DXHD56P
Zoom Digital Microscope
User's Manual

FEIN OPTIC

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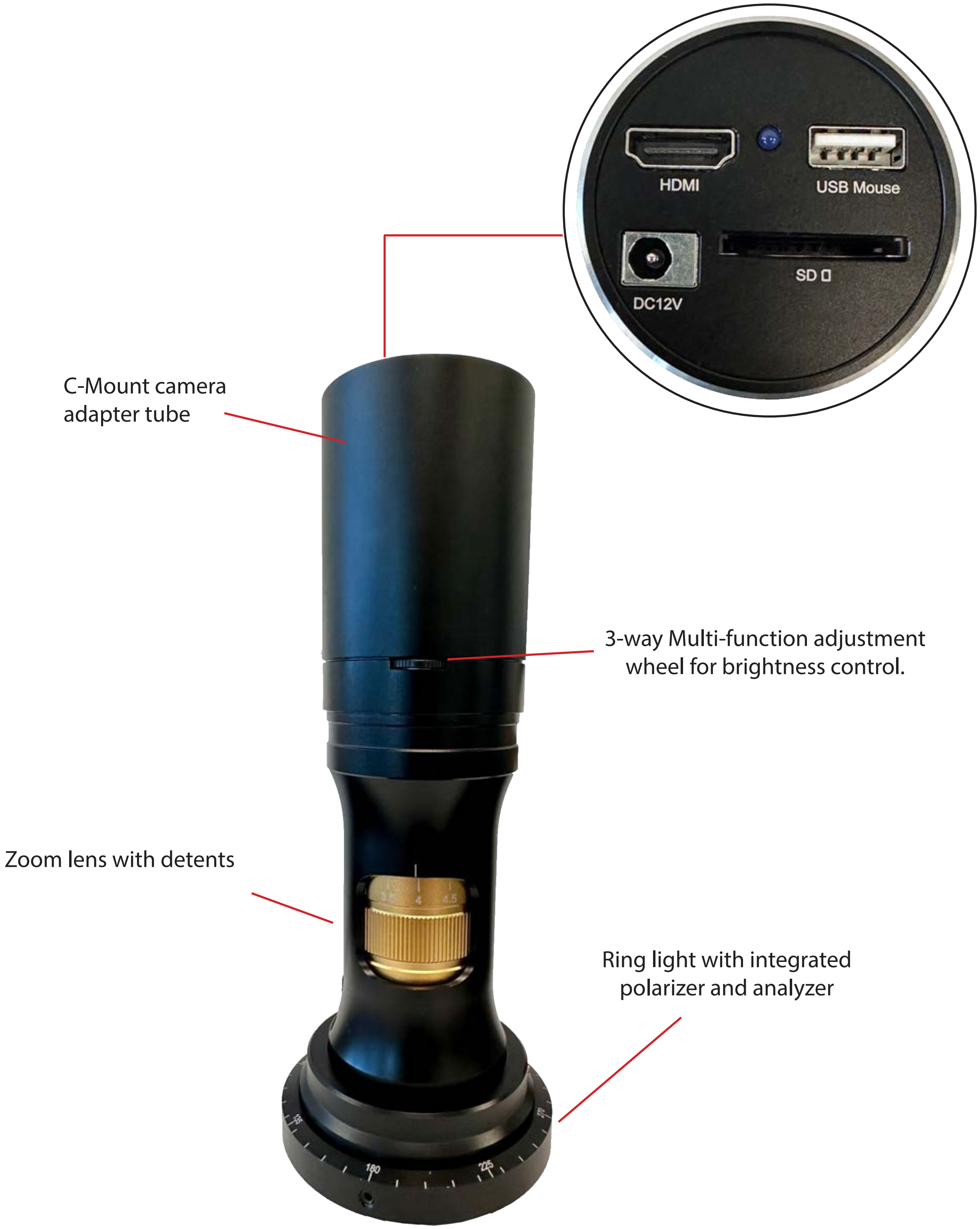
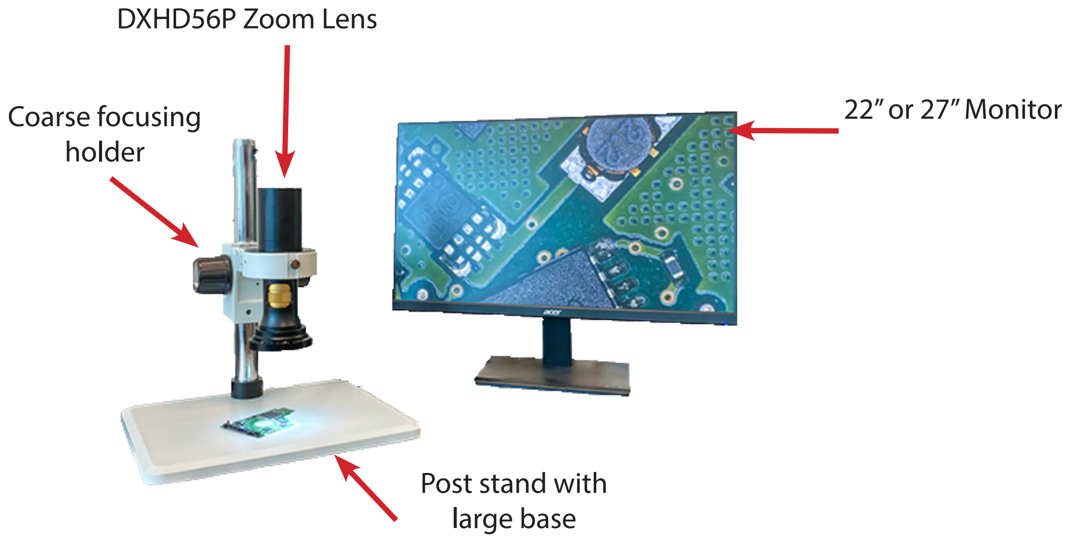
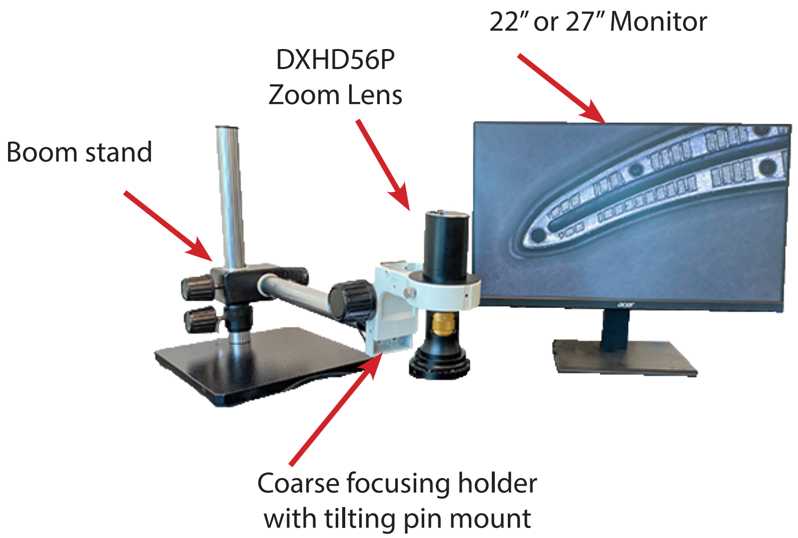
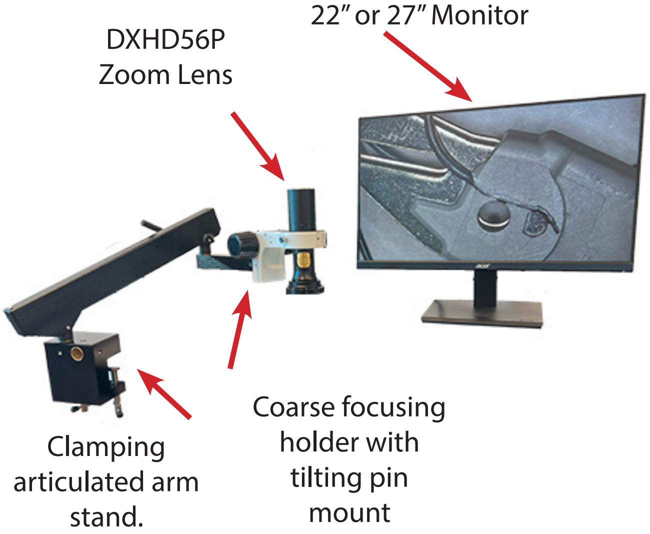
DXHD56P Zoom Digital Microscope


