



Motic®

MORE THAN MICROSCOPY



Superior Microscopy Solutions For The Experts

PA53 BIO Series

VISUALIZATION & AUTOMIZATION FOR PROFOUND SCIENTIFIC RESULTS

PA53 BIO Series

Superior Microscopy Solutions for Demanding Tasks in Clinics and Natural Sciences

The PA53 BIO upright laboratory microscopes are designed with the experienced expert in mind. In keeping with Motic's mission of providing State-Of-The-Art technologies at affordable prices, we are proud to present multiple sophisticated solutions for the research work in hospitals and all life science laboratories. Our PA53 BIO and PA53 BIO FS6 models carry superb optics, ergonomic design and intuitive, automated controls for an efficient workflow, the whole at an unrivalled price/performance ratio.

The modularity of the PA53 BIO series allows to create tailor-made solutions for your individual needs. Whether it is about color fidelity and extended visual field for pathology, examination of crystals in urine sediments with Phase Contrast and Polarization in urology or advanced FISH/HER2 analysis of chromosomes with Fluorescence: The PA53 BIO series covers all of your demands.



Intelligent & Convenient Functionality Increase Your Work Efficiency and Comfort

Full Power Transmitted Köhler Illumination

Our PA53 BIO and PA53 BIO FS6 microscopes come equipped with a Full Köhler illumination, based on a 100W Halogen light source. Intelligent heat-dissipating technology avoids an overheating of microscope and sample. The lifespan of the 100W Halogen bulb thus is prolonged significantly.

Comfortable Viewing and Documentation

In order to reduce operator eyestrain, our standard PA53 BIO and PA53 BIO FS6 configurations are supplied with adjustable eyepieces, ready to cover a Field of View 23mm or even FOV 25mm. The 30° Siedentopf tube offers 3 beam splitter positions: 100:0, 20:80, and 0:100, ensuring maximum freedom for handling and digital documentation of low-light samples (Fluorescence).

Multifunctional Control Knob

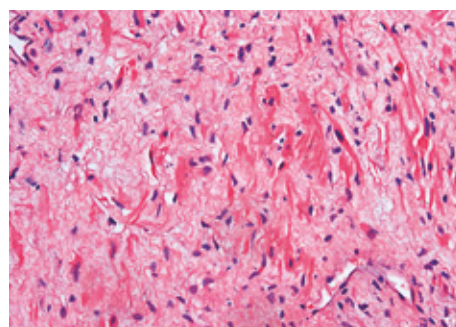
Having your workflow and ease of use in mind, our PA53 BIO and PA53 BIO FS6 models come with a multifunctional illumination control knob.

Environmentally Friendly ECO Function

An automatic power-saving mode is engaged whenever an operator leaves temporarily. This automatic shutdown protects your sample from heat, extends the lifetime of the bulb, and saves energy, so reducing operational costs.

Homogeneous Illumination with IL Function

Image quality and thus working efficiency are increased by providing a consistent and even brightness of the illumination with our IL function. Once engaged, the brightness level will be reactivated in case the nosepiece is rotated for the last lens.



PA53 BIO FS6

Intelligent Upright Microscopes for a Clever Fluorescence Management

The PA53 BIO FS6 microscopes offer maximum flexibility for managing any kind of Fluorescence application. The high-power 3-channel LUMOS LED or the traditional mercury lamp, is up to the customer to select the desired excitation source. The Fluorescence filter cubes are mounted in an encoded 6-position turret: multi-color staining can easily be handled. The standard configuration of PA53 BIO FS6 with DAPI, FITC, and TRITC filter cubes is open for more filters and more demands. A multiband filter (DAPI/Green/Orange) is available as an option for FISH technique.

Our HPlan S-APO (Fluor) objectives provide high transmission rates for the brightest images. No need for Plan Apos: Too much glass inside.



