

## Features and Benefits

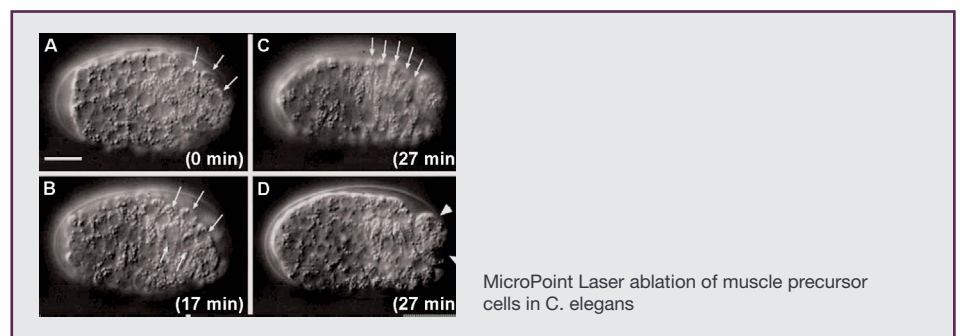
- Simultaneous laser delivery, viewing and acquisition
- Low maintenance fibre optic delivery maintains alignment
- Quick set-up with manual beam positioning or automatic pattern generation
- User control of ablation and illumination plane provided by z-axis telescope
- Precise control of energy provided 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 specimen<sup>1</sup>.



## Specifications Summary

Wavelength	365 nm to 656 nm
Pulse energy control	0.1% - 100%
Resolvable spot size	Near diffraction limited
Average power	750 $\mu$ W, 15 Hz / 50 $\mu$ 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 $\mu$ W
Peak power	12 kW
Pulse energy	50 $\mu$ 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.

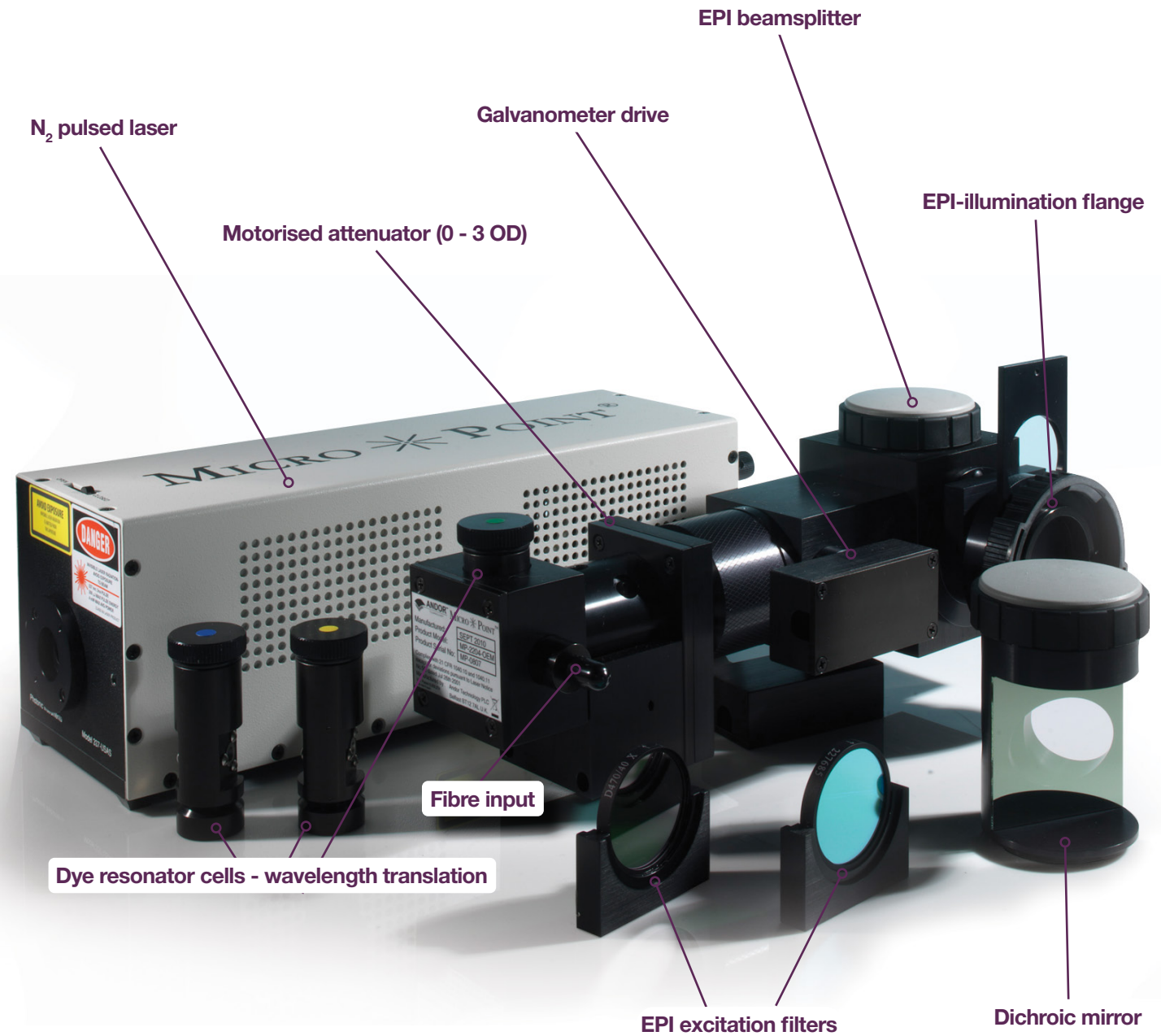
Custom OEM systems available for High Content Screening and other fluorescence based imaging instrumentation.