HDMI
USB Mouse
DC12V
SD
C-Mount camera adapter tube
3-way Multi-function adjustment wheel for brightness control.
Zoom lens with detents
Ring light with integrated polarizer and analyzer
3.5
4
4.5
135
180
225
270

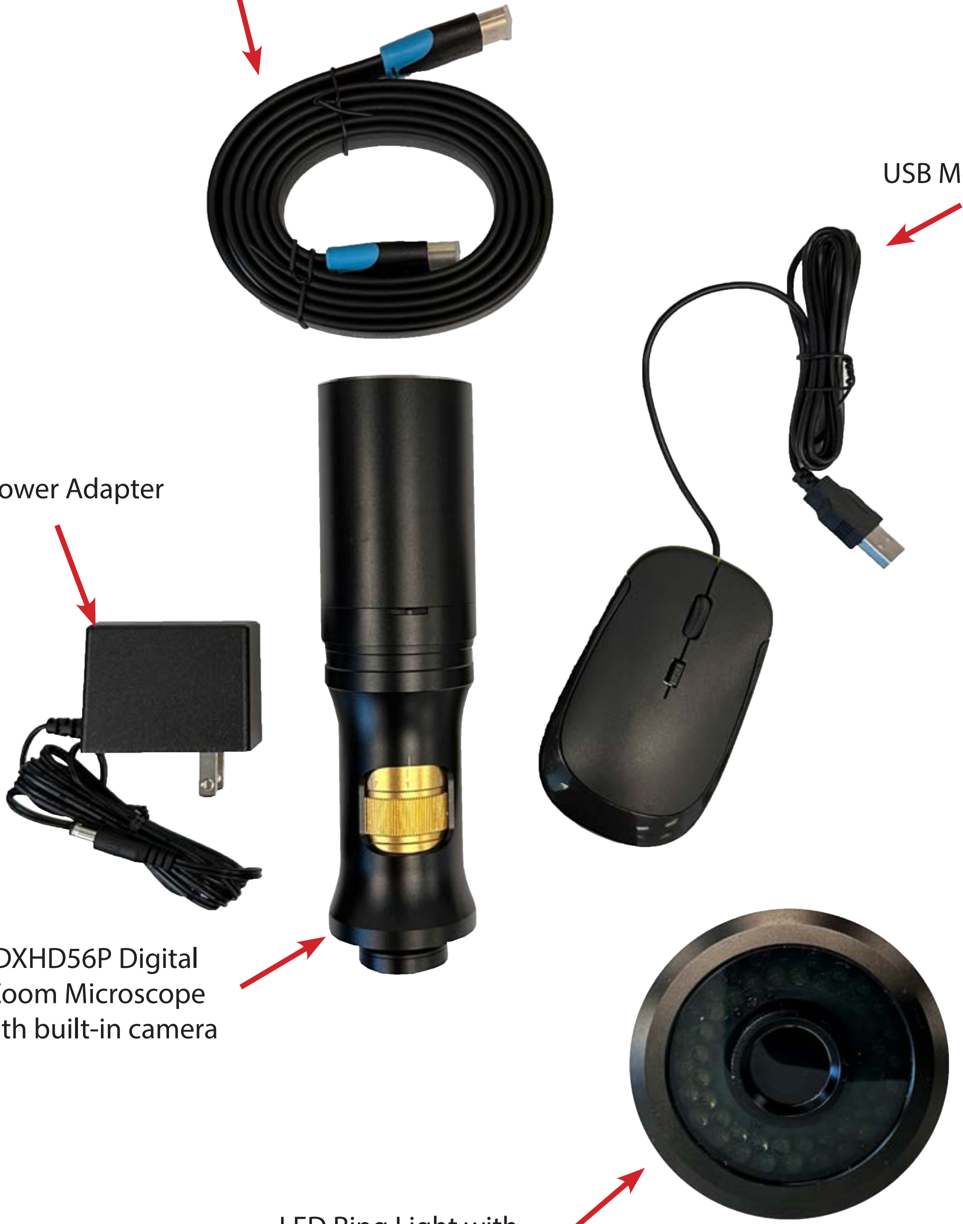
DXHD56P Zoom Digital Microscope System Components


DXHD56P Zoom Lens
Coarse focusing holder
22" or 27" Monitor
Post stand with large base


22" or 27" Monitor
DXHD56P Zoom Lens
Boom stand
Coarse focusing holder with tilting pin mount


22" or 27" Monitor
DXHD56P Zoom Lens
Clamping articulated arm stand.
Coarse focusing holder with tilting pin mount

