

BLC-480 Series All-in-One Camera



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The BLC-480 is a multifunctional all-in-one camera that integrates a 13.3-inch display screen and a 4K image acquisition and processing system for capturing digital images of stereo microscopes, biological microscopes, or online interactive teaching.

Feature

The basic characteristic is listed as below:

1. The camera and display screen are integrated together, eliminating wiring and facilitating installation
2. Sony STARVIS 2 back-illuminated CMOS sensor
3. The average delay of display screen output is 40ms
4. Support HDMI2.0 interface connection to external displays for synchronous output, 4K/1080P auto switching according to monitor resolution
5. BLC-480A supports USB 3.0 interface for synchronous output of real-time video. BLC-480B supports USB 2.0 interface for synchronous output of real-time video.
6. Provide real-time video WDR output function
7. Provide real-time video EDF function
8. USB flash drive for captured image and video storage, support local preview and playback
9. Excellent ISP with local tone mapping and 3D denoising
10. Provide two sets of default ISP parameters for biological microscope and stereo microscope
11. Embedded XCamView for the control of the camera and image processing, supporting automatic edge finding and measurement functions
12. New browsing function, providing rich file operation functions, image to image comparison, image to real-time video comparison, multi-image EDF and other functions
13. ImageView software for PC
14. iOS/Android applications for smart phones or tablets

Specification

Order Code	Sensor & Size (mm)	Pixel (μm)	G Sensitivity Dark Signal	FPS/Resolution ADC	Binning	Exposure
BLC-480A	Sony IMX678(C) 1/1.8"(7.68x4.32)	2.0x2.0	3541mv with 1/30s 0.15mv with 1/30s	60@3840*2160	1x1	0.019~1000
BLC-480B	Sony IMX678(C) 1/1.8"(7.68x4.32)	2.0x2.0	1364mv with 1/30s 0.15mv with 1/30s	30@3840*2160	1x1	0.04~1000

Camera Model	Video Saving (FPS/Resolution)	HDMI2.0 (FPS/Resolution)	USB3.0 (FPS/Resolution)	WiFi (FPS/Resolution)
BLC-480A	60@3840*2160 60@1920*1080	60@3840*2160 60@1920*1080	30@3840*2160 45@2688*1512 60@1920*1080	30@3840*2160 60@1920*1080 60@1280*720

Camera Model	Video Saving (FPS/Resolution)	HDMI2.0 (FPS/Resolution)	USB2.0 (FPS/Resolution)	WiFi (FPS/Resolution)
BLC-480B	30@3840*2160	30@3840*2160	30@3840*2160	30@3840*2160



