

OLYMPUS[®]

Your Vision Our Future

Research Stereomicroscope System

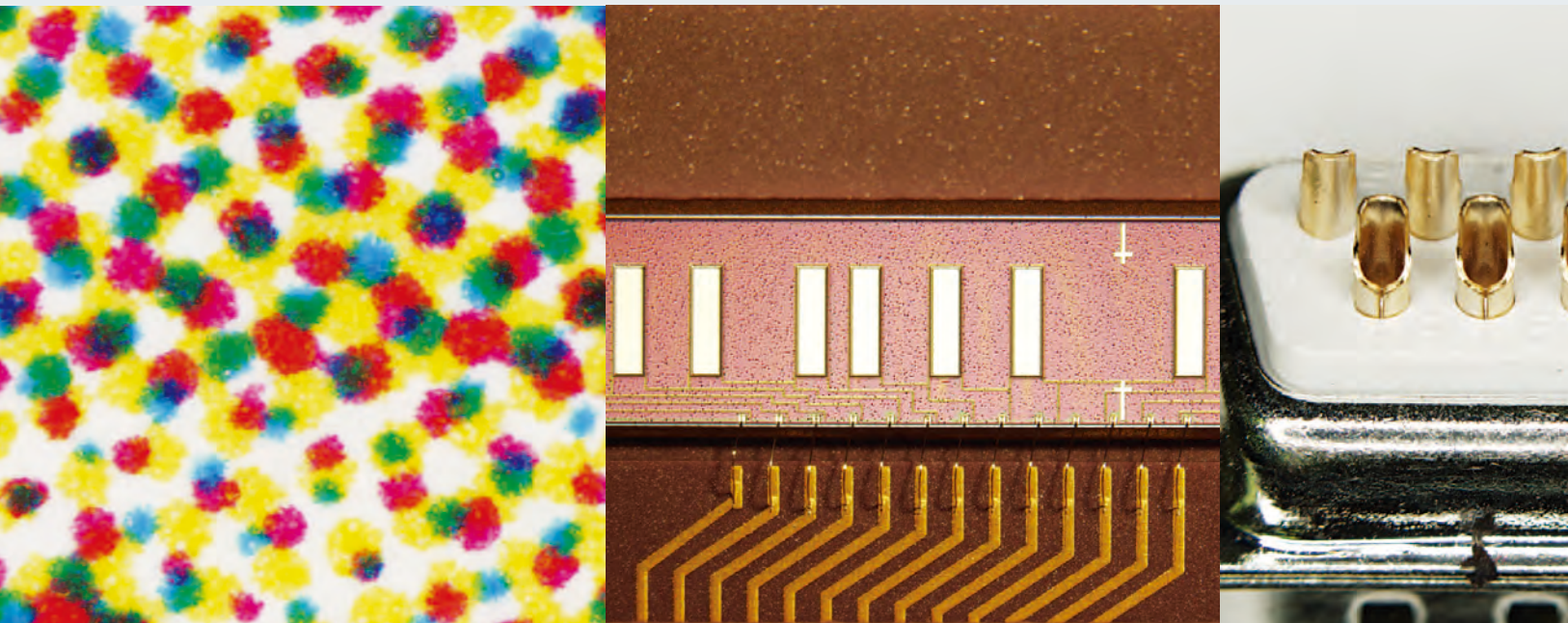
SZX16/SZX10



For **I**ndustrial Use



Reaching a New Dimension of Microscopy — Beyond the Imagination



Fine optical performance at the superior quality of stereomicroscopes. Operability designed to be user-friendly. Full response to the need for digital imaging that supports a variety of tasks from observation to analysis. Highly responsive with refined optics, the SZX Research Stereomicroscope enhances the efficiency required for cutting-edge industrial R&D and quality analysis.

- **Refined Optical Performance** p3-p8
- **Ergonomic Design for Working Comfort** p9-p10
- **Varied Illumination Technology** p11-p14
- **Intelligent Digital Imaging** p15-p17