DXHD56P Zoom Digital Microscope Components



HDMI Cable

USB Mouse

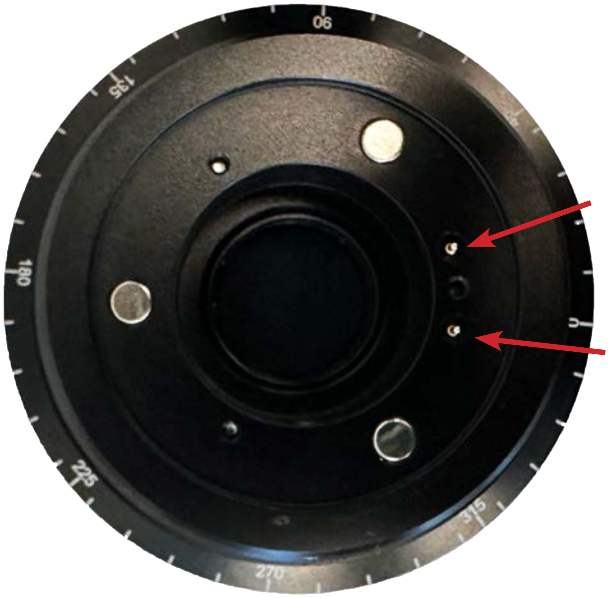
Power Adapter

DXHD56P Digital Zoom Microscope with built-in camera

LED Ring Light with integrated polarizer and analyzer

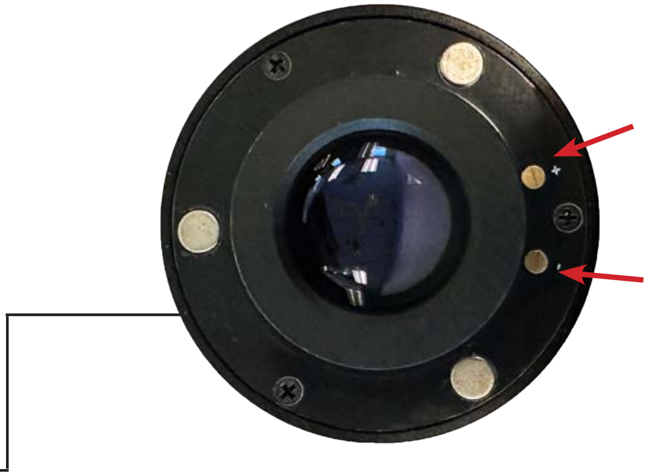
DXHD56P Zoom Digital Microscope Assembly

The LED Ring Light with integrated polarizer and analyzer will already be assembled when you receive your system. However, should the ring light ever need to be removed and reassembled, ensure that the pins of the LED Ring Light align with the connector points on the underside of the microscope. Failure to align the pins with the connector points will result in the ring light not being supplied with power.



LED Ring Light pins

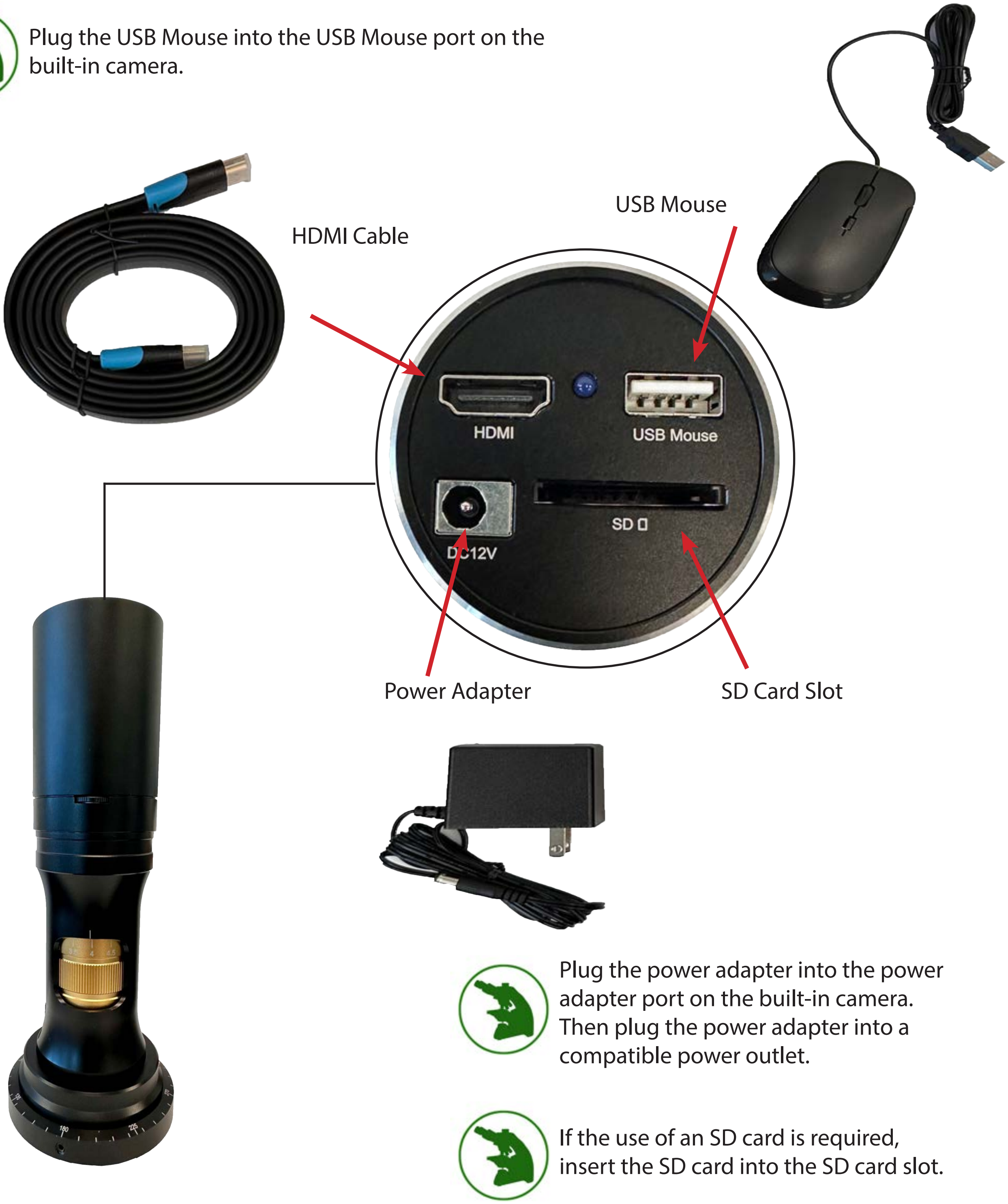
Connector points on underside of microscope



Camera and Monitor Assembly

Plug one end of the HDMI cable into the HDMI port on the built-in camera. Plug the other end of the HDMI cable into the HDMI port on the monitor.

Plug the USB Mouse into the USB Mouse port on the built-in camera.