Perfect Handling, Smooth Operation. Don't Worry About Multi-Color

Fluorescence Turret

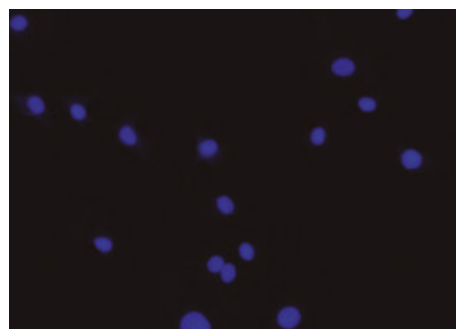
The coded fluorescence turret automatically remembers the fluorescence channel if changed. Close contact with the operating panel of the LUMOS light source ensures smooth handling and managing of multi-stained samples.

Motic Fluorescence Imaging Software

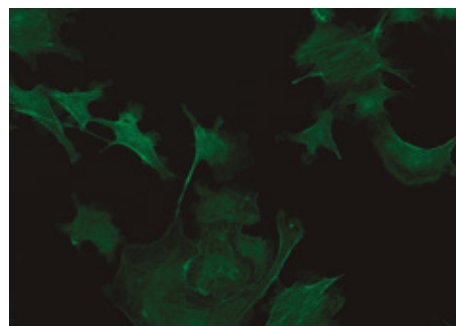
Our Motic Fluorescence Imaging Software plug-in for Motic Images Plus 3.0 is included with all PA53 BIO FS6 packages. It was developed for multi-channel imaging, the highest challenge in wide-field microscopy.

The perfect Light Source for Fluorescence: LUMOS FL

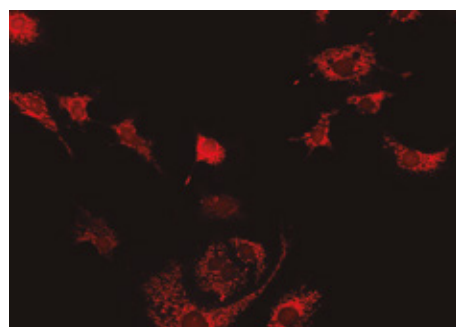
- Expanded lifespan in comparison to mercury bulbs: Factor 100.
- Instant On/Off: Unlike traditional mercury-arc lamps which take up to 20 minutes to reach constant brightness, the LUMOS FL is ready for use at the flip of a switch.
- Individually control of each LED channel.



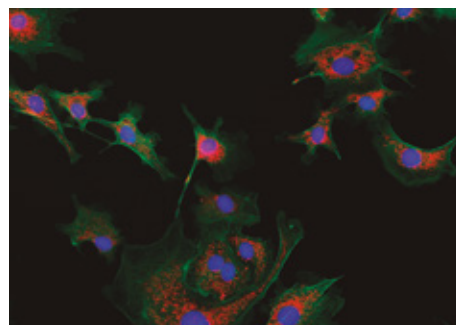
DAPI
Exciter filter (wave length) : D350/50x nm
Beam splitter filter (wave length) : 400DCLP nm
Emitter filter (wave length) : D460/50m nm



FITC
Exciter filter (wave length) : D480/30x nm
Beam splitter filter (wave length) : 505DCLP nm
Emitter filter (wave length) : D535/40m nm



TRITC
Exciter filter (wave length) : D540/25x nm
Beam splitter filter (wave length) : 565DCLP nm
Emitter filter (wave length) : D605/55m nm



RGB
Three channels Integration

Moticam S-Line

Scientific-Grade Microscope Cameras

The new Moticam S-line marks a further step in Motic's digital microscopy. By utilizing the latest sCMOS sensors coupled with our own PCB design and on-board image management, each Moticam S camera promises professional digital results at an affordable price. This Moticam S-line is designed and manufactured completely in-house under strict German quality guidelines. Whether for Clinical, Research or Industrial, this new generation of Moticams has got the answer for every demand. At Motic, we believe in making High-level Digital Microscopy affordable for everyone. You surely will enjoy this camera line.