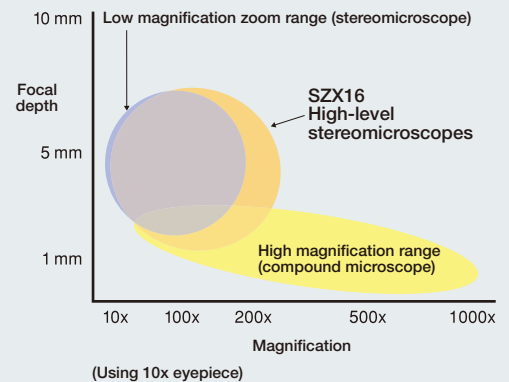
SZX16
Standard base set



SZX10
Slim LED transmitted light illuminator

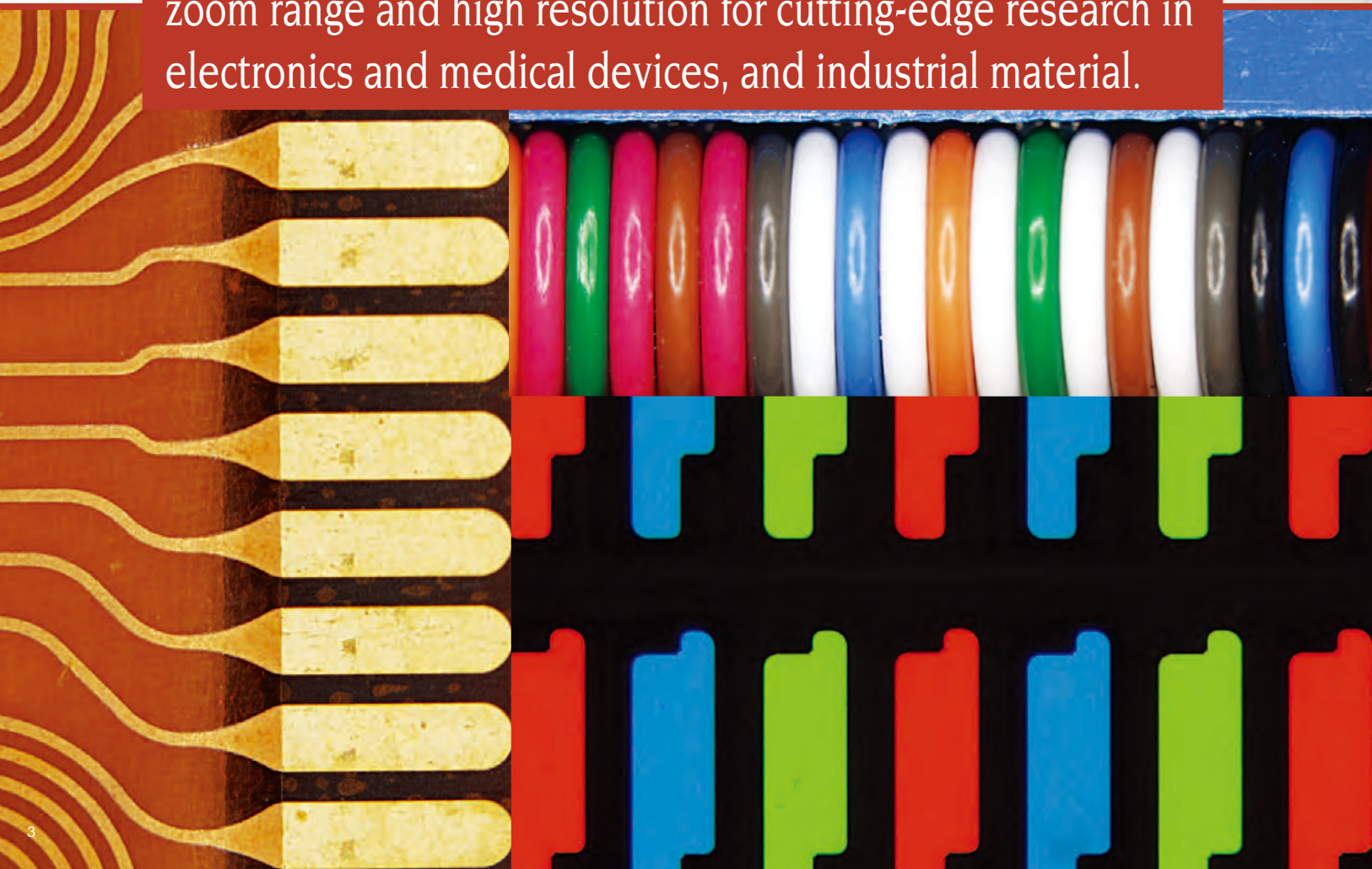
The SZX series is the result of steadily pursuing superior Galilean optics for advanced stereomicroscopy. The lineup is designed to increase power for obtaining high quality image during macro observation at low magnification, as well as microstructural observation at high magnification. Enhanced power also is assured by the exceptionally high zoom range and increased focal depth (See P6). Observations by parallel light paths and by digital imaging, plus ease of use, are features that realize the full potential of stereomicroscopy.

Magnifications with single objective lens magnifications as high as 200x have been commonly used with conventional compound microscopes. With the introduction of the SZX16 series, high magnification is attainable along with the added benefit of increased focal depth.





Optical performance has been refined to support a wide zoom range and high resolution for cutting-edge research in electronics and medical devices, and industrial material.



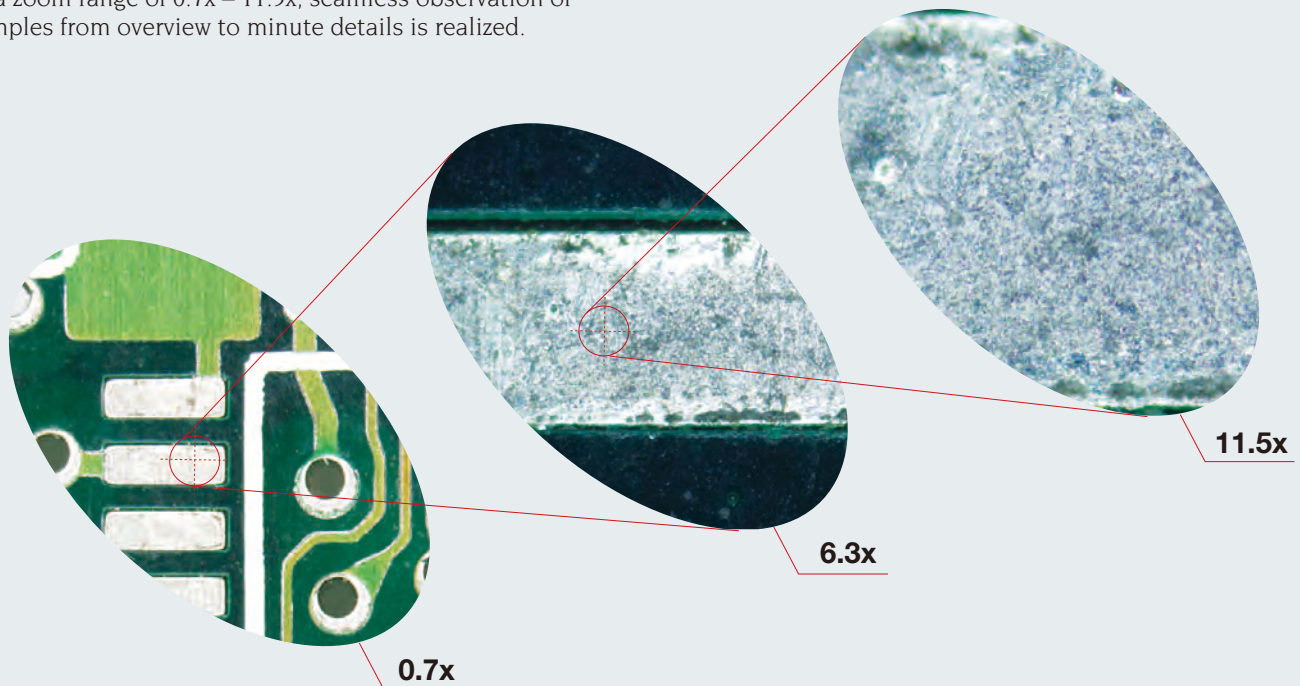
SZX16

Crystal Clear Viewing of Samples from Large Field Overview to Microstructural Observation and a Wide Zoom Ratio (16.4:1) are Key Performance Features

SZX 16 represents optical performance (16.4:1 zoom ratio) at the exceptionally high standards. With a wide zoom range of 0.7x — 11.5x, clear observation ranging from overview to microstructure is possible. When revolving objectives are used, even higher resolution magnifications are available.

