

Features and Benefits

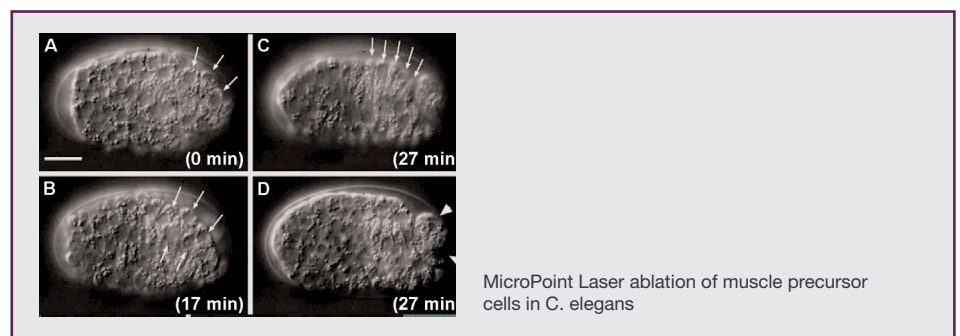
- Simultaneous laser delivery, viewing and acquisition
- Low maintenance fibre optic delivery maintains alignment
- Quick set-up with manual beam positioning or automatic pattern generation
- User control of ablation and illumination plane provided by z-axis telescope
- Precise control of energy provided by motorized variable attenuator slide

Models

- **MicroPoint Manual**
Angular and spatial alignment of the illumination via 2-axis joystick.
- **MicroPoint Galvo**
Galvanometer beam steering through PC, enables precise and repeatable illumination

MicroPoint Laser Illumination & Ablation.

MicroPoint provides a flexible and field-proven tool for photo-stimulation. Supplied with a patented compact, pulsed nitrogen pumped tuneable dye laser, it is capable of ablation, bleaching and uncaging over a wavelength range of 365 to 656 nm. Broad wavelength range and energy control allow MicroPoint to be optimized for a wide range of scenarios. More than 20 wavelengths can be utilized with available dye resonator cells, while appropriate dichroic filter sets enable simultaneous imaging and photo-stimulation of the specimen¹.



Specifications Summary

Wavelength	365 nm to 656 nm
Pulse energy control	0.1% - 100%
Resolvable spot size	Near diffraction limited
Average power	750 μ W, 15 Hz / 50 μ J
Pulse width	3 to 5 ns
Certification	CDRH IIIb

Hardware Specifications

Control Interface Type

	Manual	Galvo
Connectivity	Foot pedal trigger option	USB
Field of view range switching	100%, 80%, 60%, 40%, 30% (selectable)	

Optical

Wavelengths	365 nm to 656 nm	
Spectral bandwidth	4 nm FWHM	
Attenuation options	Computer-controlled, 90 steps, 0.1%-100% transmission	
Resolvable spot size	Near diffraction limited	
Fields of view	Fixed beam (User-adjustable)	MP-2204-EBD* = 5.84 x 5.84 mm MP-2204-EBD** = 5.0 x 5.0 mm

* = MicroPoint combined with large field of illumination Mosaic3 model

** = MicroPoint combined with small field of illumination Mosaic3 model

Tunable, Fiber Optic Pumped Dye Laser Source

Average power	750 μ W
Peak power	12 kW
Pulse energy	50 μ J
Stability	\pm 3%
Pulsewidth	3 to 5 nsec
Pulse repetition rate	0 to 15Hz
CDRH	IIIb

Widefield Illumination Port Options

Dichroic beamsplitter	Single pass, specify wavelength; Multi-pass, specify wavelength
Beamsplitter	450 nm to 750 nm, R = 100, 70, 50 or 30%
Excitation filter	360 nm / 40 nm (DAPPI); 480 nm / 20nm (GFP); 470 nm / 40 nm (FITC); 535 nm / 40 nm (Rhodamine)

Additional illumination port options available on request

Mechanical / Electrical

Illumination port clear aperture	\varnothing 34 mm
Illumination port filter size	\varnothing 25 mm or \varnothing 38 mm
Lifetime	20,000,000 laser pulses; 30,000 laser pulses per refillable dye cell

Interoperability

Compatible with microscopes platforms - point & slit scan confocal, spinning disk confocal & widefield.