Available Ports on the Panel of the Camera Body

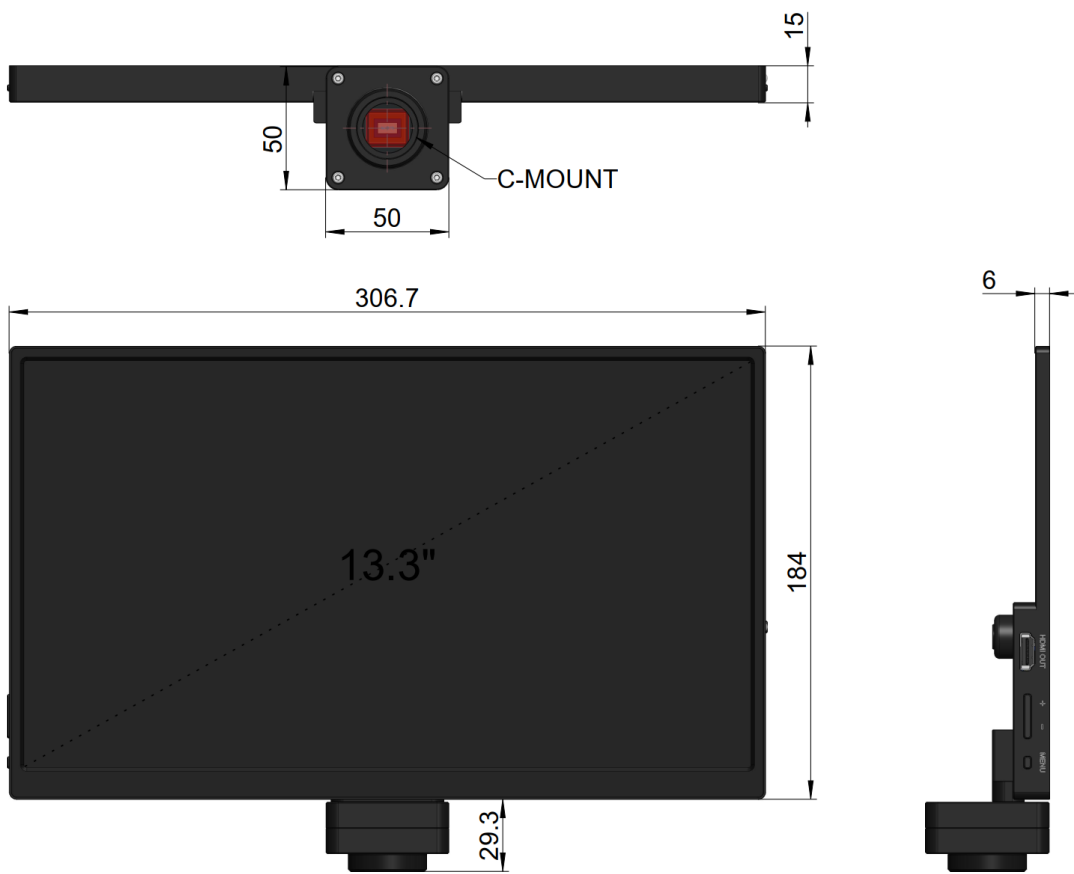
BLC-480A BLC-480B

Interface or Button	Function Description
USB 2.0	Connect USB mouse for easy operation with embedded XCamView software
USB Video	Connect PC or other host device to realize video image transmission
USB3.0	Connect USB flash drive to save pictures and videos Connect 5G WiFi module to transfer video wirelessly in real time Connect USB microphone for audio and video recording
ON/OFF	Power switch (Short press to turn on, long press to turn off)
HDMI OUT	Comply with HDMI2.0 standard. Used to extend 4K/1080P format video output and supporting automatic switch between 4K and 1080P format according to the connected monitors
LED	LED status indicator

+/-	Display brightness adjustment button
MENU	Display menu key
DC 12V2A	Power adapter connection (12V/2A)
Video Output Interface	Function Description
HDMI Interface	Synchronize video output through HDMI OUT interface, comply with HDMI2.0 standard. BLC-480A: 60fps@4K or 60fps@1080P BLC-480B: 30fps@4K or 30fps@1080P
WiFi Interface	Connecting 5G WiFi adapter (USB3.0 slot for BLC-480A, USB2.0 for BLC-480B) in AP/STA mode
USB Video Interface	Connecting USB Video port of PC for video transfer H264/MJPEG format video
Other Function	Function Description
Video Saving	Video format: 8M (3840*2160) H264/H265 encoded MP4 file Video saving frame rate: BLC-480A: 60fps in Low Delay mode; 30fps in WDR mode BLC-480B: 30fps
Image Capture	8M (3840*2160) JPEG/TIFF image in USB flash drive
Measurement Saving	Measurement information saved in different layer with image content Measurement information is saved together with image content in burn in mode
ISP	Exposure (Automatic / Manual Exposure) / Gain, White Balance (Manual / Automatic / ROI Mode), Sharpening, 3D Denoise, Saturation Adjustment, Contrast Adjustment, Brightness Adjustment, Gamma Adjustment, Hue Adjustment, Color to Gray, 50HZ/60HZ Anti-flicker Function
Image Operation	Zoom In/Zoom Out (Up to 10X), Mirror/Flip, Freeze, Video EDF, Cross Line, Overlay, PIP, Browser (including Picture Browsing, Video Playback, Video Compare, Picture Compare, Picture EDF, Image Processing), Measurement Function
Embedded RTC(Optional)	To support accurate time on board
Restore Factory Settings	Restore camera parameters to its factory status
Multiple Language Support	English / Simplified Chinese / Traditional Chinese / Korean / Thailand / French / German / Spanish / Japanese / Italian / Russian / Dutch / Portuguese
Software Environment under WiFi/USB Video Output	
White Balance	Auto White Balance
Color Technique	Ultra-Fine Color Engine
Capture/Control SDK	Windows/Linux/macOS/Android Multiple Platform SDK (Native C/C++, C#/VB.NET, Python, Java, DirectShow, Twain, etc.)
Recording System	Still Picture or Movie
Operating System	Microsoft® Windows® 8 / 8.1 / 10 / 11(32 & 64 bit) OSx(Mac OS X) Linux
PC Requirements	CPU: Equal to Intel Core2 2.8GHz or Higher
	Memory: 4GB or more
	Ethernet Port: RJ45 Ethernet Port
	Display:19" or Larger
	CD-ROM
Operating Environment	