■ A Wide Zoom Ratio (16.4:1). Wide Range of Options for Observation and Documentation

At a zoom range of 0.7x – 11.5x, seamless observation of samples from overview to minute details is realized.

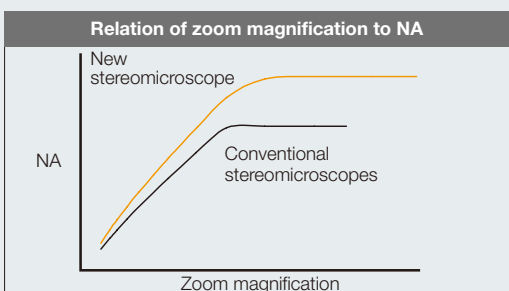


■ Improved Image Clarity at the Most Frequently Used Magnification

Resolution at the most frequently used magnification setting (middle range) is 30% better than conventional models. Improved brightness has been attained for high image clarity needed for cutting-edge research in advanced materials and electronics.

■ Expansion of Zoom Ratio with Revolving Nosepiece

The revolving nosepiece (SZX2-2RE16) incorporates parfocal (PF) objective lenses for observation at different magnifications. Using PF objective lenses enables quick and minimal focusing when switching between them.



■ Variable Focus Depth from the Built-in AS Zoom Body for Observation and Image Capture

The ability to control the built-in aperture stop (AS) allows the user to optimize sample viewing for contrast and resolution and is especially useful with samples having uneven structures.

SZX16

Highly Detailed Viewing of Samples in True-to-life Images. The New Super Depth of Focus (SDF) Objective Lenses Have a High Resolution and Offer Optimal Aberration Correction

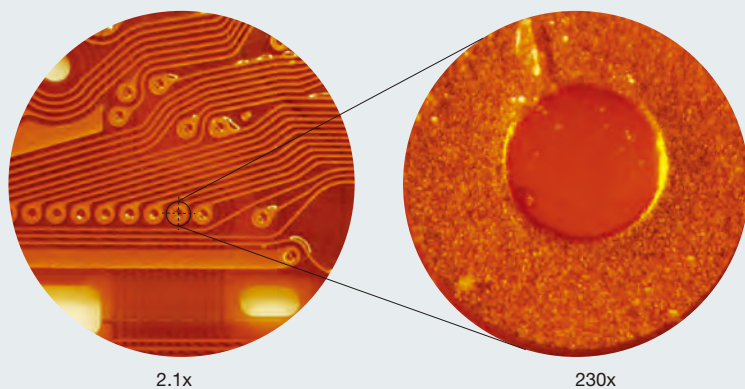
The six objective lenses in the new SDF lineup use special dispersion glass to provide stereoscopic viewing unmatched by other products.

■ Top Grade Objective Lenses in the Lineup SDF Series

By effectively eliminating astigmatism, the SDF series achieves high-quality stereoscopic viewing with less defocusing — a feature unmatched by other lenses. The six-piece lineup comprises 0.3x, 0.5x, 0.8x, 1x, 1.6x, and 2x objective lenses providing a wide range of observation between 2.1x-230x (with 10x eyepiece) — all conveniently available in one stereomicroscope.



Top row, from right: SDFPLAPO2XPFC, SDFPLAPO1.6XPF, SDFPLAPO1XPF2
Bottom row, from right: SDFPLAPO0.8X, SDFPLAPO0.5XPF, SDFPLFL0.3X



2.1x

230x

Model	WD (mm)	Total magnification*
SDFPLFL0.3X	141	2.1x-34.5x
SDFPLAPO0.5XPF	70.5	3.5x-57.5x
SDFPLAPO0.8X	81	5.6x-92x
SDFPLAPO1XPF2	60	7x-115x
SDFPLAPO1.6XPF	30	11.2x-184x
SDFPLAPO2XPFC	20	14x-230x

* Using 10x eyepieces; 15x through 30x eyepieces are optional.

■ High Resolution at 900 Lines/mm with SDFPLAPO2XPFC

SDFPLAPO2XPFC objective lens attains a high resolution at 900 lines/mm, resolved down to 1.1µm lines.



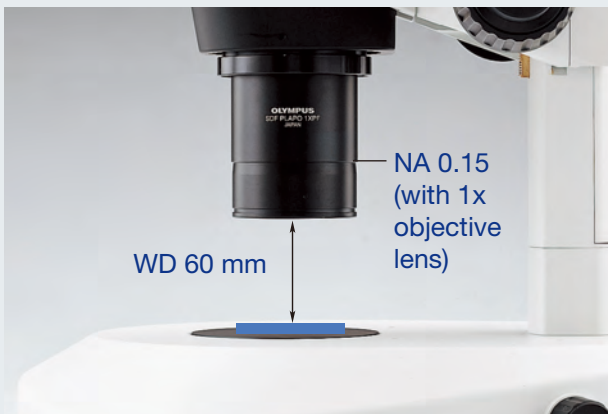
Conventional model



SZX16 (with SDFPLAPO2XPFC)

■ High NA (0.15) and Long WD (60mm) with 1x Objective Lens

SDFPLAPO1XPF objective lens provides excellent operability by providing both a high numerical aperture (0.15) and long working distance (60mm).



■ Apochromatic Design for Correction of Chromatic Aberration

The characteristics of the apochromatic system — integrated into tubes, zoom body, and objective lenses — eliminate chromatic aberration and ensure excellent color reproduction for all zoom ranges.



Uncorrected apochromatic viewing

Apochromatic viewing

■ Astigmatism-free Design for Clear Stereoscopic View

An astigmatism-free design integrated throughout the system effectively prevents the astigmatism that deforms images appearing in tubes, zoom body, and objective lenses. Increased focus depth enables clear observation at high magnifications.



