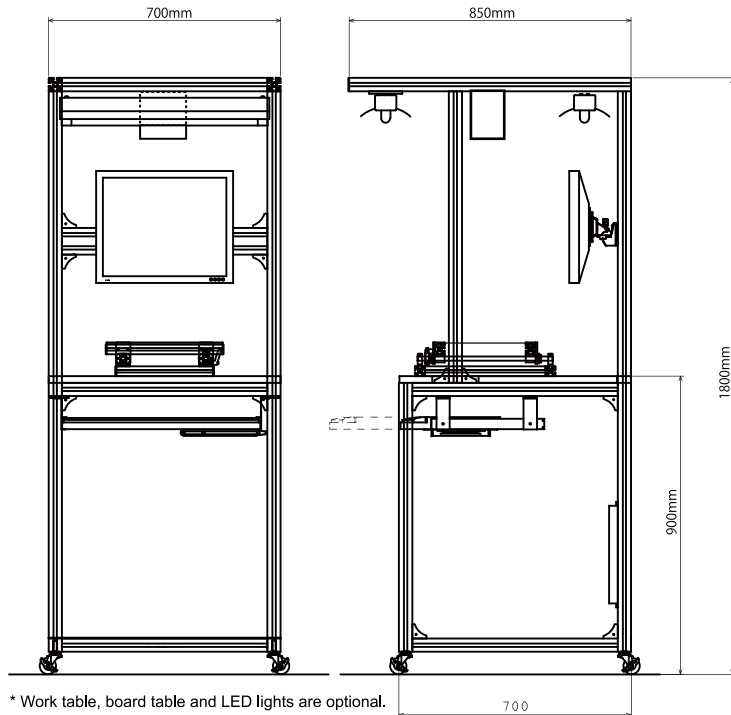
\* Connection possible up to 6 inspection terminals per programming server unit.

\* Program preparation, editing, and storage work cannot be implemented at all on the inspection terminals. With this measure, the cases in which the judgment criteria vary among the terminals can be prevented, since only the administrator can control the inspection programs.

\* Standard Kit includes 1 unit of programming server and 5 inspection terminals.



# Specifications



## Inspected board specifications

Board size (Standard)	50mm × 50mm to 250mm × 330mm
Board size (HD)	50mm × 50mm to 460mm × 610mm
Board thickness	0.5 to 2.0mm
Board warpage	3mm or less
Height of parts (bottom)	20mm or less, customization possible
Height of parts (top)	70mm or less

## Inspection specifications

Image capture	One shot taken per view
Inspection speed	5 seconds (40 inspection items)
Inspection subject	Manually inserted parts, LED colors
Inspection method	FuzzicalZ (color judgment)
Inspection precision	Adjustable by board size and subject parts

## System specifications

Power supply	AC 100V to 240V 1.5KVA
Environment of use	Temperature: 15 to 35 °C, humidity: 30 to 80%
Weight	20kg (work table not included)
Camera unit	CMOS camera
Camera pixel count	24 million pixel (Standard), 36.3 million pixel (HD)
Controller	PC OS: Windows XP, Windows 7
LCD monitor	19-inch
Supported codes	Barcode, 2D code

\* Code reader is optional.

Please note that the information on specifications described on this catalog is subject to partial change without prior notice for purposes of product improvement.

### MANUFACTURER:



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