Key features



Super-Fast
Frame Rates



USB 3.1
Data Transfer



True color
reproduction



sCMOS
Sensor



Up to 20MP
Resolution

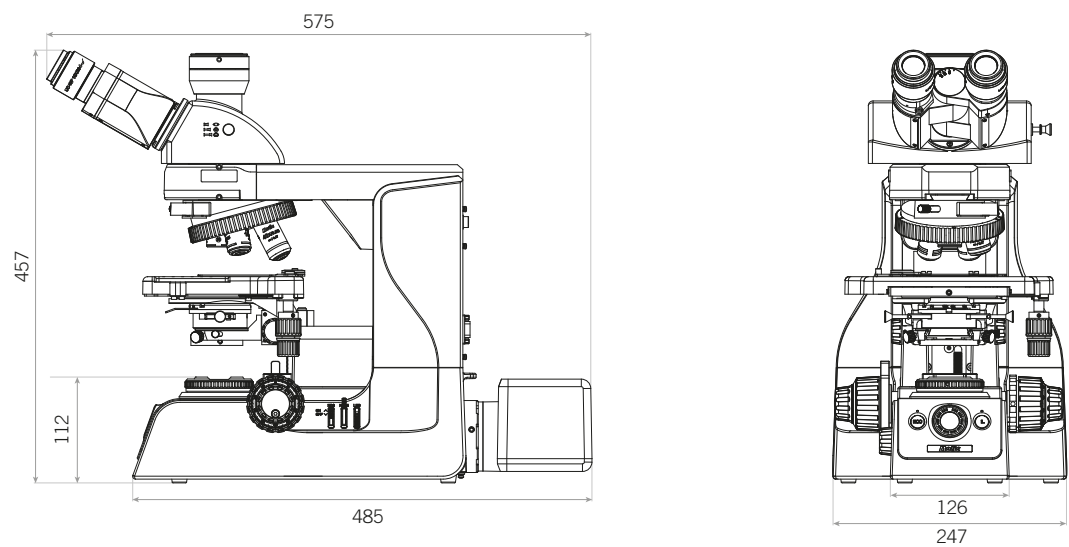


Rolling and Global
shutter models

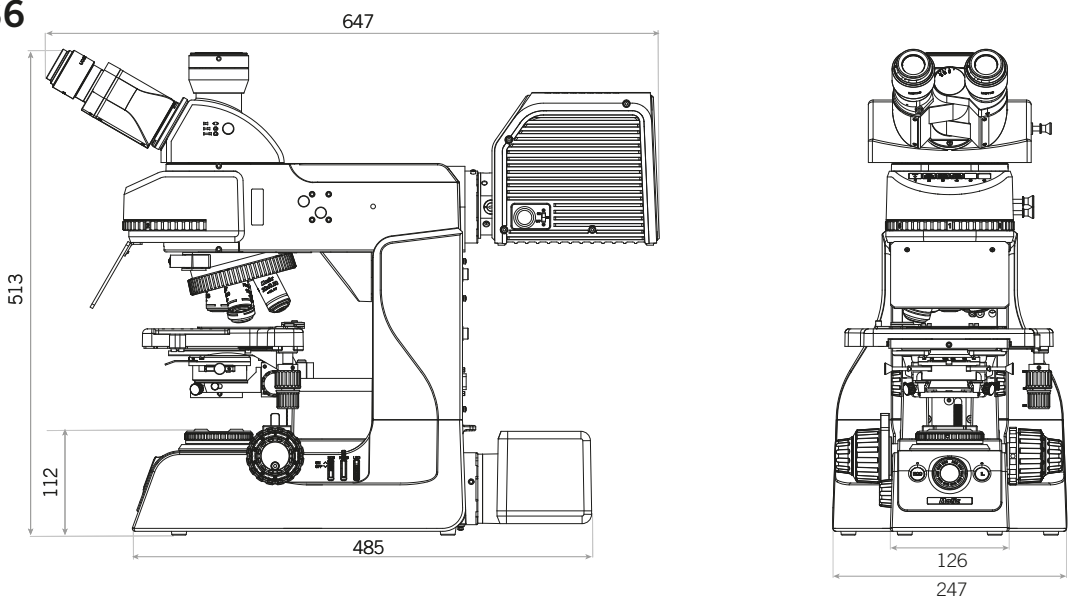


PA53 BIO Dimensions

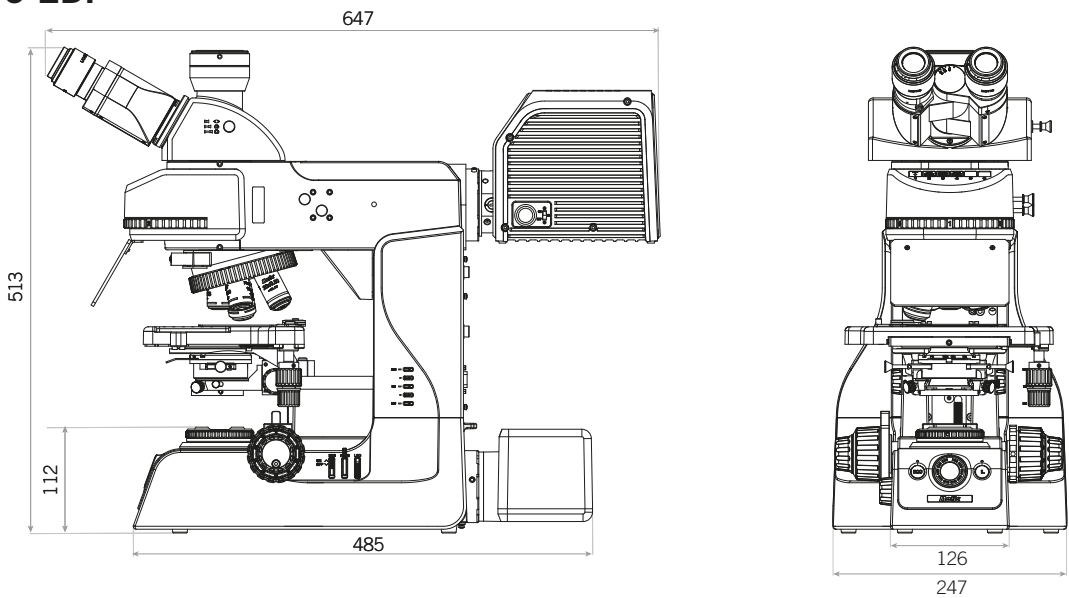
PA53 BIO



PA53 BIO FS6



PA53 BIO FS6 EDF



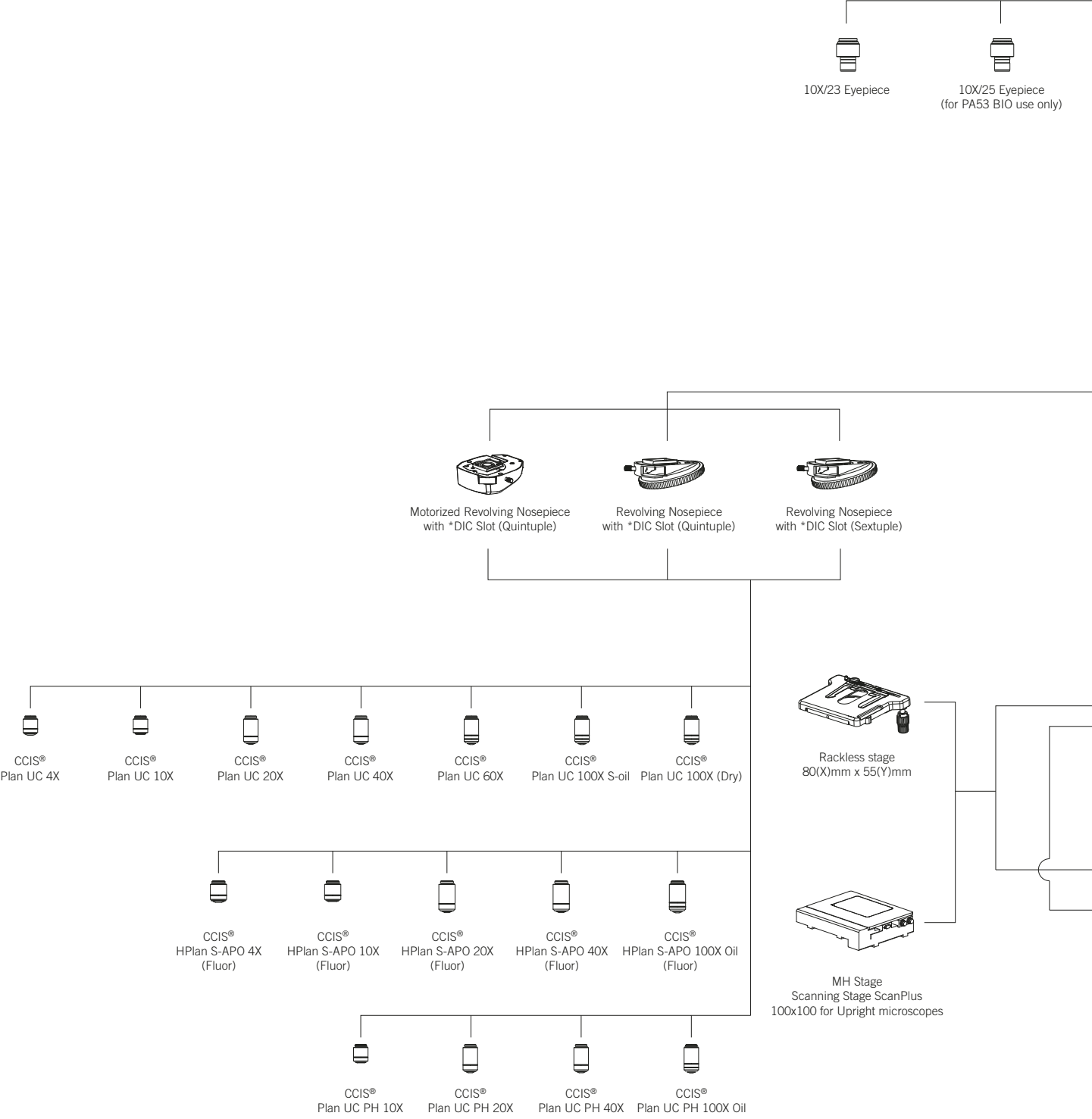
PA53 BIO Technical specifications

● SKU	1100104600941	1100104600947
● Name	PA53 BIO (Basic configuration)	PA53 BIO (High-end configuration)
Optical system	Colour Corrected Infinity Optical System (CCIS®)	
Observation tube	Trinocular head, Siedentopf type	
Inclination	30° inclined	
Trinocular light split	100:0/20:80/0:100	
Interpupillary distance	50-75mm	
Diopter adjustment	On both eyepieces, +/- 4 diopter	