SZX10

Superior Performance and Operability of this Flagship Model Provide Excellent Cost Efficiency and Sensitive Response to Various Samples

SZX10 offers high cost performance with outstanding operability. Two apochromatic objective lenses are standard. The 1x objective lens has an 81mm working distance (WD) for operational comfort, and a 0.1 numerical aperture (NA) for assured optical performance. The 1.25x objective lens may be used creatively for any number of purposes. The chromatic-aberration correction of these objective lenses provides clear and distinct images.

■ High Zoom Ratio (10:1)

Olympus proprietary optical design technologies are integrated to achieve a high 10:1 zoom ratio of 0.63x - 6.3x. A wide range of magnifications is therefore possible without having to switch objective lenses.

■ Built-in AS Zoom Body

The fully adjustable AS can be used to increase focus depth — especially useful when observing samples of notable height.

■ New 1.25x Objective Lens for High Magnification and Resolution; 1x Objective Lens for Wider Field of View and Longer WD

These high-quality apochromatic lenses designed for the SZX10 may be creatively used to serve a variety of observation tasks and needs.



Aperture stop of zoom body

Objective lenses: 1x for task efficiency

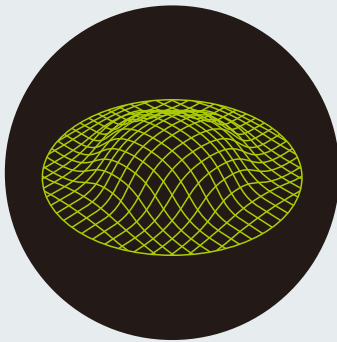


1.25x for high magnification and optimal NA

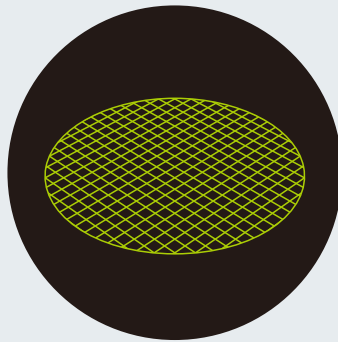


■ Distortion-free Design Minimizes Image Curvature

Distortion-free design to lower curvature/distortion allows for true observation of flat samples within a field of view.



Conventional design



Distortion-free design

■ System-wide Astigmatism-free Design for Clear Observation

Incorporating an astigmatism-free design throughout the system effectively prevents the astigmatism that deforms tube, zoom, and objective lens images.

■ Selection of Powerful SZX10 Objective Lenses


Olympus objective lenses are designed to be equally responsive to different sample needs. Eight SZX10 objective lenses offer magnification from 0.5x to 2x. Users have a variety of observation choices all in a single microscope, ranging from 3.2x to 126x with 10x eyepieces. In addition, two lenses come equipped as standard for the revolving nosepiece (SZX2-2RE10).



Top row, from right: DFPLAPO1.25X, DFPL1.5X-4, DFPL2X-4
 Center row, from right: SZX-ACH1X, SZX-ACH1.25X-2
 Bottom row, from right: DFPL0.5X-4, DFPL0.75X-4, DFPLAPO1X-4

Model	WD (mm)	Total magnification*
DFPL0.5X-4	171	3.2x–31.5x
DFPL0.75X-4	116	4.7x–47.3x
DFPLAPO1X-4	81	6.3x–63x
SZX-ACH1X	90	6.3x–63x
DFPLAPO1.25X	60	7.9x–78.9x
SZX-ACH1.25X-2	68	7.9x–78.9x
DFPL1.5X-4	45.5	9.5x–94.5x
DFPL2X-4	33.5	12.6x–126x

* Using 10x eyepieces; 15x though 30x eyepieces are optional.



The pursuit of fatigue-free observation through advanced ergonomics. The ergonomically designed system reduces fatigue and provides comfort.

Tilting Trinocular Observation Tubes with an Appropriate Convergence Angle Relieve Eye and Neck Strain, thus Eliminating Fatigue and Headaches

The trinocular tubes for comfortable and efficient observation. Regardless of standing or seated height, observers may adjust the tilting trinocular tube to efficiently perform long-duration observation.

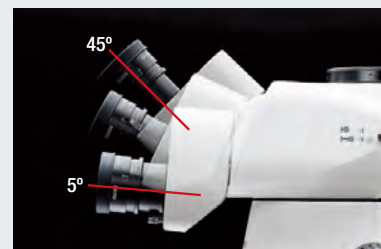
■ Convergence Angle in Tube Relieves Eyestrain

Olympus in-house research established the correlation between stereomicroscopic optical systems and eyestrain. This finding also confirms that a convergence angle using right and left optical paths without compensation can induce the malaise. The convergence angle in the SZX series, however, completely compensates for each optical path. This solution effectively eliminates eyestrain during prolonged observation.



■ Tilting Trinocular Tube Allows for Natural Posture, Reduces Fatigue

The tilting trinocular tube, angled from 5 to 45 degrees, easily adjusts to the exact angle desired. Regardless of standing or seated height, observers can perform long-duration observations while assuming a natural posture assured by the easily adjusted tilting trinocular tube. As fatigue and stress are greatly relieved, oversights are avoided and work efficiency is enhanced.



Tilting range of SZX2-TTR

■ Ergonomic Zoom and Focus Knobs for Fatigue-free Use

Position of zoom knob, size and position of coarse/fine focusing knob, and the fine focus stroke have all been redesigned to guarantee smooth operation. This enhancement of the fine focus stroke results in easy and precise focusing.



