



Mask Inspection System MI-8700

For inspecting glass masks and film masks

Features :

1. **Ultra precision mask inspection**
 Thanks to the development of a high-resolution optical system and a high-speed image processing unit, the MI-8700 can now inspect even high-density patterns with 12.5 μm line widths. The MI-8700 provides outstanding performance, especially for inspection of today's high-precision, highly dense glass and film masks.

2. **Improved speed**
(i) Faster inspection

In addition to the 1.25 μm and 2.5 μm inspection modes available in the past, the MI-8700 features new 1.875 μm, 3.75 μm, and 5 μm inspection modes, for a total of five different inspection modes. This enables the operator to choose the optimal inspection mode for the line width of the mask being inspected, and increases inspection speed.

Inspection mode	1.25μm	1.875μm	2.5μm	3.75μm	5μm
Inspection time	4min.41sec.	3min.7sec.	2min.21sec.	1min.34sec.	1min.11sec.

Note: Size of area inspected: 406 x 610 mm
 Excluding camera movement time, alignment time, and inspection image data transfer time.
 When using two cameras

(ii) Faster setup

Transfer speed is 50% faster than with the MI-8500, thanks to a new image processing board. As a result, total setup time has been reduced significantly, compared with the MI-8500.

3. **Multi-threshold DRC inspection**

To improve the precision of black and white pin detection, which is so critical for mask inspection, the MI-8700 features two different DRC inspection circuits. Black pin detection uses an inspection image created with a high threshold value, while white pin detection uses an inspection image created with a low threshold value, and the two images are inspected individually to enable high-precision, simultaneous detection of both black and white pins.

CAM data conversion software and built-in verification unit

4. The MI-8700 incorporates CAM data conversion software and a built-in defect verification unit. This has paved the way for an inspection system that can be run with minimal costs.

High-precision inspection with detailed inspection on/off settings

5. With the MI-8700, the operator can set which areas should be inspected and which should not, to increase the resolution of both pattern matching and DRC inspection. The areas for which inspection is turned on are inspected only after the system checks for, and corrects, any position displacement.

This results in higher inspection precision.

High-sensitivity DRC inspection (CAM data pre-checking function)

6. The MI-8700 features a DRC pre-inspection for CAM data that prevents false alarms by pre-checking the CAM data. This function makes it possible to increase the sensitivity of detection of even minute nicks and protrusions, while still reducing false alarms dramatically.

Dynamic scaling function

7. The MI-8700 automatically corrects for any differences between the CAM data and the actual dimensions of the board's mask pattern. This eliminates the need for complex scaling adjustments.

Inspection of multiple patterns within a single mask

8. If the same pattern appears several times in a single mask, the operator can select one of the pattern areas as an inspection master for use in inspecting other areas. This allows for highprecision inspection even when there is no CAM data.

Glass Mask Setup Unit (option)

9. The glass mask setup unit features transfer rollers that make it easy to set up glass masks in the inspection area. It also maintains the position of the areas surrounding the glass mask during inspection, which prevents damage to the back side of the mask pattern as well as the adhesion of dust and other particles, ensuring consistent inspection.

For more information, please contact :

PCB Graphtech Pte Ltd

51, Bukit Batok Crescent #08-41/42, Unity Centre, Singapore 658077

Phone : (65) 6261 1933 Fax : (65) 6261 1938

www.pcb-graphtech.com.sg Email : pcbgt@pcb-graphtech.com.sg