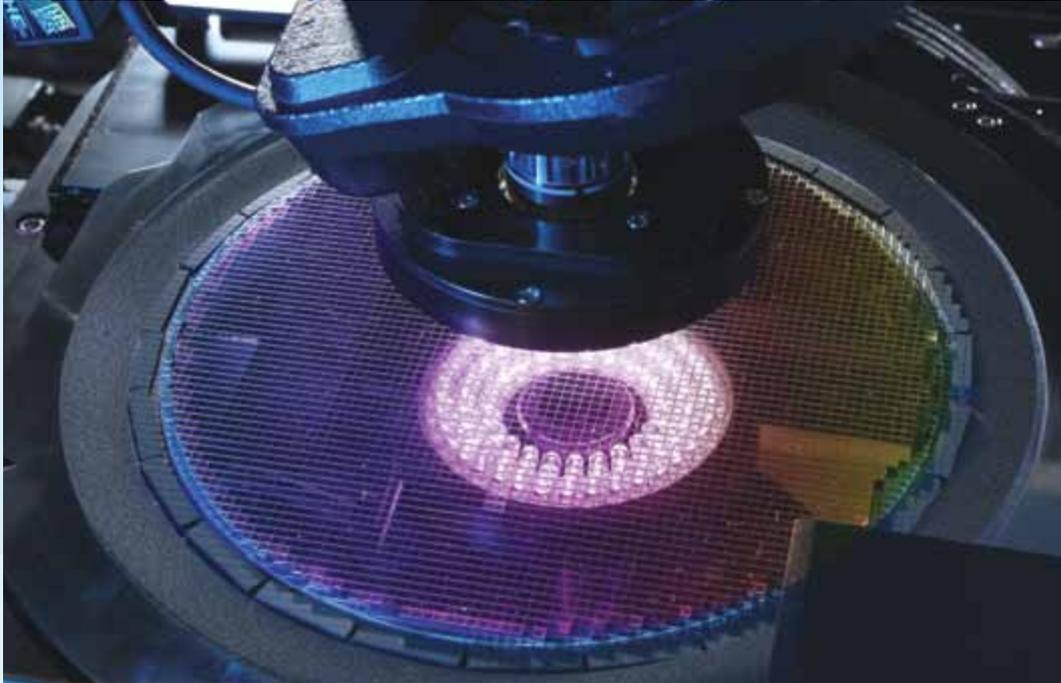


WAFER INSPECTION SYSTEM

MODEL 7935



Chroma 7935 wafer inspection system is an automatic inspection system for after-dicing wafer chip. The appearance defects of wafer chip are clearly conspicuous by using advanced illumination technology. Illumination and camera acquisition mode can be adjusted for various wafer chip, like LED, CMOS image sensor and laser diode.

Applied with high speed camera and inspection algorithms, the 7935 can inspect a 2" wafer in 2 minutes for specific defect items; the throughput is about 15 msec/chip. The 7935 also provides auto focus and warpage compensation function to overcome wafer warpage and chuck leveling issue. There are three magnification objective lens for selection by corresponding chip size or defect size. The minimum resolution of the system is 0.7um that has capability to detect 2 um defect.

System Function

After the tape expansion process, the arrangement of dies on wafer may be formed an irregular alignment. The 7935 also offers software alignment function to adjust wafer alignment angle for scan. In addition, the 7935 owns a friendly user interface to reduce user's learning time. All of inspection information like mapping map, defect region, inspection results is visualized for easy reading.

Defect Analysis

Inspection result raw data are recorded not only pass/fail information but also bin data. This is easily to analysis an optimal parameter that achieves the balance of overkill and underkill. The data also helps to monitor the defect trend caused by the production process, and feedback to production unit in advance.

In conclusion, Chroma 7935 is an ideal cost and performance selection for wafer chip inspection process.

KEY FEATURES

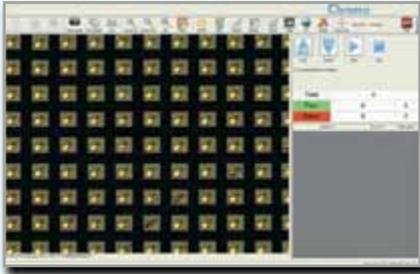
- Maximum 8 inch wafer handling capability (10 inch inspection area)
- Unique detection algorithm can be replaced or added for different customer or model
- No precise wafer loading is needed because of auto alignment function
- Edge finding to test various wafer shapes
- Defect criteria editor for versatile pass/fail criteria setting
- Chip Optical Character Recognition > 98%
- Combine AOI and upstream machine data and upload a final mapping file for downstream machine
- Editable inspection report for defect analysis
- Suitable for LED, laser diode, CIS, and other wafer chip