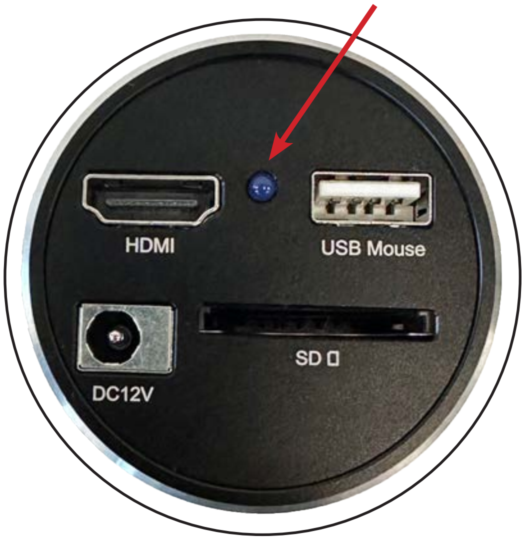

USB Mouse
HDMI Cable
HDMI
USB Mouse
DC12V
SD
Power Adapter
SD Card Slot

Plug the power adapter into the power adapter port on the built-in camera. Then plug the power adapter into a compatible power outlet.

If the use of an SD card is required, insert the SD card into the SD card slot.

Camera and Monitor Assembly

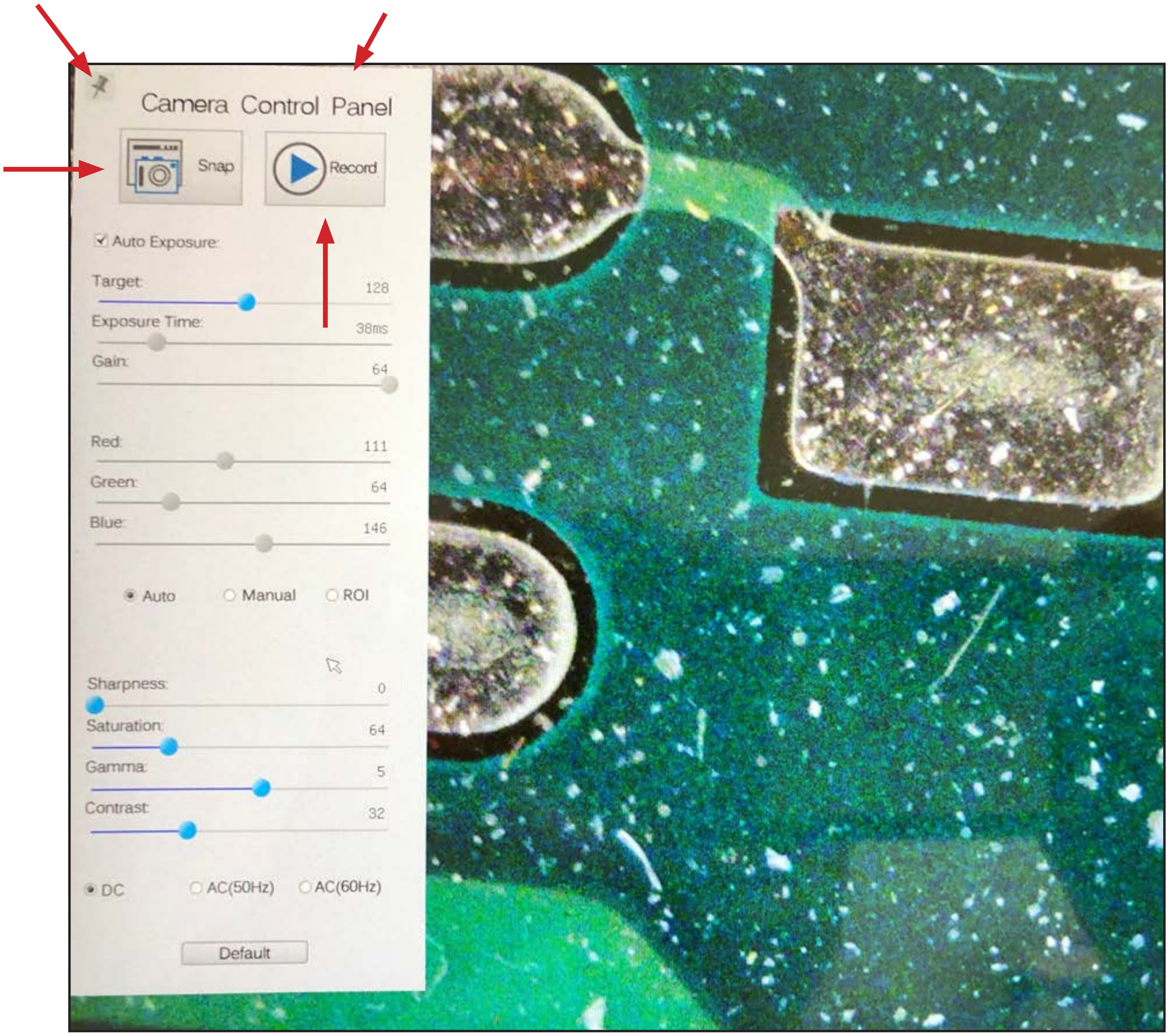
With the camera and monitor now assembled, plug the camera and monitor into a power outlet. A blue indicator light will illuminate indicating the camera is powered on and ready for use.



Once the camera and monitor are powered on, a live image of your stage/specimen will appear on the monitor.

Working with the Tool Bars

- Hover the mouse cursor on the left hand side of the monitor.
- A control panel will appear.
- Here you can enhance the appearance of your image by adjusting the settings.
- To capture an image click the Snap button. The image will be saved directly to the SD card.
- To begin recording a live image, click the Record button. To stop the recording, click the Record button again.
- This tool bar can be pinned by clicking on the thumb tack.



☑ Auto Exposure

Target 128

Exposure Time 38ms

Gain 64

Red 111

Green 64

Blue 146

● Auto ○ Manual ○ ROI

Sharpness 0

Saturation 64

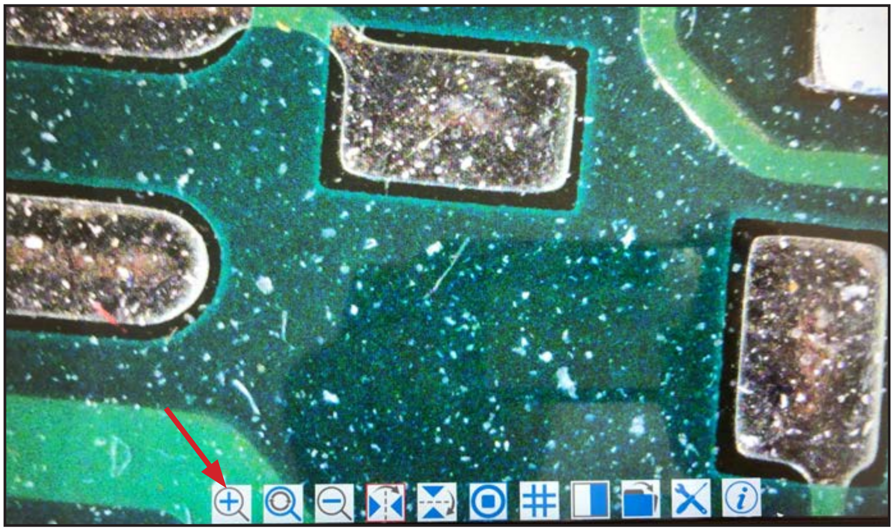
Gamma 5

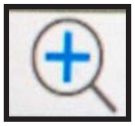
Contrast 32

● DC ○ AC(50Hz) ○ AC(60Hz)

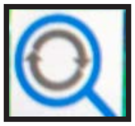
Working with the Tool Bars

- Hover the mouse cursor in the lower center portion of the monitor.
- A tool bar will appear with additional options.