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, w Zeiss and model.	Control Interface	Select either Manual or Galvo

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> <table border="1"> <thead> <tr> <th>Part Number</th> <th>nm</th> <th>Part Number</th> <th>nm</th> <th>Part Number</th> <th>nm</th> <th>Part Number</th> <th>nm</th> </tr> </thead> <tbody> <tr> <td>MP-27-365-DYE</td> <td>365</td> <td>MP-27-481-DYE</td> <td>481</td> <td>MP-27-543-DYE</td> <td>543</td> <td>MP-27-625-DYE</td> <td>625</td> </tr> <tr> <td>MP-27-388-DYE</td> <td>388</td> <td>MP-27-515-DYE</td> <td>515</td> <td>MP-27-551-DYE</td> <td>551</td> <td>MP-27-635-DYE</td> <td>635</td> </tr> <tr> <td>MP-27-404-DYE</td> <td>404</td> <td>MP-27-516-DYE</td> <td>516</td> <td>MP-27-576-DYE</td> <td>576</td> <td>MP-27-651-DYE</td> <td>651</td> </tr> <tr> <td>MP-27-422-DYE</td> <td>422</td> <td>MP-27-521-DYE</td> <td>521</td> <td>MP-27-590-DYE</td> <td>590</td> <td>MP-27-656-DYE</td> <td>656</td> </tr> <tr> <td>MP-27-435-DYE</td> <td>435</td> <td>MP-27-527-DYE</td> <td>527</td> <td>MP-27-613-DYE</td> <td>613</td> <td></td> <td></td> </tr> <tr> <td>MP-27-471-DYE</td> <td>471</td> <td>MP-27-539-DYE</td> <td>539</td> <td>MP-27-622-DYE</td> <td>622</td> <td></td> <td></td> </tr> </tbody> </table>	