

Benchtop High Speed Coating Inspection System

BF-Rigel

Auto Inspection on Coating Condition

With our unique Automated Coating Inspection System(*1), BF-Rigel enables to inspect various coating conditions(*2) of the customers.

(*1) Line Scan Technology enables to scan and capture image of entire PCB in a single pass. Multiple-images are displayed by one scanning with alternated lighting system (UV (ultraviolet)+optical line).

(*2) Inspection target is the coating agent with fluorescent dye. Compliant with varied coating conditions such as dispenser coating, hand coating, spray coating, full coating, and partial coating etc.

Tele-centric Optical System

The Telecentric lens system was designed to compensate for image distortion for accurate detection: enables to take highly accurate image without wrap, and also eliminates blind area even with manually inserted tall components.

High Clearance

The PCB clearance .85mm at the top and 60 mm at the bottom which is one of the industry largest size, is designed to allow inspection of PCB in post-dip process with large components mounted.



Capacitor



Cement Resistor



Connector

Image Processing which Highlights Coating

The unique image processing, of the image taken by UV lighting, allows for clear judgment by highlighting luminance in the coated area, where it is hard to inspect visually.

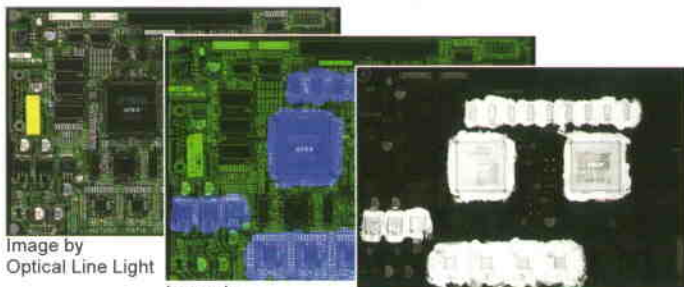


Image by Optical Line Light

Image by UV Light

Image by Saki Original Image Processing

Coating Specified Area

In our inspection system, it allows to inspect Non-Wetting or Partial Non-Wetting condition which is visually difficult to detect.

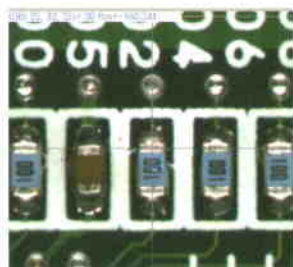


Image by Optical Line Light



Image by Saki Original Image Processing

Coating Banned Area

Only the area that coating agent attached shines, therefore it enables to detect splattered coating agent and also pin head inside connector which is hard to inspect visually.

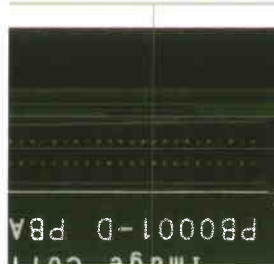


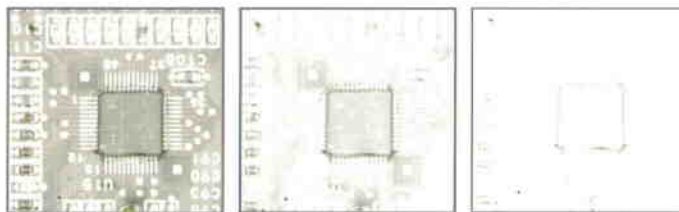
Image by Optical Line Light



Image by Saki Original Image Processing

Coating Thickness Inspection

Thin coating can be detected by measuring the gap between the specified (any value) luminance and actual luminance, in the case of the actual value goes under the criteria value.



Thin Thick Thin Thick Thin Thick

Traceability

By using barcode recognizing function, 1 and 2 dimensional barcode(QR code/Data Matrix) can be recognized automatically(2D is optional). Additionally, traceability of production boards is available if combined with optional systems of Saki.