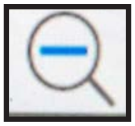




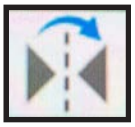
- Zoom In- Select this button to zoom in on the image.



- Reset Zoom- Select this button to reset the image back to the default zoom setting.



- Zoom Out- Select this button to zoom out on the image.



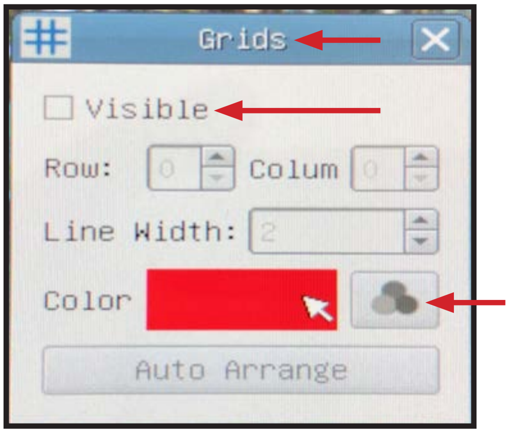
- Horizontal Flip- Select this button to horizontally flip the image.

- Vertical Flip- Select this button to vertically flip the image.

- Freeze / Resume- Select this button to freeze or resume.

- Grids- Select this button to create a grip overlay on your live image.

- A grid box will appear with options to select the number of rows and columns.
- There is also an option to change the color of the grid lines. Select the "Color" button. A "Select Color" box will display allowing the grid color to be customized.
- To remove the grid overlay, uncheck the "Visible" box.

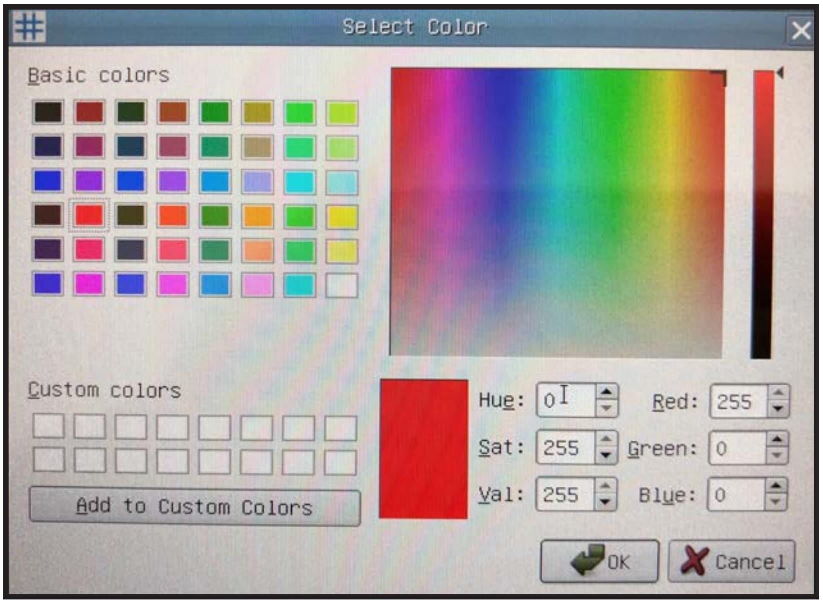

Grids
Auto Arrange

☐ Visible

Row: 0 Colum 0

Line Width: 2

Color


Select Color
Basic colors
Custom colors
Add to Custom Colors
OK
Cancel

Hue: 0 Red: 255

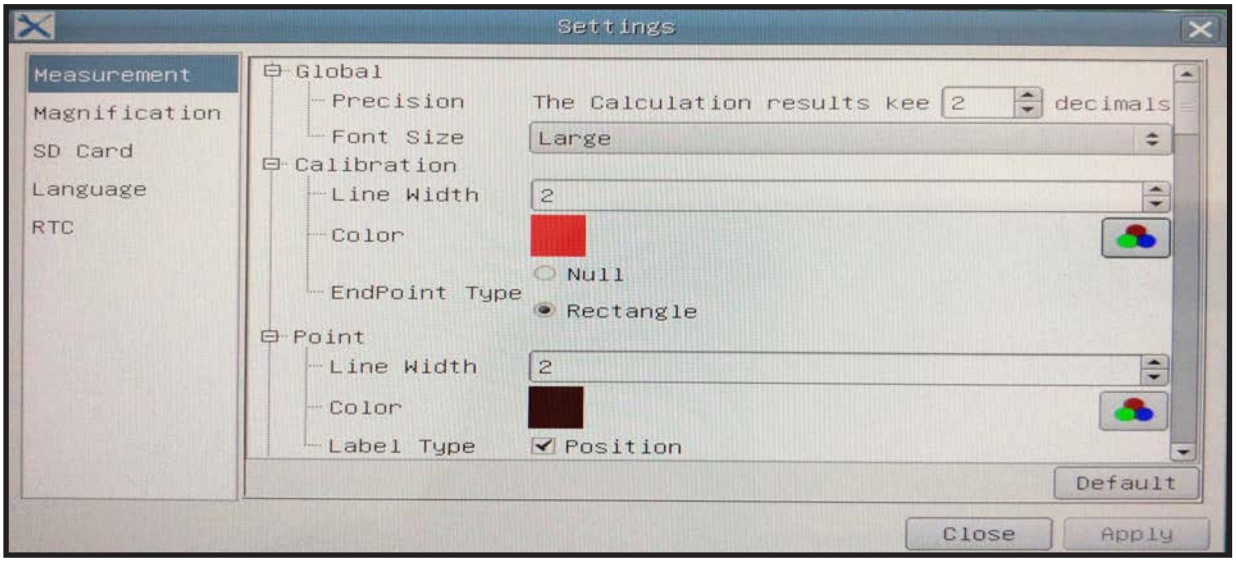
Sat: 255 Green: 0

Val: 255 Blue: 0

- Compare image- will split the monitor allowing for a side by side comparison of a chosen captured image and the live image.

- Browser- Allows access to the captured images saved to the SD card.

- Settings- Access camera and feature settings to customize preferences.