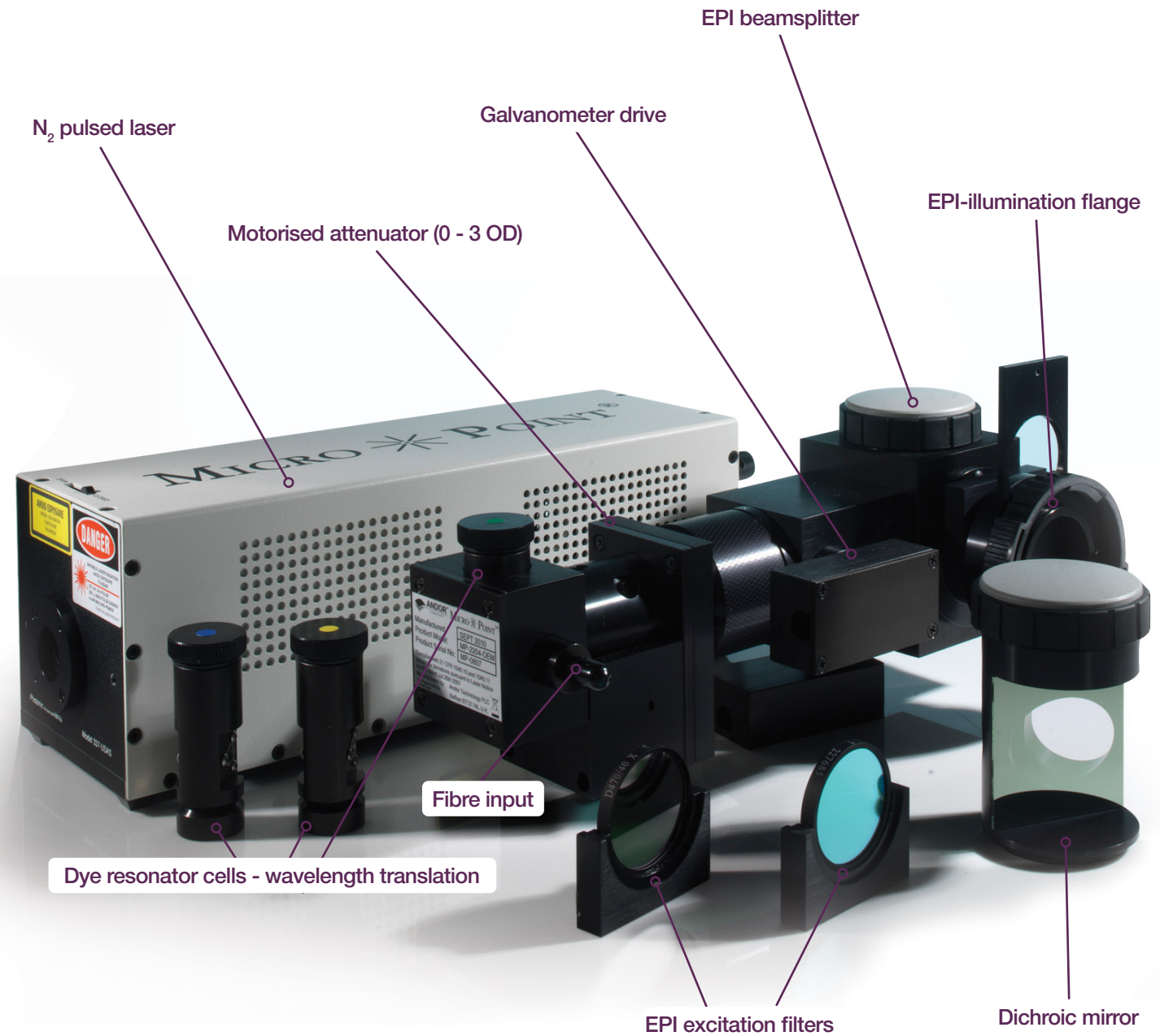
Custom OEM systems available for High Content Screening and other fluorescence based imaging instrumentation.

Compatible with control and acquisition software from market leading microscope manufacturers including Carl Zeiss, Leica and Olympus.

Lowest cost to add wavelengths in the field - change a dye cell and tune system within the visible spectrum.