Operating Temperature (in Centidegree)	-10°~ 50°
Storage Temperature (in Centidegree)	-20°~ 60°
Operating Humidity	30~80%RH
Storage Humidity	10~60%RH
Power Supply	DC 12V/2A Adapter

Dimension



Dimension of BLC-480 All-in-One Camera

Packing Information

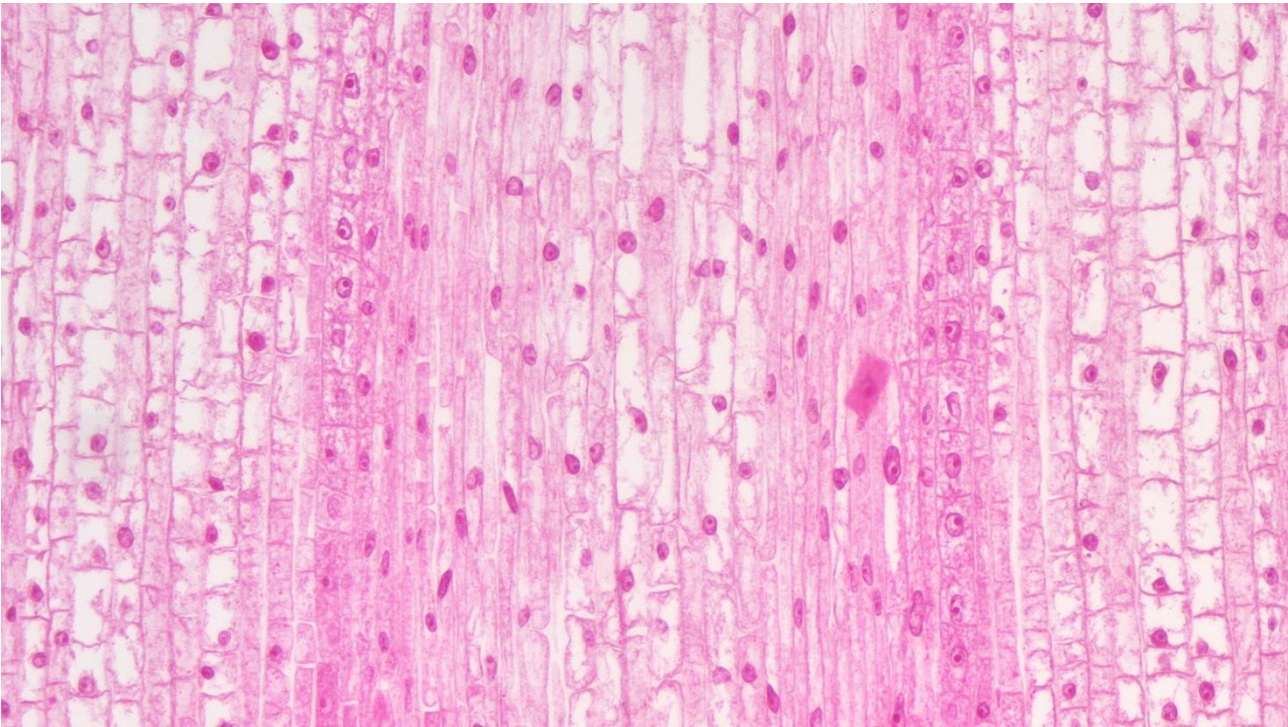


Packing Information of BLC-480 Series All-in-One Camera

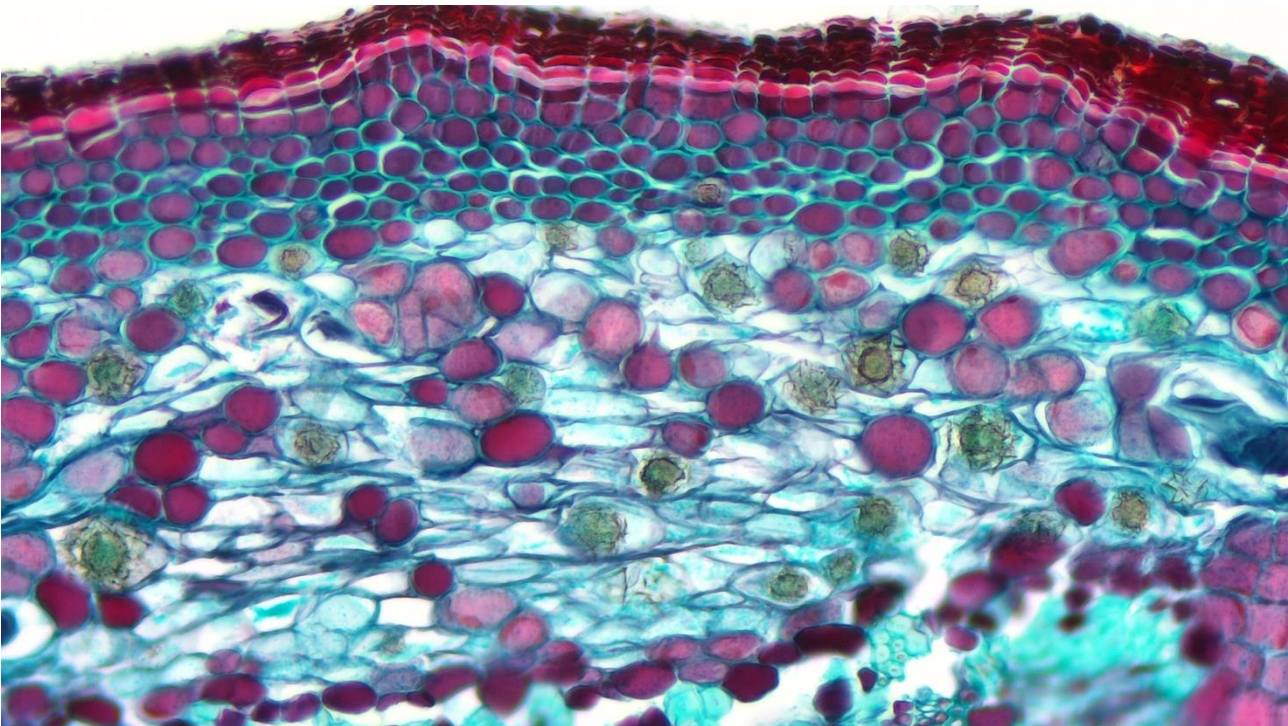
Standard Packing List		
A	Gift box: L:35.6cm W:24.9cm H:7.5cm (1pcs, 1.68Kg/ box)	
B	BLC-480 Series All-in-One Camera	
C	Power Adapter: Input: AC 100~240V 50Hz/60Hz, Output: DC 12V 2A	
	American standard: Model: POWER-12V2A(MX24Z1-1202000) + American standard plug	
	European standard: Model: POWER-12V2A(MX24Z1-1202000) + European standard plug	
D	USB wireless mouse	
E	USB3.0 (for BLC-480A)/USB2.0 (for BLC-480B) A male to A male gold-plated connectors cable /2.0m	
F	CD (Driver & utilities software, Ø12cm)	
Optional Accessory		
G	HDMI Cable	
H	USB flash drive	
I	USB WiFi adapter	
J	Adjustable lens adapter	C-Mount to Dia.23.2mm Eyepiece Tube (Please choose 1 of them for your microscope)
K	Fixed lens adapter	C-Mount to Dia.23.2mm Eyepiece Tube (Please choose 1 of them for your microscope)
	Note: For J and K optional items, please specify your camera type (C-mount, microscope camera or telescope camera), our engineer will help you to determine the right microscope or telescope camera adapter for your application;	
L	108015(Dia.23.2mm to 30.0mm Ring)/Adapter rings for 30mm eyepiece tube	

M	108016(Dia.23.2mm to 30.5mm Ring)/ Adapter rings for 30.5mm eyepiece tube	
N	Calibration kit	106011/TS-M1(X=0.01mm/100Div.); 106012/TS-M2(X, Y=0.01mm/100Div.); 106013/TS-M7(X=0.01mm/100Div., 0.10mm/100Div.)

