



Digital Microscope for PCB Inspection JBM-MZ3D

The Monozoom 3D Microscope represents a cutting-edge advancement in microscopy technology, offering a revolutionary approach to scientific exploration and observation. This sophisticated microscope is designed to provide researchers and scientists with an immersive three-dimensional experience, allowing for unprecedented insights into the microcosms

When observing the surface of an object with a microscope, it can be very difficult to determine the shape or topography of the surface since only a small area can be in focus at one time. This is especially true when capturing a photo with a camera. Some digital microscopes have the ability to scan an entire surface and capture each different area that comes into focus, combining them into one fully-focused image. The relative height data from each focal plane can then be used to reconstruct the surface into a 3D image that users can freely manipulate, making it easy to understand the true shape of the surface.

These are the main function of a 3D Microscope

- ▶ High-resolution 3D images
- ▶ Capture areas completely in focus
- ▶ Ability to inspect from any angle
- ▶ Advanced 3D measurement capabilities

High- Accuracy 3D Microscope Image With the Accurate D.F.D Method

D.F.D. stands for Depth from Defocus. The D.F.D. method calculates three-dimensional depth information based on the amount of defocusing of two-dimensional images. When the lens is shifted vertically towards the target to capture images at different heights, the focus level of an individual point changes gradually.

When a position on the target is higher, in a topographical sense, that part of the image will come into focus sooner (when moving the lens downward toward the part). When a position on the target is lower, that part of the image will come into focus as the lens is moved closer to the target.

By calculating the height position of the lens when each point in the image comes into focus, a 3D image can be created. Even if perfect focus is unable to be obtained for some areas, the D.F.D. algorithm is still capable of calculating the height location of those pixels and obtaining detailed texture information.



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Specification:

Brand	JB MICROSCOPE
Zoom Ratio	1:7
Zoom objective	0.7X-5X
Eyepiece	0.4X
Working Distance	100mm L1 Base
Vertical post height	240mm
Vertical post diameter	φ32mm
Microscope body holder	φ50mm
Focus travel	50mm
Base size	320x260x16mm
Material	Metal

LED-144TP Specification:

Outer diameter	100mm
Inner diameter	61mm
Wattage	4.5W
Input voltage	90V-264V
Output voltage	DC12V
Brightness adjust	0-100%
Working distance	40-250mm
Quantity of LED	144PCS
Brightness	20000Lux at height of 100mm
Color of light	6400K

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