Components

The main components of MicroPoint are shown below:



Ordering your MicroPoint system

Prior to commencing the order process please advise your customer representative of your application requirements. Please also refer to the flow chart on the next page.

Step 1. Confirm Microscope make and model		Step 2. Choose your control Interface							
Microscope model	Make: e.g. Leica, Nikon, Olympus, Zeiss and model.	Control Interface	<table border="1"> <thead> <tr> <th>Part Number</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>MP-220X-EBD</td> <td>Head unit (USB) for Galvo model</td> </tr> <tr> <td>MP-220X-OEM</td> <td>Head unit for Manual control interface</td> </tr> </tbody> </table>	Part Number	Description	MP-220X-EBD	Head unit (USB) for Galvo model	MP-220X-OEM	Head unit for Manual control interface
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MP-220X-OEM	Head unit for Manual control interface								
		X = 3, 4, 5, 6 depends on target microscope (step 1)							

Step 3. Select the required laser option	
Laser option	<p>The following laser option is available:</p> <p>Pulse Generator / Counter with foot pedal (Manual Control Interface Only)</p>

Step 4. Select the required pre-mixed laser dye cells																																																									
Laser Dye Cells (premixed)	<p>The following pre-mixed laser dye cells are available in 50 ml quantities:</p> <p>High power 365 nm dye cell + 50 ml dye; High power 435 nm dye cell + 50 ml dye; Multiline 388 - 656 nm dye cell + 50 ml dye (please refer to table below for part numbers and available wavelengths).</p>																																																								
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Step 5. Select the required beamsplitters									