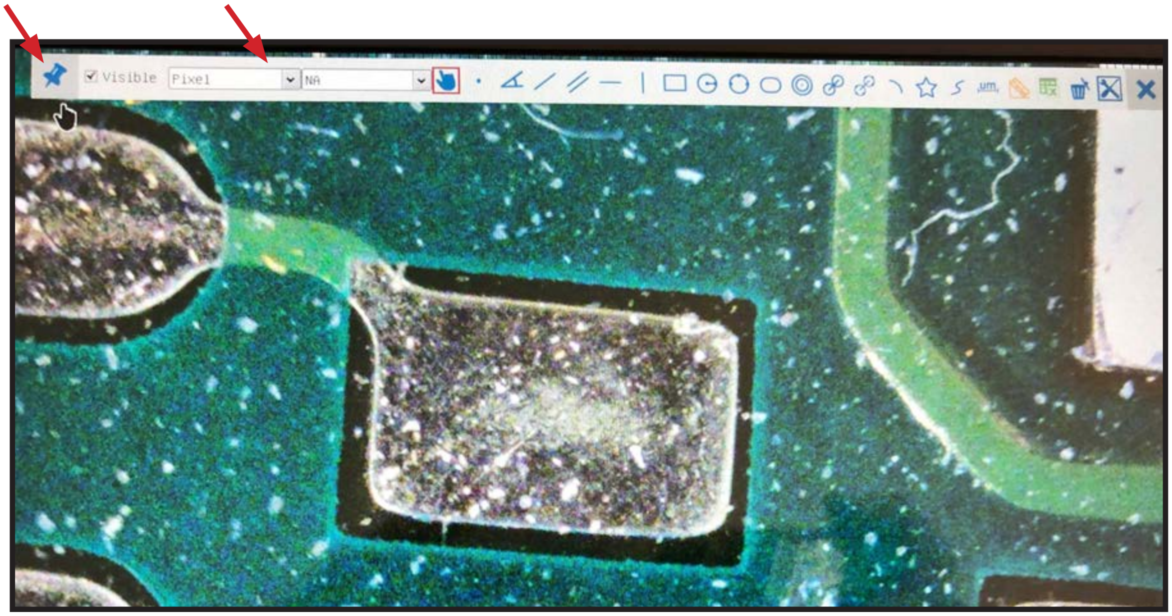

Settings
Measurement
Magnification
SD Card
Language
RTC
Default
Close
Apply

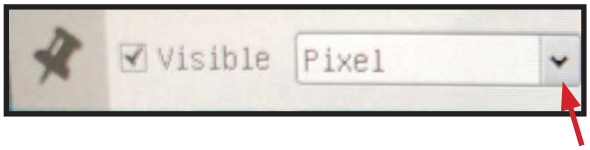
Global
Precision The Calculation results kee 2 decimals
Font Size Large
Calibration
Line Width 2
Color 🟥
EndPoint Type ○ Null ● Rectangle
Point
Line Width 2
Color ■
Label Type ☑ Position

- Info- Advises the software version.

Working with the Tool Bars

- Hover the mouse cursor in the upper center portion of the monitor.
- A tool bar will appear with additional options.
- The tool bar can be pinned by clicking on the thumb tack.



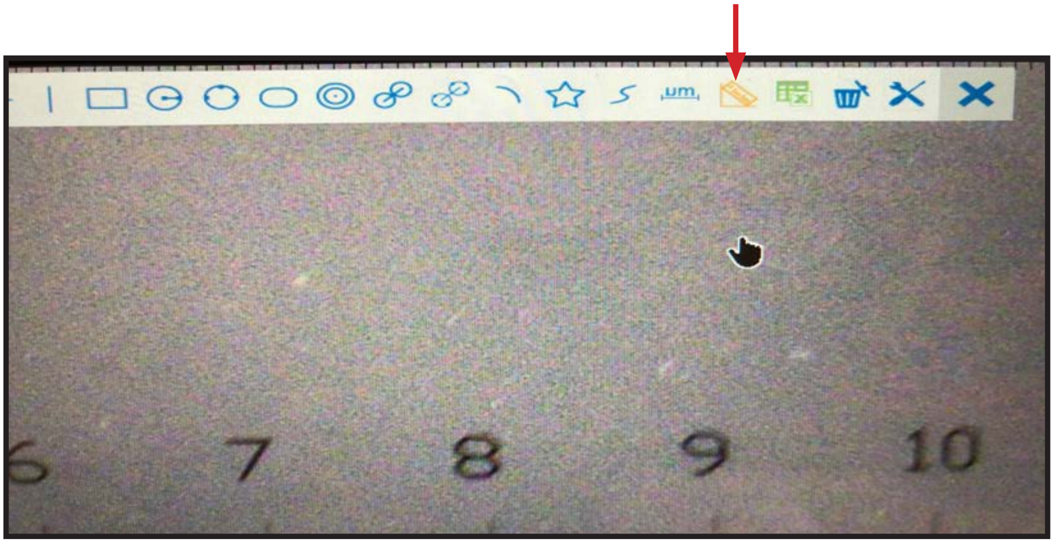


- Select the drop down arrow to select the unit of measure.

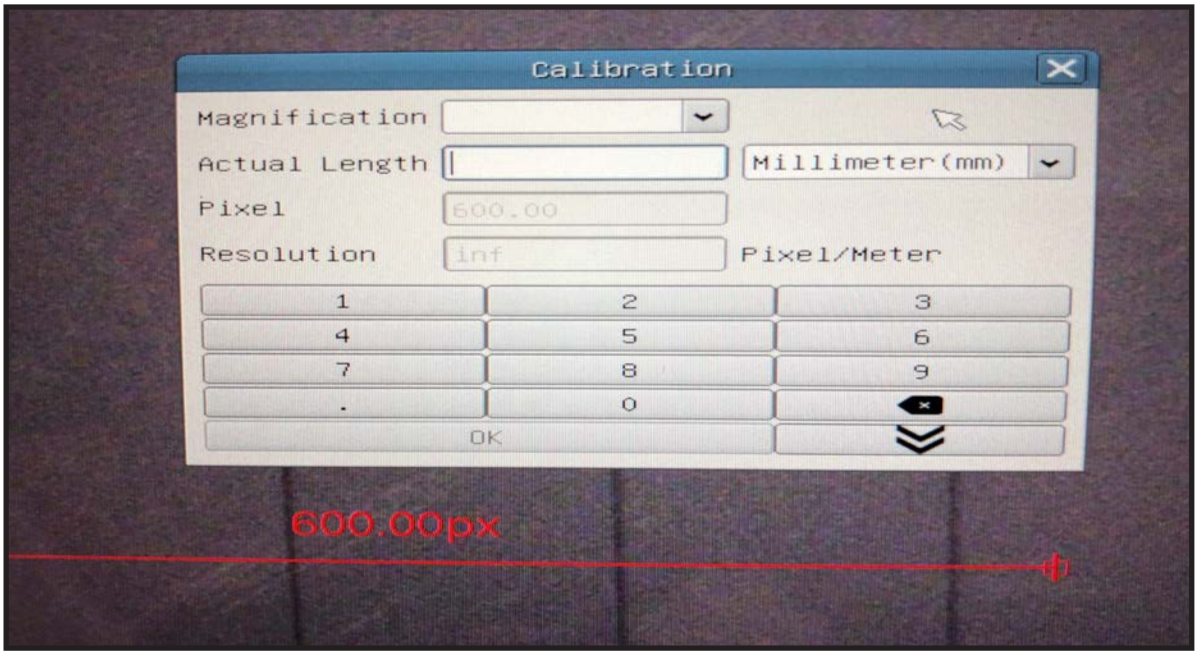
- This tool bar offers many options for different measurement methods.
- The microscope and camera must first be calibrated for accurate measurements.