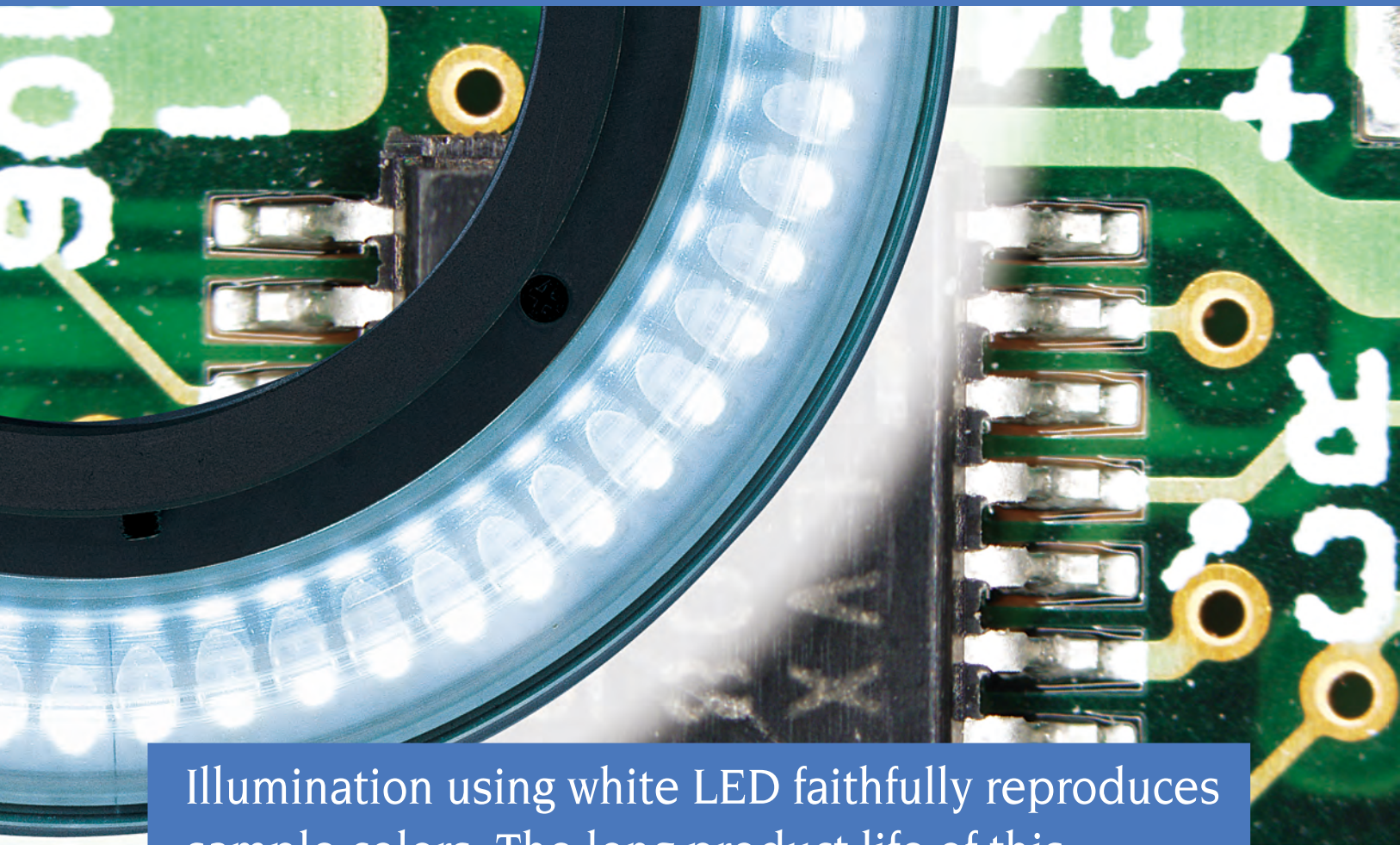
Ergonomic coarse/fine focusing knob

■ Slim Design Illumination Stand for Easy Access to Samples

Illumination stands are designed not only to be easy to use but fatigue-free. The slim LED transmitted light illumination stand, at approximately 40 mm height, provides comfortable selection of fingertip illumination and easy access to samples.



Slim design illumination stand (SZX2-ILLT)



Illumination using white LED faithfully reproduces sample colors. The long product life of this technology assures cost-effective operation.



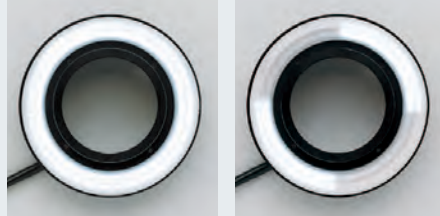
LED: Powerful, Smart, Long-lasting Illumination for Satisfying Imaging

Industrial research requires the precision LED illumination can provide for a variety of inspection and sample needs. Reproducing natural light, white LED delivers constant color temperature, and the LED ring illuminator offers high contrast observation and variable lighting for ease of use. Olympus LEDs have a long life that reduces maintenance and improves imaging results.

LED Four-Part Ring Illumination Unit (SZX2-ILR66)

High-intensity LED illumination is an extremely bright light source that reproduces natural light for optimal observation. This LED illumination system provides even illumination plus a variable selection of lighting for ease of use. By choosing from an illuminator divided into four parts, offering full, 3/4, 1/2, and 1/4 lighting for a total of thirteen patterns, the user need not move the sample for optimal viewing and documentation. Thanks to fan-less ventilation of the power supply, the LED illumination system is highly compatible with clean rooms. In addition to ESD compatibility that helps keep samples free from static electricity damage, the manual control unit, easily operated by hand, assures user comfort.

The exclusive control for the LED ring illumination system offers the freedom to direct 13-pattern LED lighting for optimum observation. Three-quarter, half, and quarter lighting patterns move in circular rotation and in mirror symmetry via pad control. The ergonomic design of the unit is perfectly suited to fingertip operation.



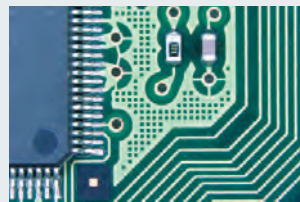
SZX2-RHS, the control pad for LED 4-part ring illumination unit



Four-part illumination of surface fracture (metal)



Upper-portion illumination of surface fracture (metal)



Four-part illumination of PWB



Right-quadrant illumination of PWB

Slim LED Transmitted Light Illumination Stand (SZX2-ILLT)

This LED transmitted light illumination stand provides three image contrast options in a slim design. In addition to superior darkfield performance, LEDs (with a Product life of over 10,000 hours) facilitate crisp brightfield images and contrast-enhancing oblique illumination.



Slim LED transmitted light illumination stand

Choose the Illumination Source that Suits Your Sample

Olympus' several light solutions work in many different tasks with such sources as transmitted, reflected, ring light, and fluorescence illumination. Offering consistently bright and stable illumination, the SZX system meets reflected light requirements by a coaxial illumination system, a dual flexible light guide, and a ring light guide, among others. These choices enable users to do a broad array of stereomicroscopic observations and documentation.