Beamsplitters	<p>The following beamsplitters are available:</p> <table border="1"> <tr> <td>30 Epi</td> <td>70 Epi</td> <td>Short reflect / long reflect Laser Notch</td> <td>100% Epi Plug</td> </tr> <tr> <td>50 Epi</td> <td>Shortpass Laser 435 nm Beamsplitter Plug</td> <td>435 nm Beamsplitter Plug</td> <td>0% Epi (Blank) Plug</td> </tr> </table>	30 Epi	70 Epi	Short reflect / long reflect Laser Notch	100% Epi Plug	50 Epi	Shortpass Laser 435 nm Beamsplitter Plug	435 nm Beamsplitter Plug	0% Epi (Blank) Plug
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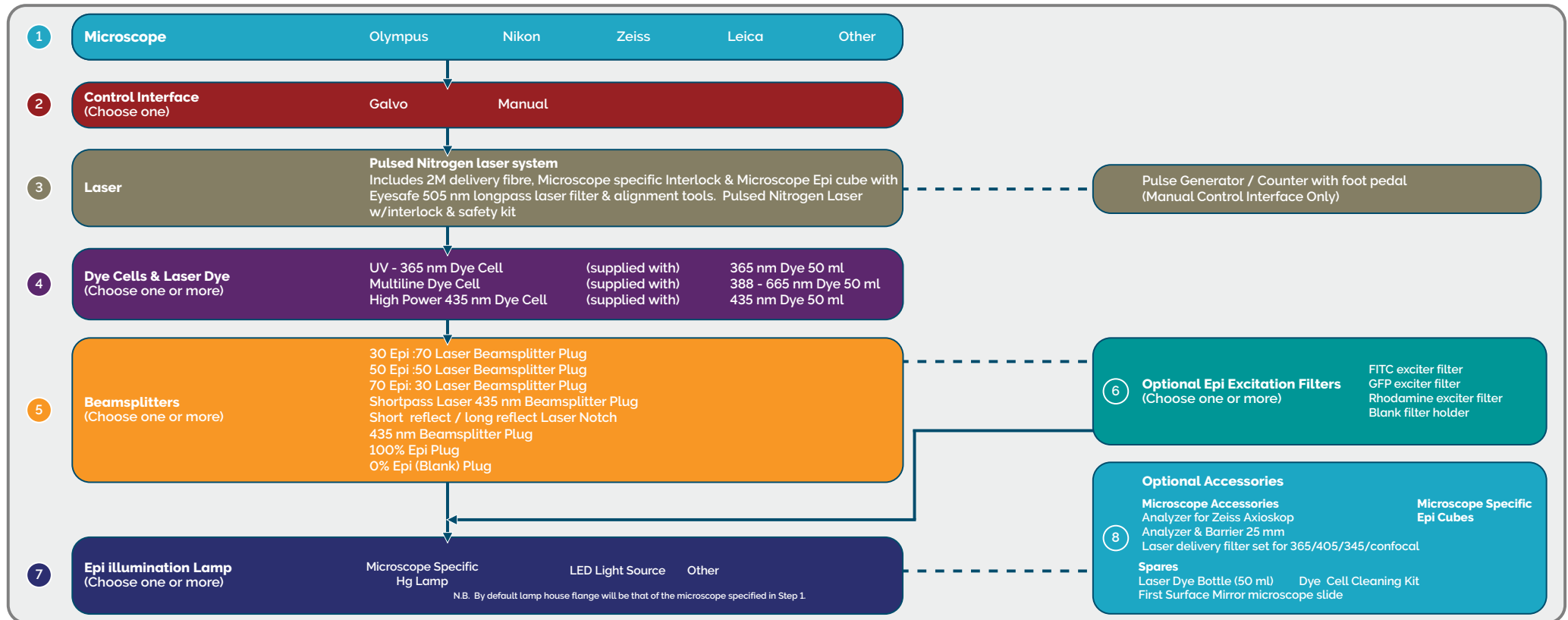
Step 6. Select the required EPI Excitation filters				
EPI Excitation Filter options	<p>The following EPI Excitation filter options are available:</p> <table border="1"> <tr> <td>GFP exciter filter</td> <td>Blank filter holder</td> <td>Any 25 mm filter with 38 mm holder</td> </tr> </table>	GFP exciter filter	Blank filter holder	Any 25 mm filter with 38 mm holder
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Step 7. Select the required EPI Illumination Lamp option					
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Step 8. Select required options				
Optional Accessories	<p>The following optional accessories are available:</p> <table border="1"> <tr> <td>Microscope Accessories Analyzer for Zeiss Axioskop, Analyzer & Barrier 25 mm, Laser delivery filter set for 365/435/345/confocal</td> </tr> <tr> <td>EPI cubes Microscope specific</td> </tr> <tr> <td>Spares Laser Dye Bottle (50 ml), Dye Cell Cleaning Kit, First Surface Mirror microscope slide</td> </tr> </table>	Microscope Accessories Analyzer for Zeiss Axioskop, Analyzer & Barrier 25 mm, Laser delivery filter set for 365/435/345/confocal	EPI cubes Microscope specific	Spares Laser Dye Bottle (50 ml), Dye Cell Cleaning Kit, First Surface Mirror microscope slide
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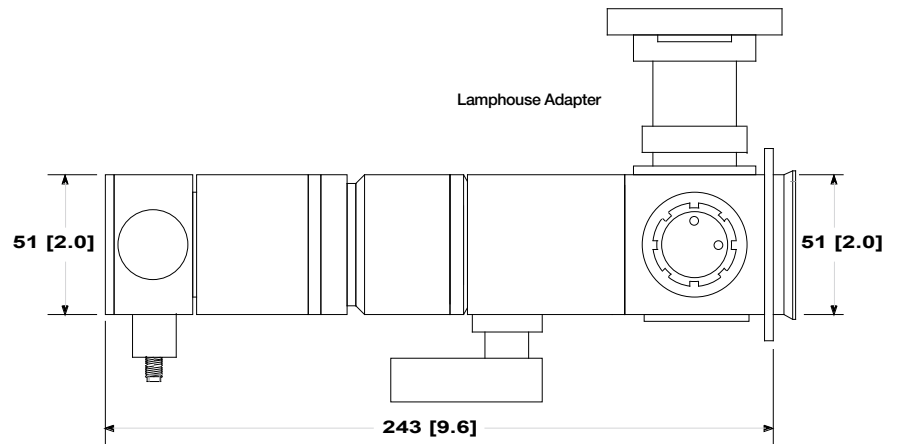
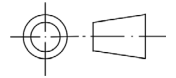
Configuring MicroPoint

MicroPoint is a highly versatile illumination source, compatible with all leading microscopes and most legacy systems. There are a selection of control interfaces, filter and laser/lamp attachment options. This product tree shows the potential configurations of MicroPoint:

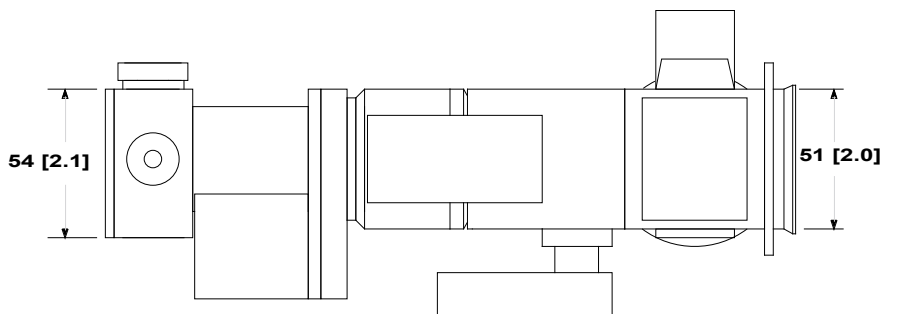
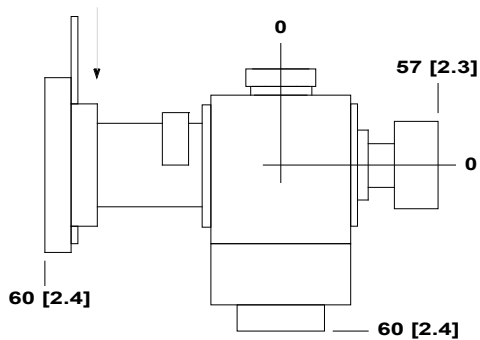


Product Drawings

Dimensions in mm [inches]



Shutter Moves 25.4 [1.0]



Weight of Head = 1.5 kg [3.0 lb]

Software Compatibility - Life Science Applications

MicroPoint Computer Controlled systems are compatible with a wide range of life science imaging software as indicated in the table below.

Andor iQ Version 2.0 and above	Live cell multi-dimensional imaging with flexible control of MicroPoint
Micro-Manager	Image-based targeting, control and calibration
MDC MetaMorph Ver 6.3 and above (32-bit only)	Fully integrated MicroPoint support with powerful imaging capabilities
Nikon NIS Elements 3.0 SP8 Build 548	Multi-dimensional imaging with simple/fast control of MicroPoint
Software Development Kits (SDK)	SDKs are available for OEM to develop software to control integrated MicroPoint systems

Order Today



Need more information? At Andor we are committed to finding the correct solution for you. With a dedicated team of technical advisors, we are able to offer you one-to-one guidance and technical support on all Andor products. For a full listing of our regional sales offices, please see: andor.oxinst.com/contact

Our regional headquarters are:

Europe

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Phone +44 (28) 9023 7126
Fax +44 (28) 9031 0792

Japan

Tokyo
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Fax +81 (3) 6732 8939

North America

Concord, MA, USA
Phone +1 (860) 290 9211
Fax +1 (860) 290 9566

China

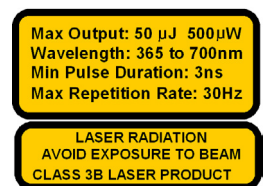
Beijing
Phone +86 (10) 5884 7900
Fax +86 (10) 5884 7901

Items shipped with your MicroPoint:

- 1x First surface mirror
- 1x Allen key (0.05")
- 1x TPES24-T120MM power supply with
- 1x 3m mains cable for TPES24-T120MM (EBD systems)
- 1x USB cable (EBD systems)
- 1x 2m BNC - BNC cable (EBD systems)
- 1x User guide

Footnotes: Specifications are subject to change without notice

1. MicroPoint is supplied with a UV-Vis imaging quality Epi-illumination adapter for both current and previous generation microscopes from Leica, Nikon, Olympus and Zeiss.



Minimum Computer Requirements:

- The computer controlled system requires a personal computer with a PCI slot and a USB port.

Operating & Storage Conditions

- Operating Temperature: -12°C to 43°C ambient
- Relative Humidity: < 70% (non-condensing)
- Storage Temperature: -25°C to 50°C



Note

Within the EU MicroPoint is only available for research purposes and not for commercial use.

Power Requirements

- 120-240 VAC, 50-60 Hz, 1.0 A

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