Calibrating and Measuring

- Place a stage micrometer on the specimen stage and bring it into focus. Hover over the top tool bar and select the calibration icon.



- A calibration box and a measurement line will appear.



Calibration

Magnification

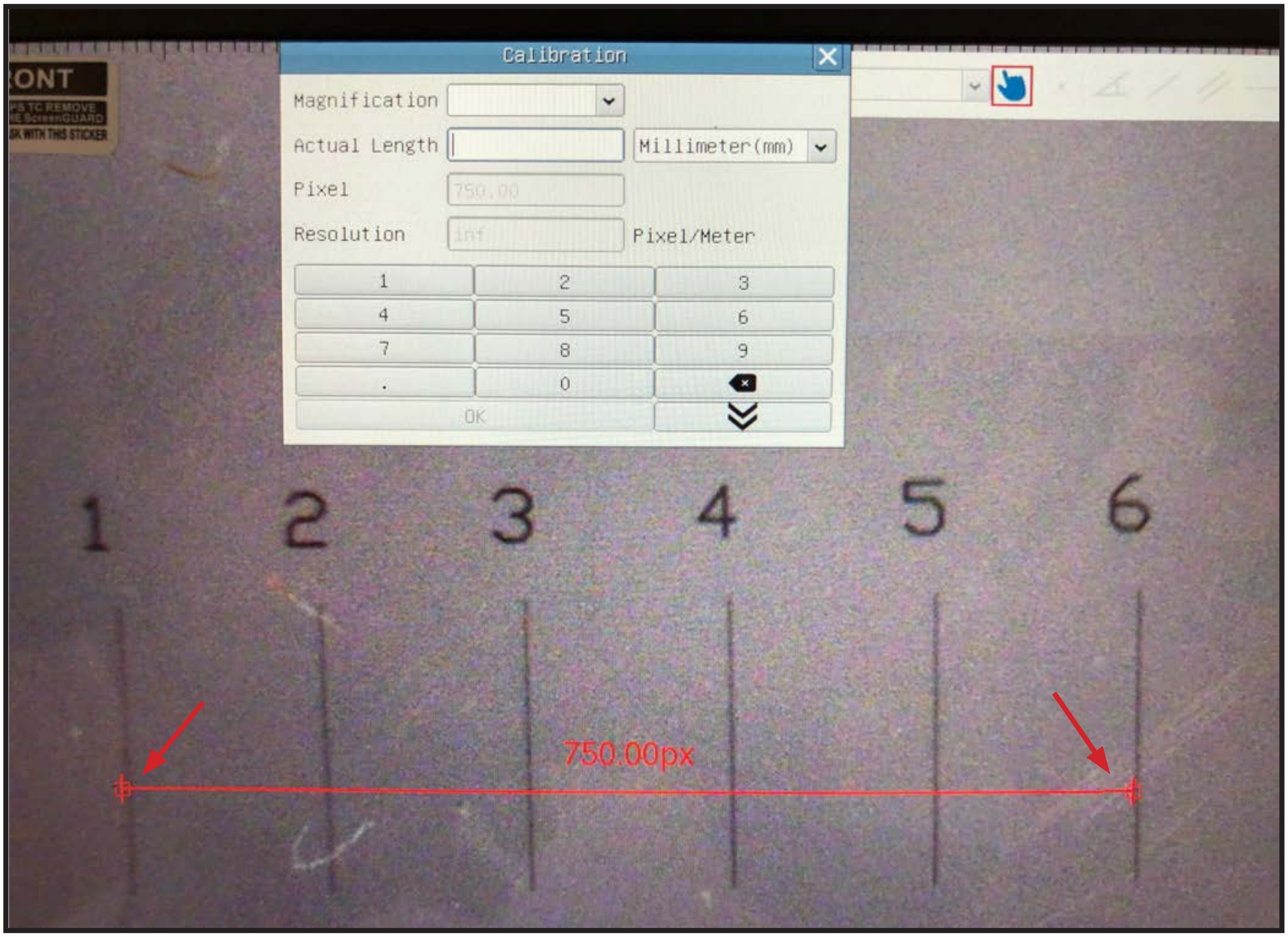
Actual Length | Millimeter(mm)

Pixel 600.00

Resolution inf Pixel/Meter

600.00px

- Use the mouse cursor to place the left side of the measurement line on the leading edge of the stage micrometer. In this case it is the 1 mm line.
- Then move the right side of the measurement line to the inside edge of the furthest visible line. In this case it is the 6 mm line.