Part Number	nm	Part Number	nm	Part Number	nm	Part Number	nm	MP-27-365-DYE	365	MP-27-481-DYE	481	MP-27-543-DYE	543	MP-27-625-DYE	625	MP-27-388-DYE	388	MP-27-515-DYE	515	MP-27-551-DYE	551	MP-27-635-DYE	635	MP-27-404-DYE	404	MP-27-516-DYE	516	MP-27-576-DYE	576	MP-27-651-DYE	651	MP-27-422-DYE	422	MP-27-521-DYE	521	MP-27-590-DYE	590	MP-27-656-DYE	656	MP-27-435-DYE	435	MP-27-527-DYE	527	MP-27-613-DYE	613			MP-27-471-DYE	471	MP-27-539-DYE	539	MP-27-622-DYE	622		
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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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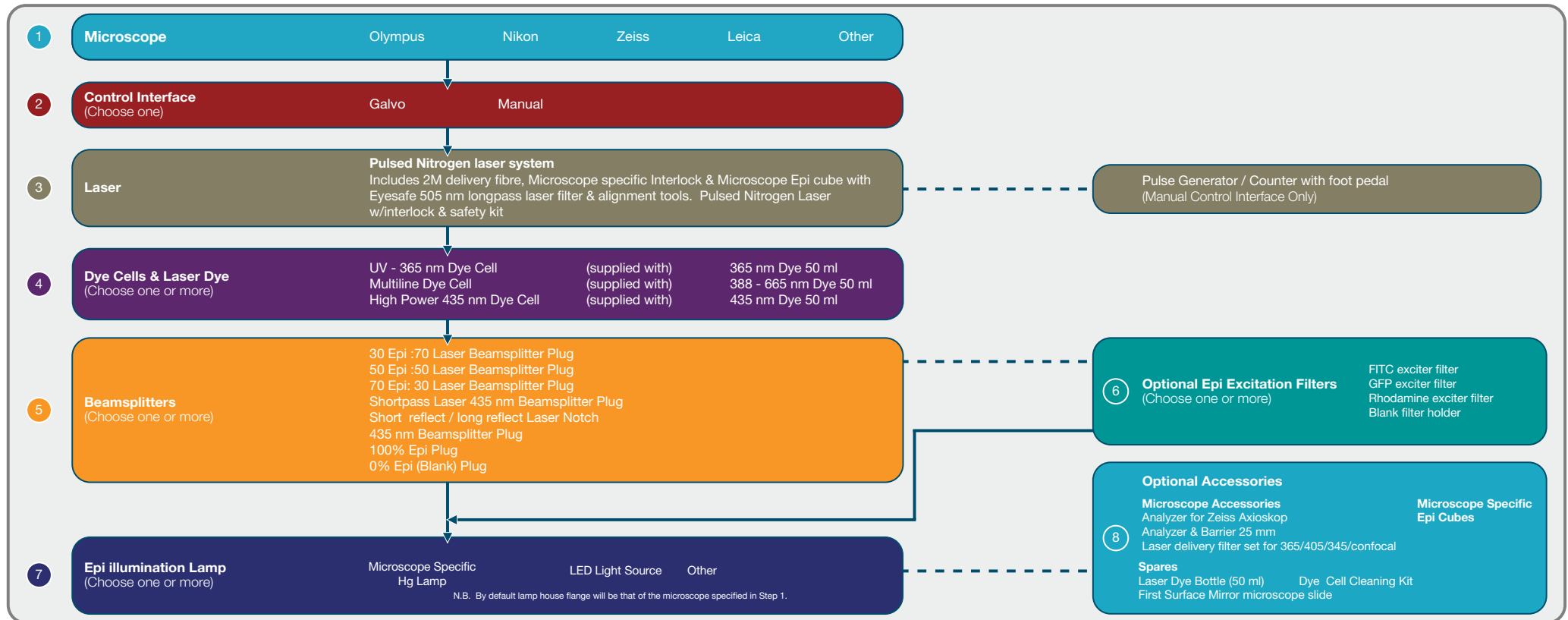
Step 6. Select the required EPI Excitation filters	
EPI Excitation Filter options	<p>The following EPI Excitation filter options are available:</p> <p>GFP exciter filter      Blank filter holder      Any 25 mm filter with 38 mm holder</p>

Step 7. Select the required EPI Illumination Lamp option	
EPI Illumination Lamps	<p>The following EPI illumination lamp options are available:</p> <p>Microscope Specific Hg Lamp      DG4      Andor AMH      Other</p>