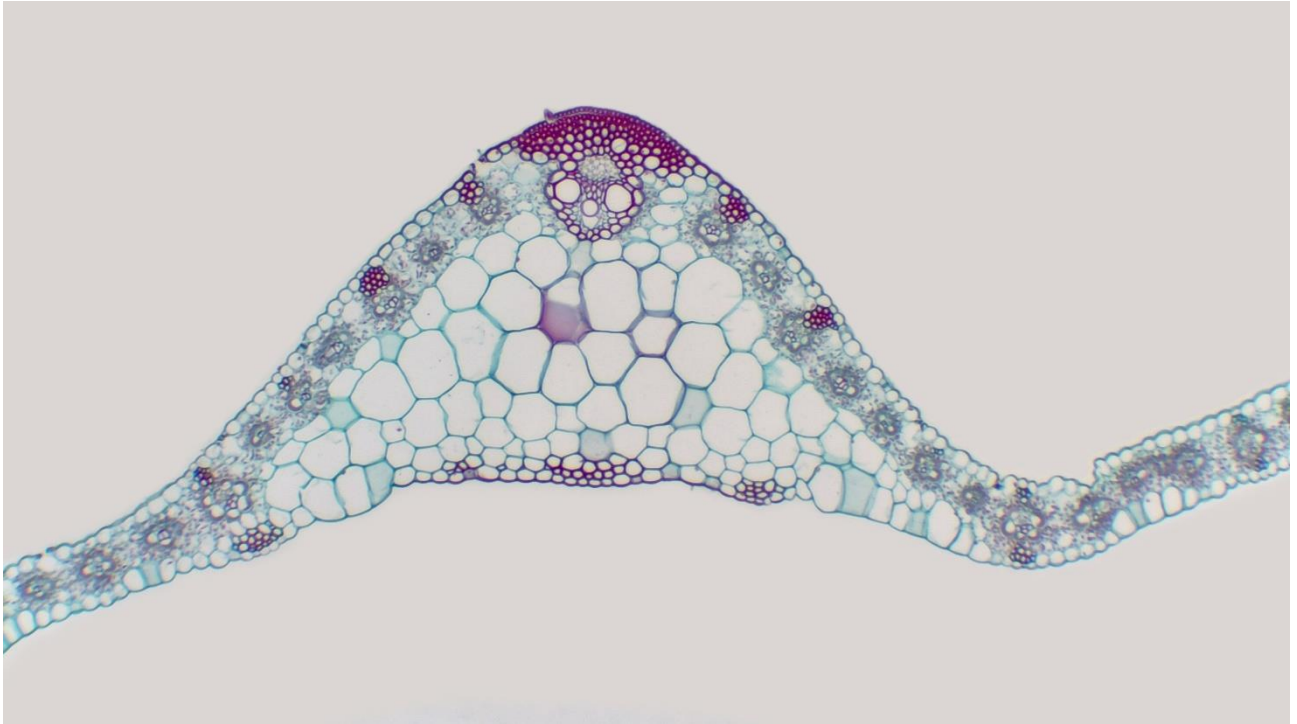
Sample



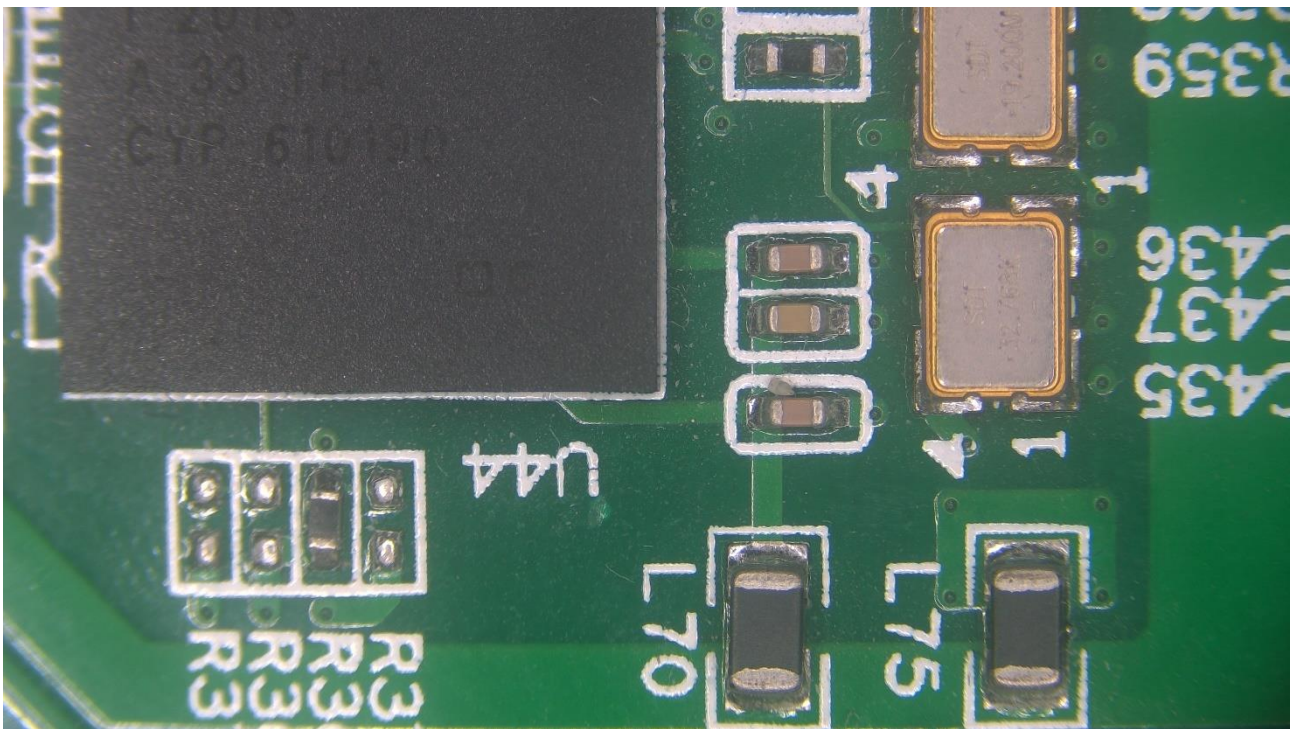
Corn Root Tip.L.S Captured with BLC-480A