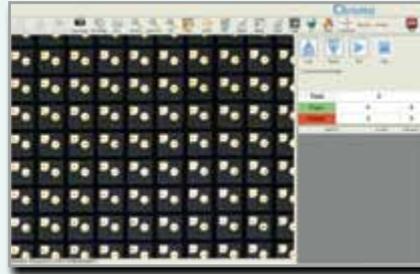
Chroma

APPLICATIONS

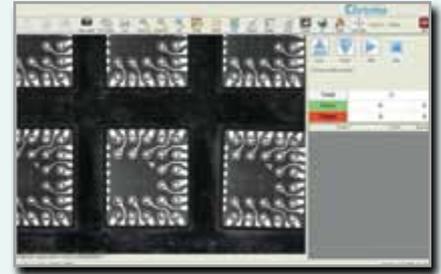
Application for Laser Diode



Application for LED Chip



Application for CIS Chip



Laser Diode Inspection Items



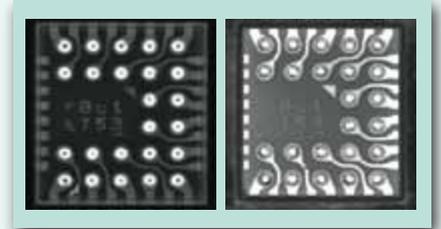
- Photosensitive Region Defect
- Bond Pad Defect
- Passivation Film Defect
- Scribe Line Defect
- Chipping
- Double Chip

LED Inspection Items



- Pad Defect
- Pad Residue
- ITO Peeling
- Finger Broken
- Mesa Abnormality
- Epi Defect
- Chipping
- Chip Residue

CIS Inspection Items

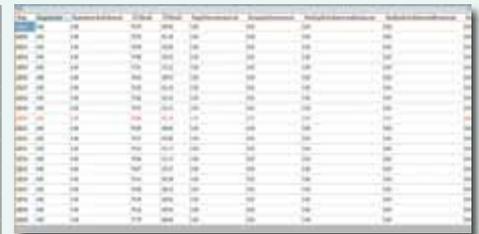


- Ball Missing
- Ball Chipping
- Ball Shift
- Lead Short
- Lead Open
- Lead Notch

SPECIFICATIONS

Model	7935
Suitable Chip and Package Type	
Applicable Ring	Grip ring holder or wafer holder
Inspection Area	10", suitable for 6" expanding wafer and 8" sawing wafer
Chip Size	125um x 125um ~ 1.2mm x 1.2mm
Chip Height	10um ~ 1.5mm
Chip Type	LED, laser diode, CIS and other wafer chip
Inspection	
Camera	5M color camera
Light Source	LED co-axis lighting, ring lighting, back lighting
Magnification	Multiple magnifications for selection, 2X, 5X and 10X
Throughput	2 minutes for 2" wafer at 2 lighting modes
Algorithm	Basic algorithm : pad defect, mesa defect, chipping defect, emitting area defect Advance algorithm : finger defect, epitaxy defect
External Interface	Provide external algorithm interface to replace or add new inspection algorithm
System	
Loading/Unloading	Auto cassette x 2
Warpage Compensation	Software auto focus and mechanical focus supporting to overcome wafer warpage
MTBF	> 500 hours
Computer/OS	1 set / Windows
Software Function	
Monitor	Real-time wafer map display
Image Storage	All/defect image saving selectable
Report	Including chip position, defect type, inspection results
Cassette Selection	Programmable cassette selection and scheduling
Facility Requirement	
Dimension (WxDxH)	1300 mm x 900 mm x 1600 mm
Weight	800 kg
Power	AC 220V ± 10%, 50/60 Hz, 1 Φ, 2KW
Compressed Air	0.6 MPa

SOFTWARE INTERFACE



Detail defect raw data for analysis



Flexible editor for combining with upstream tester bin data

ORDERING INFORMATION

7935 : Wafer Inspection System

Developed and Manufactured by :

CHROMA ATE INC.

TAIWAN HEADQUARTERS
T +886-3-327-9999
F +886-3-327-8898
http://www.chromaate.com
E-mail : info@chromaate.com

HSINCHU
T +886-3-563-5788
F +886-3-563-5758

KAOHSIUNG
T +886-7-365-6188
F +886-7-364-9500

CHINA
CHROMA ELECTRONICS
(SHENZHEN) CO., LTD.
T +86-755-2664-4598
F +86-755-2641-9620

JAPAN
CHROMA JAPAN CORP.
T +81-45-542-1118
F +81-45-542-1080

U.S.A.
CHROMA ATE INC. (U.S.A.)
T +1-949-421-0355
F +1-949-421-0353
Toll Free: +1-800-478-2026

EUROPE
CHROMA ATE EUROPE B.V.
T +31-318-648282
F +31-318-648288

CHROMA SYSTEMS SOLUTIONS, INC.
T +1-949-600-6400
F +1-949-600-6401