Step 8. Select required options	
Optional Accessories	<p>The following optional accessories are available:</p> <p><b>Microscope Accessories</b> Analyzer for Zeiss Axioskop, Analyzer &amp; Barrier 25 mm, Laser delivery filter set for 365/435/345/confocal</p> <p><b>EPI cubes</b> Microscope specific</p> <p><b>Spares</b> Laser Dye Bottle (50 ml), Dye Cell Cleaning Kit, First Surface Mirror microscope slide</p>

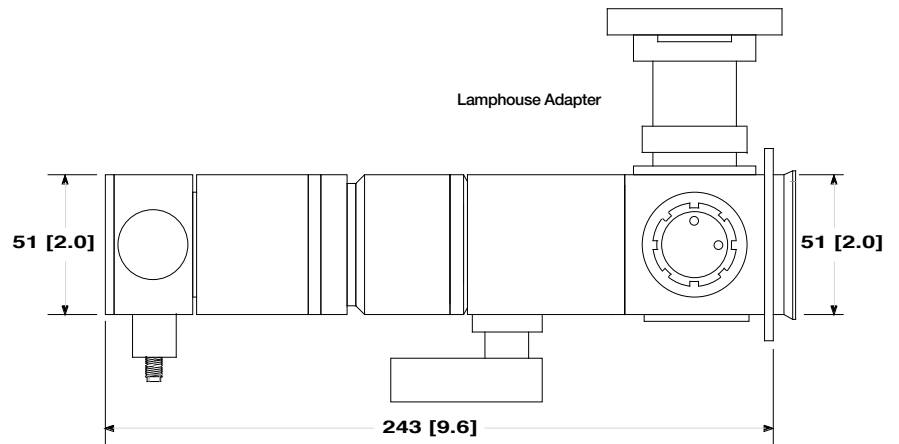
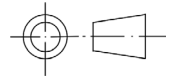
## Configuring MicroPoint

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:

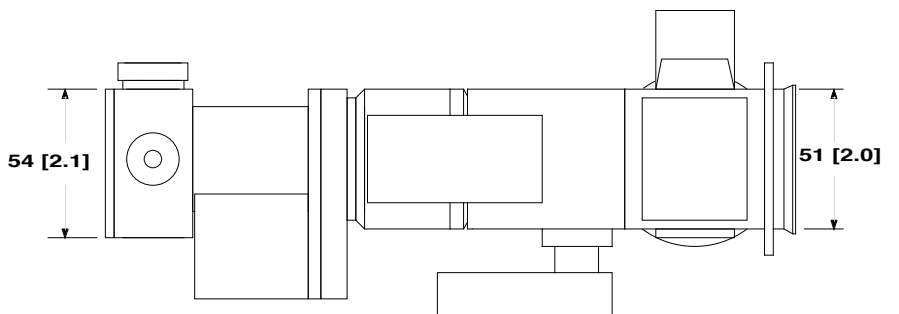
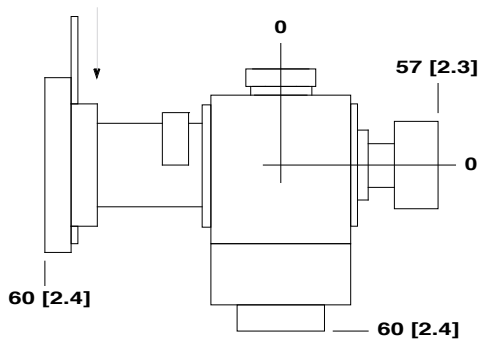


## Product Drawings

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: [www.andor.com/contact](http://www.andor.com/contact)

Our regional headquarters are:

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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.



Max Output: 50  $\mu$ J 500  $\mu$ W  
Wavelength: 365 to 700nm  
Min Pulse Duration: 3ns  
Max Repetition Rate: 30Hz

LASER RADIATION  
AVOID EXPOSURE TO BEAM  
CLASS 3B LASER PRODUCT

**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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