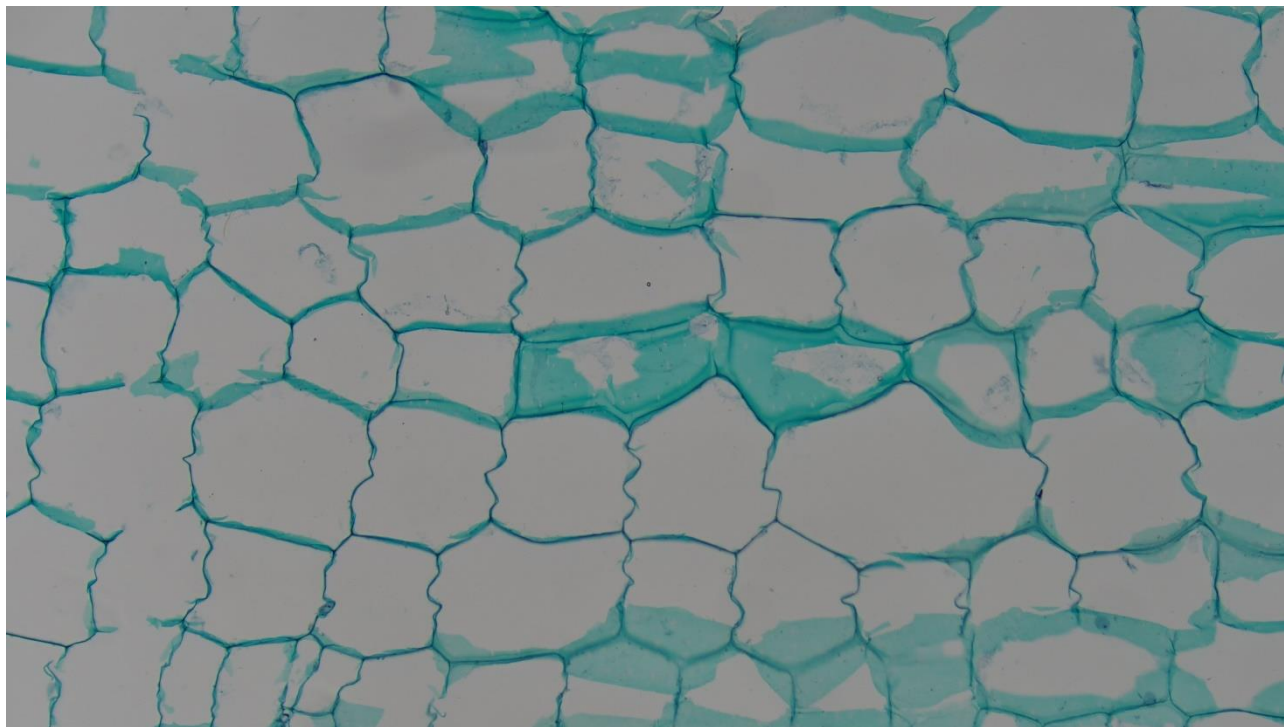
Three Year Tilia Stem.C.S Captured with BLC-480A