● Eyepieces	Widefield WF10X/23mm with diopter adjustment	Widefield WF10X/25mm with diopter adjustment
Intermediate body	Simple intermediate	
Nosepiece	Reversed quintuple, coded	
● Objective classification	CCIS® UC Plan Achromatic (Pb free)	CCIS® HPlan S-APO (High Fluorite Class)
● Objectives	4X/0.10 (WD 30.5mm), 10X/0.25 (WD 17.4mm), 40X/0.65/S (WD 0.6mm), 100X/1.25/S-Oil (WD 0.16mm)	4X/0.13 (WD 17.3mm), 10X/0.3 (WD 11.7mm), 40X/0.75/S (WD 0.7mm), 100X/1.3/S-Oil (WD 0.1mm)
Objective mounting thread	W 4/5"x1/36" (RMS standard)	
Stand type	Upright	
Stage	Mechanical stage with built-in low position rackless coaxial stage control and sample holder	
Stage size	220x170mm	
Travel range X&Y	80x55mm	
Condenser	Focusable and centerable Abbe condenser N.A. 0.90/1.25 with slot for contrast sliders	
Diaphragm	Iris diaphragm	
Focus mechanism	Coaxial coarse and fine focusing system with tension adjustment	
Fine focus precision	1µm	
Focusing stroke	29.5mm	
Upper limit stop	Upper limit stop preset but adjustable	
Filter	ND6, ND25, LBD	
Filter holder	Integrated filters	
Incident illumination	-	
Transmitted illumination	Köhler Quartz Halogen 12V/100W with intensity control	
Illumination features	Power saving mode ECO function, LED voltage indicator and Intelligent Light function	
Software	-	
Transformer	Internal	
Power supply	110-240V (CE)	
Accessories included	Dust cover, power cord, Allen key, immersion oil (5ml)	
Dimensions LxWxH	576x247x457mm	
Net weight	19.2 kg	19.3 kg
CONTRAST TECHNIQUES		
Brightfield	Yes	
Phase contrast	Optional slider/turret	
Polarization	Optional add-on	
Darkfield	Optional slider/turret	
DIC Nomarski	<i>Under development</i>	
Fluorescence	Optional LED/HBO	