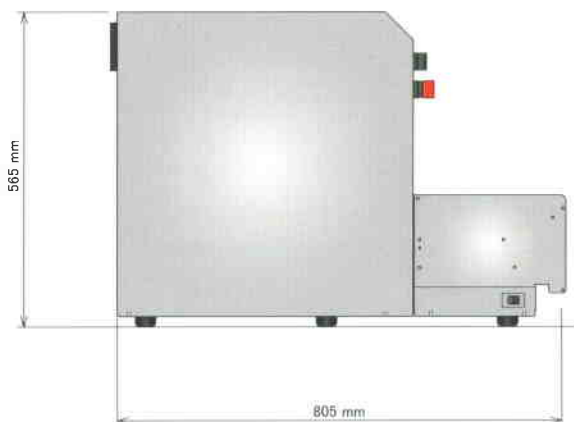


Dimensions

■ Front View



■ Side View



System Specifications

Model	BF-Rigel
Resolution	18µm
Board Size	50×50mm - 250×330mm, 2×2 - 10×13in.
Board Thickness	0.6mm - 2.5mm, 24 - 200 mils
Board Warpage	+/-2mm, 79mils
PCB Clearance	Top:85mm(3.35in.), Bottom:60mm(2.36 in.)
Inspection Categories	Missing, Non-wetting, Excess, Peeling, Air-Bubble, Foreign-Material
Tact Time	Approx. 20sec. (250×330mm) ^{*1 *2}
Image Scanning Time	Approx. 14sec. (250×330mm) ^{*1}
Camera (Image Processing)	Line Color CCD camera
Lighting	LED Lighting System
UV Peak Wave length	375λ(nm)
Operating System	Windows XP English Edition
Optional System	BF-Editor / BF-RP1 / BF-View
Optional	2D Barcode Recognition

^{*1} If PCB size is smaller than 250x330mm, Image scanning time will be shorter than this values.
^{*2} Including Image Scanning Time.

System Requirements

Electric Power Requirement	Single Phase ~100 - 120V / 200 - 240V +/-10%, 50/60Hz
Power Consumption	400VA
Air Requirement	Not needed
Usage Environment	15(59F) - 30°C(86F) / 15 - 80% RH (Non-condensing)
Dimensions W×D×H (Main Body)	420×805×565mm, 16.54×31.69×22.24in.
Weight	Approx. 45kg (Excluding Monitor and PC)

BF-Rigel: Origin of the Name

Rigel is the super-giant star shining blue-white in Orion, which constitutes The Winter's Diamond together with Procyon of Canis Minor (Little Dog), Sirius of Canis Major (Great Dog) etc. It irradiates strong ultraviolet rays with the peak wavelength approximately 300nm. This product, BF-Rigel is named after the star, since image processing is practiced on the images taken with ultraviolet lighting system.

saki Saki Corporation

URL: <http://www.sakicorp.com> E-mail: sakicorp@sakicorp.com

Headquarters

Ogawa Building, 4-14-7, Nakanobu, Shinagawa-ku, Tokyo, Japan, 142-0053
 TEL: +81-3-5788-6280 FAX: +81-3-5788-6295

Saki (Shanghai) CO., LTD

Room 809, Kerry Everbright City, No. 218 West Tian Mu Road, Zhubei District, Shanghai 200070, P.R.C.
 TEL: +86-21-6282-2266 FAX: +86-21-5230-5002

Saki America, Inc.

2378C Walsh Ave Santa Clara, CA 95051, USA
 TEL: +1-408-567-0300 FAX: +1-408-727-7810

Global Network

Germany office (Munich)
 TEL: +49-89-309-04-69-0
 FAX: +49-89-309-04-69-00

China off:
 TEL:
 F:

Ko
 TEL:
 FAX:

ASSYS
 Convincing Technologies

Pumpwerkstrasse 23 • CH-8105 Regensdorf, Switzerland
 Phone +41 44 840 58 58 • Telefax +41 44 840 58 64
 e-mail: mail@assys.ch • www.assys.ch
Mexico office (Guadalajara)
 TEL: +52-1333-440-7032