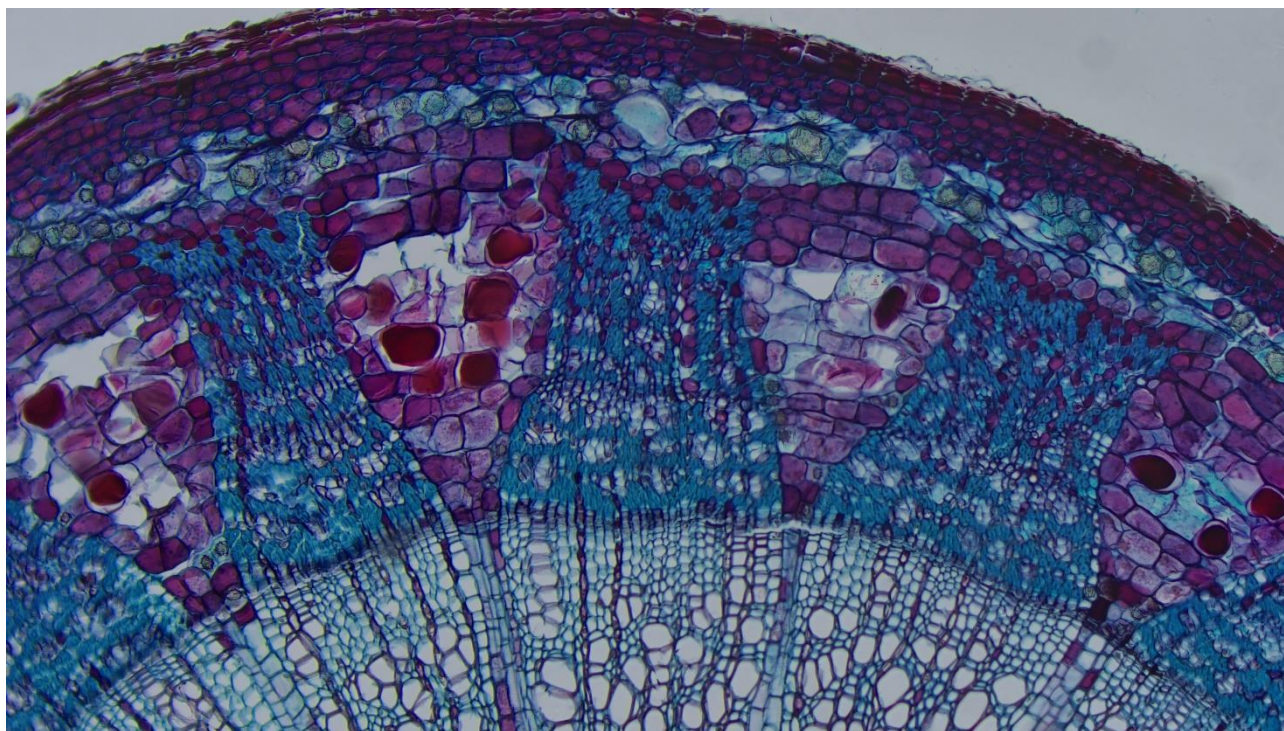
Corn Leaf Captured with BLC-480A



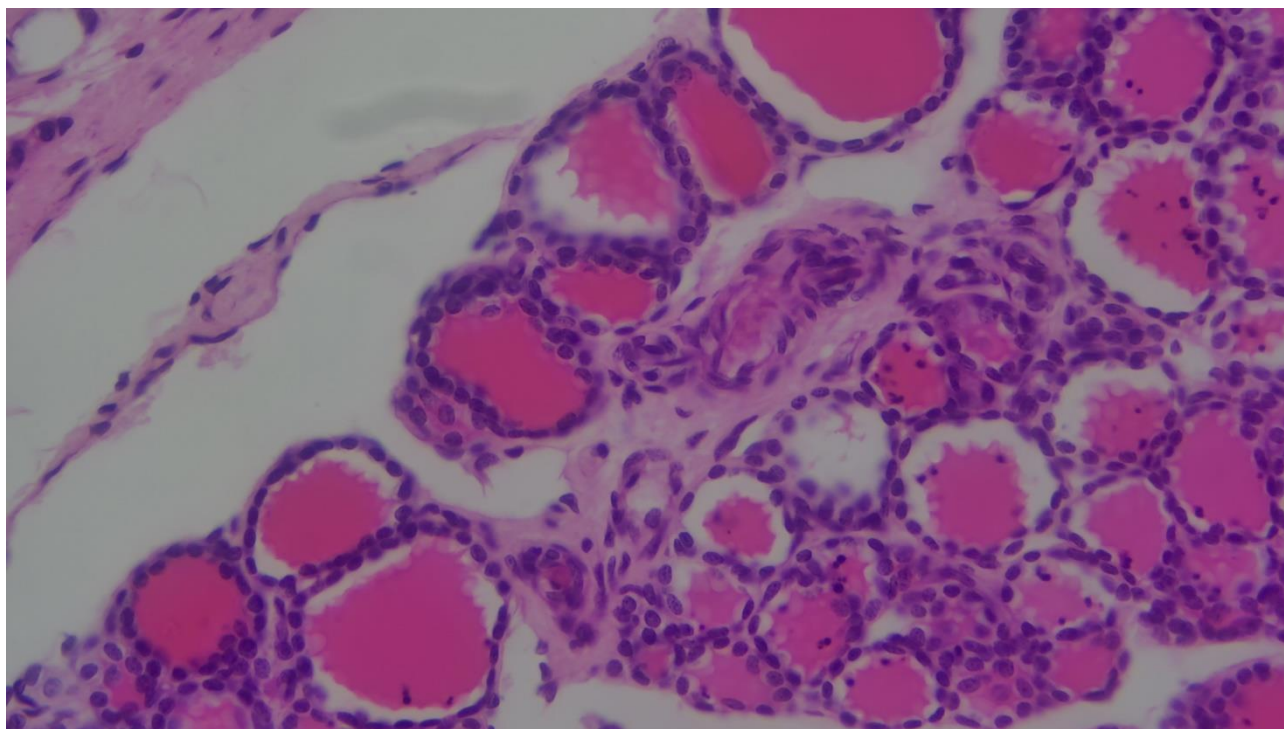
Circuit Board Captured with BLC-480A



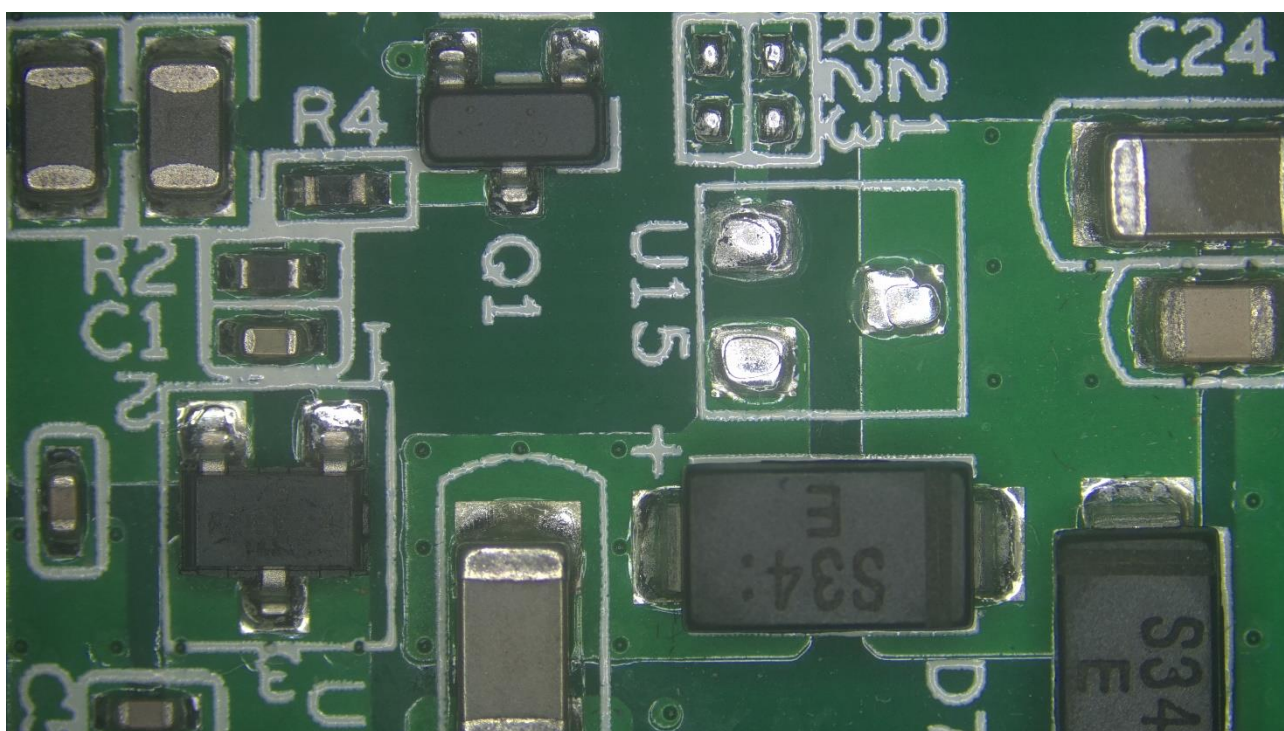
Cucurbit Stem.L.S. Captured with BLC-480B



Two Year Tilia Stem.C.S. Captured with BLC-480B



Simple Cuboidal Epithelium.Sec. with BLC-480B



Circuit Board Captured with BLC-480B