■ Various Reflected Light Illumination Systems

Dual Combination Light Guide (LG-DFI)

The top-mounted dual light guide is very easy to position and keeps workspace uncluttered. This system maintains the selected illumination position when focusing.



Dual contrast light guide on SZX16



SZX16 Coaxial illuminator



SZX16 LED Coaxial illuminator

Coaxial Illumination System (SZX2-ILLC16/SZX2-ILLC10)

This illumination system is ideal for detecting imperfections on highly reflective samples such as ICs, photonic products, and medical devices. Also available is the SZX2-ILD coaxial illumination unit with SZX2-ILPS power supply, featuring an LED light source. It not only has low power consumption but is maintenance-free and eco-friendly. Thanks to minimal vibration and dust-free design, the unit is highly suited for "clean rooms."

Dual Inter-lock Light Guide (LG-DI)

With this unit, pinpoint accuracy of select areas may be observed in detail under optimal viewing conditions.



Ring Light Guide (LG-R66)

This ring light guide provides bright, clear, and even illumination from several angles, thus eliminating obstructive sample shadowing.



Ring light guide on SZX16

Objective Lenses with an Access angle of 51 degrees (Objective Lenses for SZX16: SDFPLAPO1.6XPF, SDFPLAPO2XPFC)

Light-guide illumination with short WD (Working Distance) objective lenses made effective illumination difficult. Objective lenses set at 1.6x and 2x, with a 51-degree access angle, enable optimum illumination.



■ Transmitted Light Illumination in the following Three Stands

Advanced Brightfield Transmitted Light Illumination Stand with Filters (SZX2-ILLB)

High contrast for transparent samples is achieved through a unique oblique illumination design. Further contrast enhancement is delivered for both high- and low-power imaging. Three built-in filters (ND6/ ND25/LBD) deliver stable color temperature illumination.



Advanced transmitted light illumination stand (SZX2-ILLB)

Brightfield/Darkfield Transmitted Light Illumination Stand (SZX2-ILLD)

This transmitted light illumination stand provides twice the usual intensity with even illumination, while maintaining a safe temperature level on the surface of the illumination stand.



Transmitted Light Illumination Stand (SZX2-ILLK)

Distinguished cost-effective performance that is especially suitable for 1x objective lenses. Adjustable oblique illumination provides the contrast needed for optimal observation of transparent samples.



SZX16-FRA Fluorescence Light Illumination System for Advanced Fluorescence Imaging


High NA among Stereomicroscopes Provides Bright Fluorescent Observation

A near-vertical reflected light illumination system produces illumination that is almost coaxial to the observation path and allow for substantially improved excitation light efficiency. These features provide an average of two to three times better fluorescent observation than conventional stereomicroscopes at all magnifications. In addition to using reflected light, transmitted light can be also be used for sample confirmation.

Five-position Turret with Five-filter Selection

Fluorescence illumination system for the SZX16 has five-position turrets with a five-filter selection for different samples. Eleven different fluorescent filter units capture the details of bright and high-contrast fluorescent images.





Sophisticated microscope digital camera and image analysis software support a multitude of operations including observation, report generation and database archiving.

Olympus Microscope Digital Camera Captures SZX Images in High Resolution

OPTO-DIGITAL Technology is a total synergy of the latest digital technologies from Olympus: proprietary technology for optics, microscope digital camera, and image analysis software. Vertical observation provides excellent images.

■ High Resolution Digital Camera DP73*

This outstanding 17.3-megapixel cooled digital camera with pixel-shift technologies attains superior resolving power, sensitivity and precise 14-bit (16384 steps) color fidelity. The DP73 is compatible with all the light microscopic observation methods and produces contrast balanced images using a unique dynamic range technology. ISO1600 sensitivity delivers clear display even for faint fluorescence signals. A high definition 1600 x 1200-pixel image can be displayed live at a rate of 15 frames per second, without compression and a maximum 4800 x 3600-pixel image can be instantly saved.



■ Digital Camera DP26*

This high-resolution 5-megapixel color CCD camera provides excellent performance in brightfield observation for most applications. The DP26 incorporates progressive scanning that is free from color shift and offers high-speed IEEE1394b connectivity. It accommodates a wide range of applications with high color fidelity images.

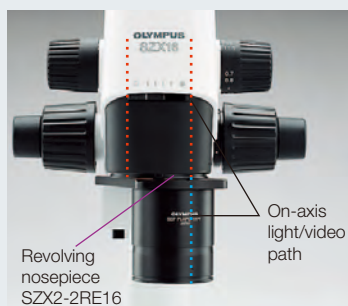
■ High-speed, Compact Digital Camera DP21*

This 2-megapixel color CCD camera can be controlled from a space intuitively operated hand-switch. The DP21 has the power to display UXGA images comparable to high-definition at a smooth 15 frames per second. Seamless viewing is sustained even when changing focus or moving the inspection spot. The hand-switch incorporates the 13 most frequently used simple measurement functions for efficient inspection of industrial parts.



■ Vertical Observation

The revolving nosepieces for SZX16 (SZX2-2RE16) and SZX10 (SZX2-2RE10) may be used for standard stereomicroscopic observation as well as vertical observation, which accommodates the overlap of lens center and optical axis. Lens-centered observation results in aberration-free images. Defocusing is therefore effectively eliminated for 3D rendering by image processing software.



The nosepiece enables vertical observation.



Ordinary observation (image)



Vertical observation

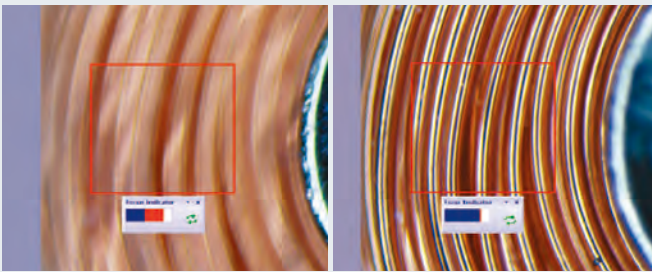
* PC is not included with the digital camera system.