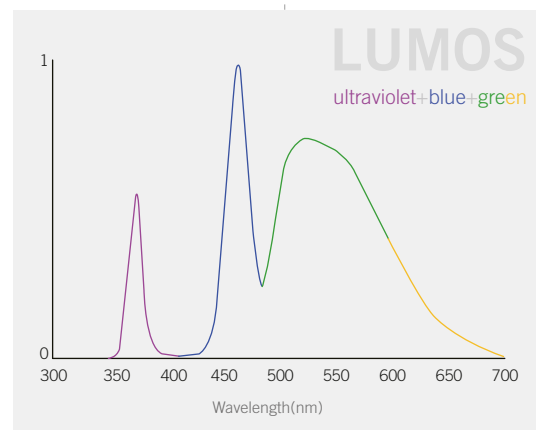
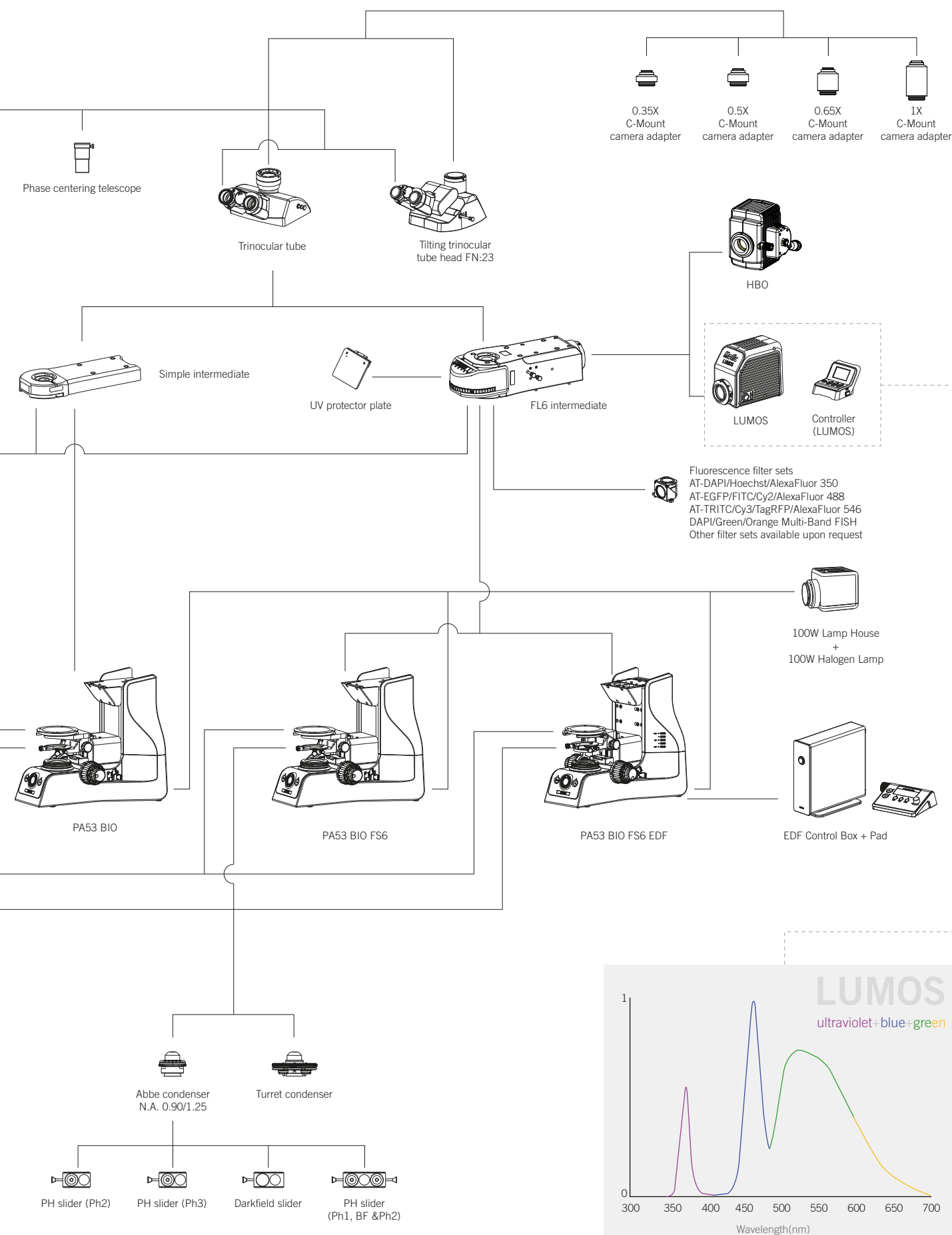
PA53 BIO FS6 Technical Specifications

