

As the world of electronics production continues to push toward ever-smaller components and



packages, as well as ever-higher standards of quality, the job of providing visual inspection equipment that gets the job done is a continuous

challenge. However, for more than 20 years Hirox has been doing exactly that - applying its technical expertise in optical design and manufacturing to provide only the highest quality solution for the inspection requirement at hand.

The new Hirox BGA inspection lens, the MX-BGAZ, is the newest member of the Hirox Hi-Scope video microscope lens family, providing users the most flexible method for performing visual inspection of BGA components, including Micro BGA's. As is true for all lenses in the Hi-Scope family of lenses, the BGA inspection lens can be

used with any Hi-Scope camera and lighting main unit, providing high-resolution images of the smallest BGA components in very restricted spaces. With a width of only 0.9mm, the contact prism chip at the base of the BGA lens can fit into the tightest spaces and cope with the most challenging samples. The lighting design of the Hirox BGA Lens, through a set of included specially designed lighting tools, allows the user to direct sufficient light to the exact point of desired inspection. The lens is also fitted with an optical rotation aspect adjustment ring which allows the user to vary the actual angle of inspection, thereby always making it possible to find the best viewing angle for a given sample. With the highest quality lenses designed for nearly every type of inspection and application, the Hirox Hi-Scope system continues to demonstrate its wide range of inspection flexibility with the addition of the MX-BGAZ BGA Inspection Lens.

Close Up

Zoom Ring

Controls both magnification and focus. Second, third, and fourth row solder balls can be focused on in high resolution without the need to move the sample.

Prism Chip With Lighting



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With a width of 0.9mm, the prism chip can deliver a clear image even when components are mounted very near each other. External lighting is also collected and sent through the chip, directing concentrated light under the BGA sample.

Zoom Stopper

3D-Rotary Ring

Allows the inspector to see under the component at exactly the most appropriate angle. Whether slightly above or below horizontal, or slightly left or right of straight ahead, the Rotary Ring provides further degree of control while inspecting in tight spaces.

Bubble Level Gauge

Provided to help the user to confirm and adjust the prism chip to a true horizontal position.

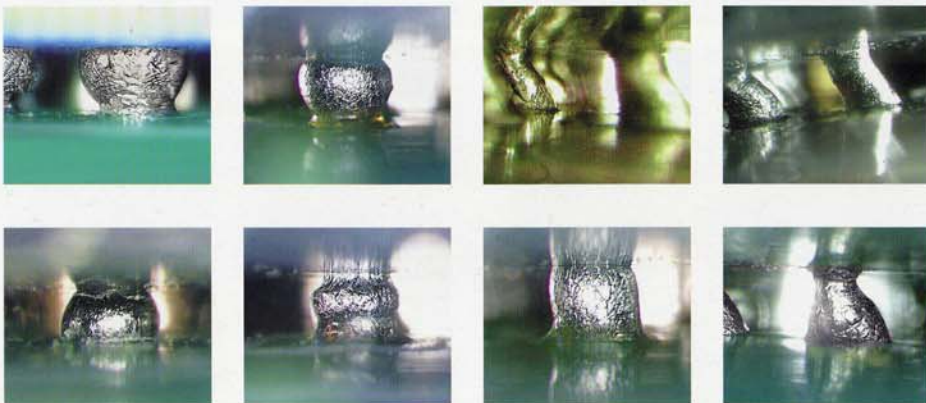
Flexible Arms

Allows the user to position the various lighting tools exactly in the position that provides the best light at all times. One flexible arm is included with the lens, but an additional arm can be added to the lens.

Light Pens & Light Brushes

Allow the user to direct concentrated light to the exact point of desired inspection. Such concentrated lighting helps to create the brightest, highest resolution images of surface details to be seen on the individual solder balls under the BGA component.

Sample Images



System Diagram

Hi-Scope KH-1000
Hi-Scope KH-2700



Other Hirox Lenses

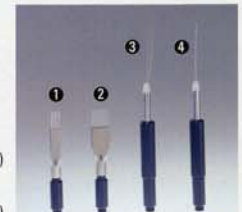


MX-BGAZ



Option

- ① AD-BGA2F
Light Pen (0.2mm)
- ② AD-BGA5F
Light Pen (0.5mm)
- ③ AD-BGA1B
Light Brush (0.1mm)
- ④ AD-BGA2B
Light Brush (0.2mm)



- KMH-24
Metal Halide Lamp
- R-246
Light Guide (φ 4mm)
- AR-W3B
Light Guide Adapter