OLYMPUS Stream Micro-Imaging Software : A New Standard for Workflow Flexibility

The OLYMPUS Stream image analysis software allows you to seamlessly acquire images, process and simply measure them via stereo microscope with a digital camera. The system provides you with the flexibility to fit your product to meet your needs without changing your operation. You can execute not just simple measurement, but a panoramic view, extended focus and particle analysis easily.

Optimized Focus and Exposure

The OLYMPUS Stream focus indicator enables users to select a region of interest and bring it into optimum focus using the focus control of the microscope. This function is essential when a large optical depth of field makes it difficult to find the best focus position by eye. OLYMPUS Stream's live histogram display and overexposure indicator let you easily find the optimum exposure time to avoid overexposed images that cause a loss of detail. Your digital camera's exposure time can then be adjusted manually or automatically when using the family of Olympus DP series cameras.



Unfocused

Focused

Instant Extended Focus Image (EFI)

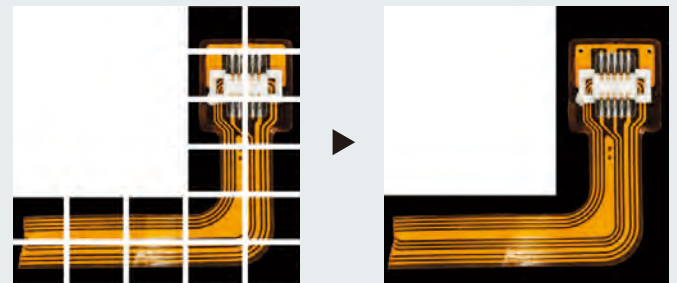
OLYMPUS Stream software provides images for samples that extend beyond the standard depth of focus. The Instant Extended Focus Image allows you to use the fine focus adjustment to combine many images at different z-levels to provide you with a single combined image that is entirely in focus.



Perfectly focuses image of mechanical parts of a watch

Manual Multiple Image Alignment (MIA)

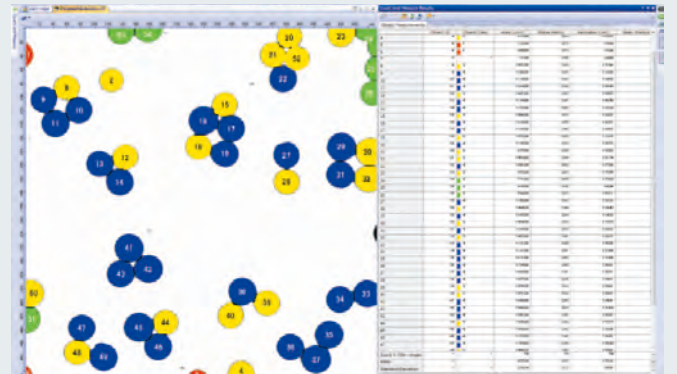
OLYMPUS Stream software provides Multiple Image Alignment (MIA) to enable the creation of panoramic images of samples that extend beyond the field of view. The OLYMPUS Stream software then quickly stitches them together, providing you with an output ready for visualization or complex measurement. Simultaneous use of instant EFI is also possible.



Multiple image acquisition of a flexible board

Count and Measure

The OLYMPUS Stream focus indicator enables users to select a region of interest and bring it into optimum focus using the focus control of the microscope. This function is essential when a large optical depth of field makes it difficult to find the best focus position by eye. OLYMPUS Stream's live histogram display and overexposure indicator let you easily find the optimum exposure time to avoid overexposed images that cause a loss of detail. Your digital camera's exposure time can then be adjusted manually or automatically when using the family of Olympus DP series cameras.



Object detection and classification

Please refer to OLYMPUS Stream catalog for further details

A wide Range of Accessories to Extend the Width of Observation. Customizable for Various Purposes (SZX16 / SZX10)



SZX16 Universal stand



SZX16 Large stand



SZX16 Motorized zoom and focus unit

Universal Stand with ESD* Compatibility (SZX-STU2)

This stand is designed for observation and digital imaging of samples too large for standard-size stands. The design, based on dual horizontal poles and linear ball bearings, ensures smooth horizontal movement and rotation. The mechanism can be tilted forward, backward, right and left, allowing a quick and precise approach to the chosen observation area.

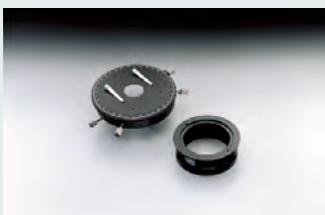
*ESD = Electric Static Discharge

Large Stand (SZX2-STL)

This large stand exhibits excellent stability, making it highly suitable for image capture as well as observation of large samples.

Motorized Focus and Zoom Enhance Efficiency (Motorized Focus Unit SZX2-FOA/Motorized Zoom Unit SZX2-ZB16A)

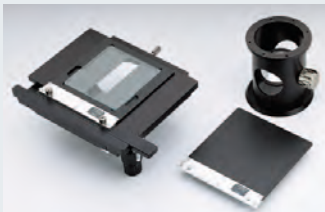
The motorized focus unit has a maximum load capacity of 23 kg and facilitates operation when heavy items such as cameras are attached. With the addition of motorized zoom, both focusing and zooming can be performed with one hand via an easily accessed switch — the ideal solution for improving examination efficiency. Remote operation is also possible, allowing observation on an external monitor.



U-SRG, SZX-STAD1

BX Stage Adapter type 1 (SZX-STAD1)

Allows use of the BXiS rotating stage (U-SRG) to various SZX stands and transmitted light illuminators. This is especially valuable in polarized observations and image capture.



U-SIC4R2, U-MSSPG, U-MSSP4, SZX-STAD-2

BX Stage Adapter type 2 (SZX-STAD2)

Allows use of a BXiS mechanical stage by combining with various SZX stands and transmitted light illuminators. Particularly suitable for accurate X-Y movement of samples.



BH2-SH, SZH-STAD1

BH Stage Adapter type 1 (SZH-STAD1)

Allows use of a BH2 mechanical stage (BH2-SH) by combining with various SZX stands and transmitted light illuminators. Particularly suitable for accurate X-Y movement of samples.