SKU	1100104600934	1100104601152
Name	PA53 BIO FS6	PA53 BIO FS6 EDF
Optical system	Colour Corrected Infinity Optical System (CCIS®)	
Observation tube	Trinocular head, Siedentopf type	
Inclination	30° inclined	
Trinocular light split	100:0/20:80/0:100	
Interpupillary distance	50-75mm	
Diopter adjustment	On both eyepieces, +/- 4 diopter	
Eyepieces	Widefield WF10X/23mm with diopter adjustment	
Intermediate body	Simple intermediate	
Nosepiece	Reversed quintuple, coded	
Objective classification	CCIS® HPlan S-APO (High Fluorite Class)	
Objectives	4X/0.13 (WD 17.3mm), 10X/0.3 (WD 11.7mm), 20X/0.5 (WD 2.2mm), 40X/0.75/S (WD 0.7mm), 100X/1.3/S-Oil (WD 0.1mm)	
Objective mounting thread	W 4/5"x1/36" (RMS standard)	
Stand type	Upright	Upright. Auto EDF with motorized Z-axis. 30mm stroke.
Stage	Mechanical stage with built-in low position rackless coaxial stage control and sample holder	
Stage size	220x170mm	
Travel range X&Y	80x55mm	
Condenser	Focusable and centerable Abbe condenser N.A. 0.90/1.25 with slot for contrast sliders	
Diaphragm	Iris diaphragm	
Focus mechanism	Coaxial coarse and fine focusing system with tension adjustment	
Fine focus precision	1µm	
Focusing stroke	29.5mm	
Upper limit stop	Upper limit stop preset but adjustable	
Filter	ND6, ND25, LBD	
Filter holder	Integrated filters	
Incident illumination	LUMOS High-power LED FL light source (Optional: Mercury light source)	
Transmitted illumination	Köhler Quartz Halogen 12V/100W with intensity control	
Illumination features	Power saving mode ECO function, LED voltage indicator and Intelligent Light function	
Software	Motic Images Plus 3.0 with FL channel merge plug-in	
Transformer	Internal	
Power supply	110-240V (CE)	
Accessories included	Dust cover, power cord, Allen key, immersion oil (5ml), 2 empty filter cubes, UV blocking tube, UV protective shield	
Dimensions LxWxH	648x247x513	
Net weight	24.2kg	29.7kg
CONTRAST TECHNIQUES		
Brightfield	Yes	
Phase contrast	Optional slider/turret	
Polarization	Optional	
Darkfield	Optional slider/turret	
DIC Nomarski	Under development	
Fluorescence	LED (HBO optional)	

PA53 BIO & FS6 System Overview



*DIC slot under development





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Design Change: The manufacturer reserves the right to make changes in instrument design in accordance with scientific and mechanical progress, without notice and without obligation.

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