Calibration

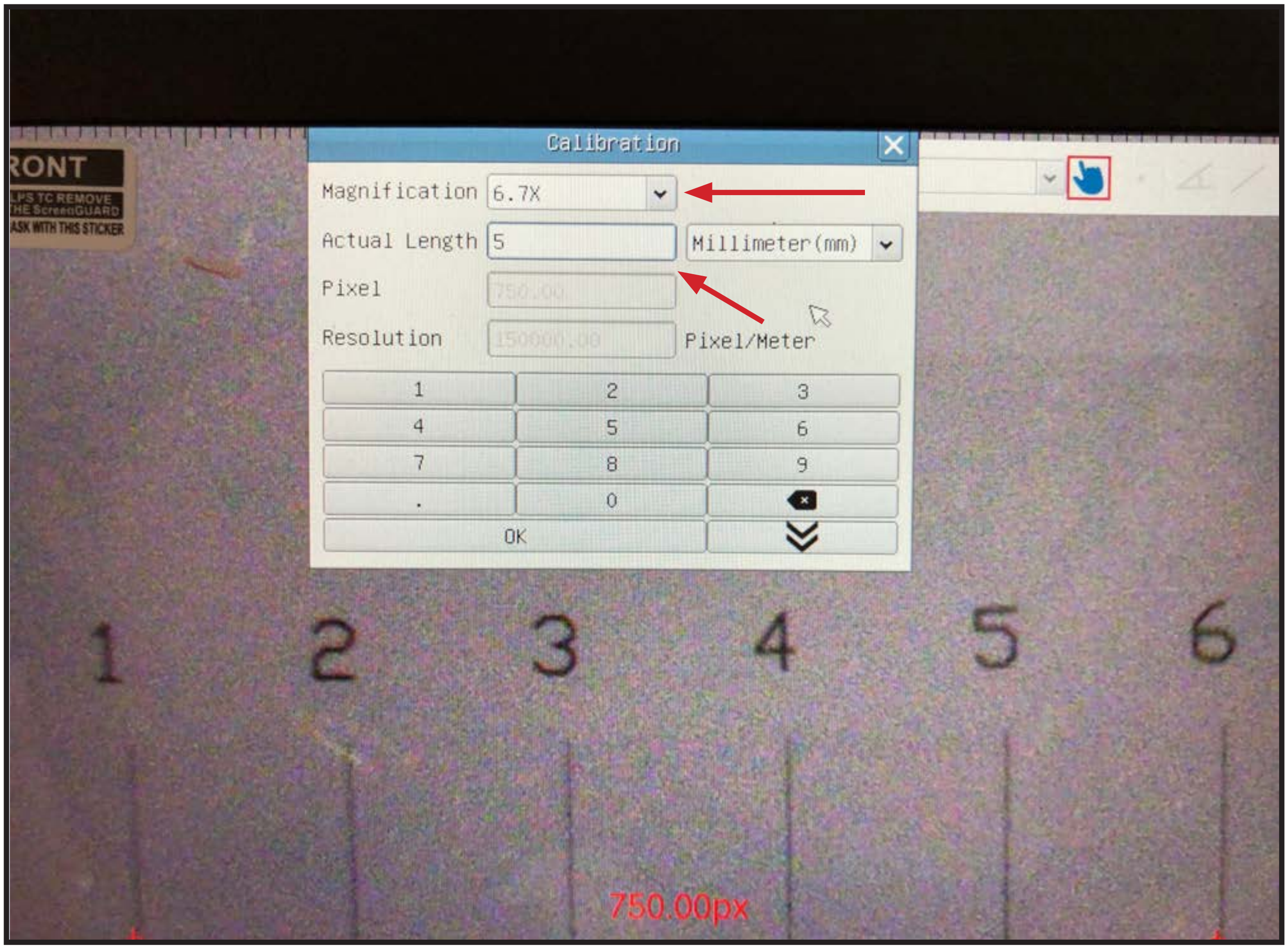
Magnification

Actual Length — Millimeter(mm)

Pixel: 750.00

Resolution: inf Pixel/Meter

- Input the total magnification by using the drop down box or the mouse to select the magnification with the numbers provided in the keypad.
- In this example the total magnification is 6.7x (10x eyepieces with 0.67x detent on the stereo microscope)
- Next input the actual length which appears above the measurement line. In this example it is 5 mm.
- Click OK and the calibration is complete.



Calibration

Magnification 6.7X

Actual Length 5 Millimeter(mm)

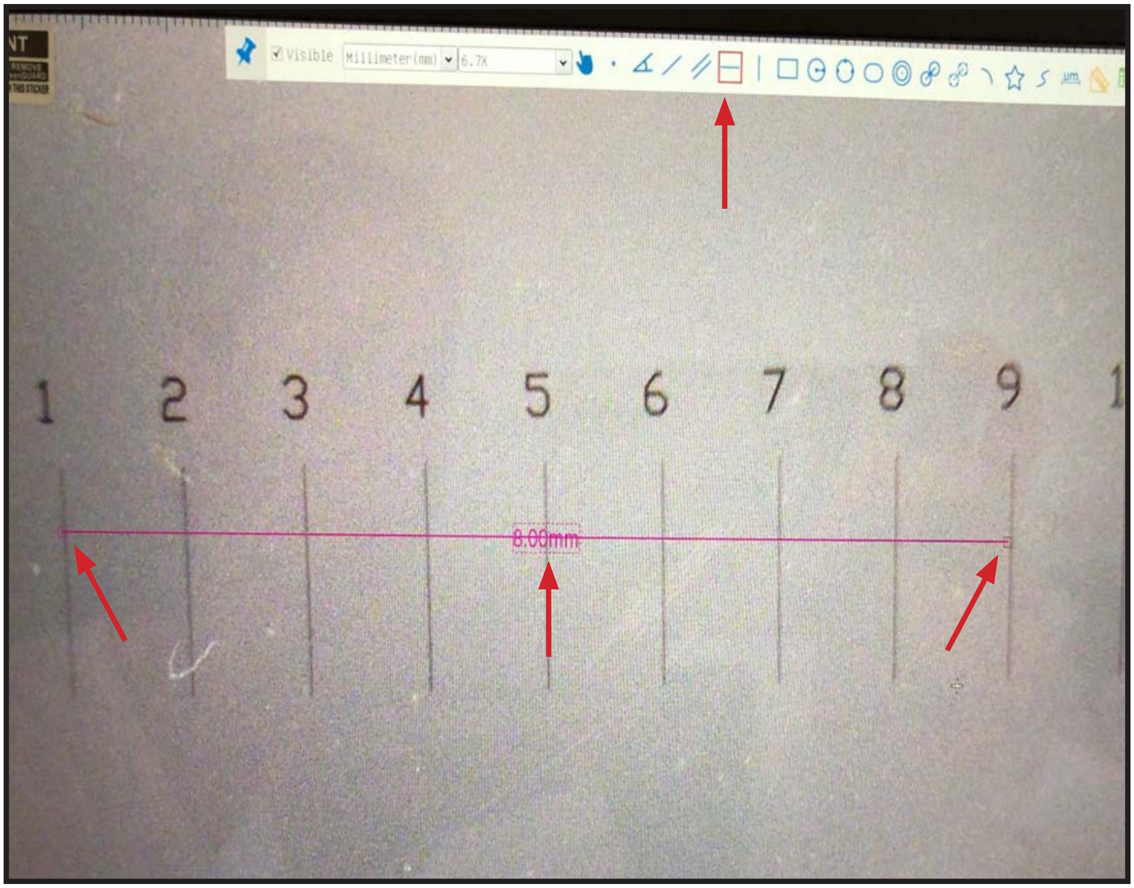
Pixel 750.00

Resolution 150000.00 Pixel/Meter

750.00px

RONT
LPS TO REMOVE
THE ScreenGUARD
ASK WITH THIS STICKER
1
2
3
4
5
6
7
8
9
.
0
OK
1
2
3
4
5
6

- Test the calibration by selecting the horizontal line option from the top tool bar.
- Using the cross-hair cursor that appears, click on the leading edge of the stage micrometer line.
- Then move the measurement line to the inside edge of a stage micrometer line.
- The measurement of the line will appear in the unit of measurement that was initially selected when the calibration was performed.



Problem	Solution
No live image displayed	Camera or monitor are not powered on. Check the power cord and press the ON/OFF buttons.
Live image is dark	Adjust the illumination on the microscope. Use the white balance option on the control panel.
Live image is upside down or backwards	Use the Rotate and Flip features on the tool bar.
Dust or dirt is visible in the live image.	Clean the sample Clean the C-mount Clean the lens on the camera