SZX16/SZX10 Specifications

Item	Specifications					
	SZX2-ZB16/SZX2-ZB16A			SZX2-ZB10		
Zoom microscope bodies	Zoom ratio: 16.4:1 (0.7x-11.5x) Magnification indication: 0.7/0.8/1/1.25/1.6/2/2.5/3.2/4/5/6.3/8/10/11.5			Zoom ratio: 10:1 (0.63x-6.3x) Magnification indication: 0.63/0.8/1/1.25/1.6/2/2.5/3.2/4/5/6.3		
	Zoom variable magnification system with parallel optical axis Zoom drive system: Horizontal handle Click-stop for various zoom positions incorporated					
	Built-in AS zoom body					
	Objective mounting: screw mount					
Objective *With WHN10x-H/ WHSZ10-H	For SZX2-ZB16/SZX2-ZB16A			For SZX2-ZB10		
	Objectives	N.A.	W.D. (mm)	Objectives	N.A.	W.D. (mm)
	SDFPLFL0.3X	0.045	141	DFPL0.5X-4	0.05	171
	SDFPLAPO0.5XPF	0.075	70.5	DFPL0.75X-4	0.075	116
	SDFPLAPO0.8X	0.12	81	DFPLAPO1X-4	0.1	81
	SDFPLAPO1XPF	0.15	60	SZX-ACH1X	0.1	90
	SDFPLAPO1.6XPF	0.24	30	DFPLAPO1.25X	0.125	60
	SDFPLAPO2XPF	0.3	20	SZX-ACH1.25X-2	0.125	68
Eyepiece	WHN10X-H F.N. 22 WHSZ15X-H F.N. 16 WHSZ20X-H F.N. 12.5 WHSZ30X-H F.N. 7			WHSZ10X-H F.N. 22 WHSZ15X-H F.N. 16 WHSZ20X-H F.N. 12.5 WHSZ30X-H F.N. 7		
	<p>SZX2-TTR/SZX2-TTRPT: Tilting trinocular tube Convergence angle, Tilting angle: 5°-45°, ray switcher: 2 ways (TTR: binocular100%, binocular50%, camera50%, TTRPT: binocular100%, camera100%) Interpupillary distance adjustment: 52-76mm</p> <p>SZX2-TR30/SZX2-TR30PT: 30 degree trinocular tube Convergence angle, Tilting angle: 30°, ray switcher: 2 ways (TR30: binocular100%, binocular50%, camera50%, TR30PT: binocular100%, camera100%) Interpupillary distance adjustment: 52-76mm</p> <p>————— SZX-BI30: 30° binocular tube Tilting angle: 30° Interpupillary distance adjustment: 51-76</p> <p>————— SZX-BI45: 45° binocular tube Tilting angle: 45° Interpupillary distance adjustment: 52-76</p> <p>————— SZX-TBI: tilting binocular tube Tilting angle: 5-45° Interpupillary distance adjustment: 51-76</p>					
Focusing assembly:	SZX2-FO: Focusing unit / focus: rack and pinion with roller guide (with torque adjustment ring for focusing), optional counter balance, coarse handle stroke: 80mm, coarse handle stroke per rotation: 21mm, Load capacity: 0-10.0kg					
	SZX2-FOF: Fine focusing unit / focus: rack and pinion with roller guide (with torque adjustment ring for coarse focusing), coarse and fine coaxial handle, built-in counter balance, coarse handle stroke: 80mm, coarse handle stroke per rotation: 36.8mm, fine handle stroke: 80mm, fine handle stroke per rotation: 0.77mm, load capacity: 2.7-15.0kg					
	SZX2-FOFH: : Heavy-duty fine focusing unit / focus: rack and pinion with roller guide (with torque adjustment ring for coarse focusing), coarse and fine coaxial handle, built-in counter balance, coarse handle stroke: 80mm, coarse handle stroke per rotation: 36.8mm, fine handle stroke: 80mm, fine handle stroke per rotation: 0.77mm, load capacity: 8.0-25.0kg					
	SZX2-FOA: Motorized focus unit / focus: rack and pinion with roller guide, focusing stroke: 78mm, motorized focusing speed coarse: 2.7mm/s fine: 0.03mm/s load capacity: 0.0-23.0kg					
Stands	SZX2-ST: Stand / Pillar height: 270mm, base dimension: 284(W)x335(D)x31(H)mm, Stage clips are mountable, with stage adapter fixing screw holes					
	SZX2-STL: Large stand / Pillar height: 400mm, base dimension: 400(W)x350(D)x28(H)mm, Stage clips are mountable, with stage adapter fixing screw holes					
Environment	In-house use / altitude: till 2000 m high, temperature: 5 through 40 degrees Centigrade, humidity: Max 80% (at or below 31 degree Centigrade, the figure varies in other temperature.)					

Transmitted illuminators specifications

Item	Specifications			
	SZX2-ILLT	SZX2-ILLB	SZX2-ILLK	SZX2-ILLD
Light source	LED	6V30W Halogen 6V30WHAL PHILIPS 5761 (average lamp service life: approx. 100 hours)		
Light intensity adjustment	Continuously variable system			
Effective illuminated area	Brightfield: ø63mm Darkfield / Oblique: ø35mm	ø40mm		Brightfield: ø40mm Darkfield: ø35mm
Built-in filter	—————	LBD, ND6, ND25 one for each	—————	LBD (inter-lock brightfield)
Add-on filter	—————	—————	ø45mm frosted filter (45LBD), provided	—————
Illumination mode	Brightfield illumination Oblique illumination Darkfield illumination	Brightfield illumination Oblique illumination	Brightfield illumination Oblique illumination	Brightfield illumination Darkfield illumination
Contrast selection	—————	2-step selection of High and Low	—————	—————
Cooling fan	—————	Built-in		
The height of stage (from desk surface)	41mm	82mm		
Pillar height	270mm			
Weight	Approx. 3.7kg	Approx. 5.0kg	Approx. 4.6kg	Approx. 5.4kg
Power source	AC adaptor	Built-in transformer with fan ventilation		

Reflected light illuminators specifications

Type	LED ring illuminator SZX2-ILR66	Ring light guide LG-R66	Dual ring light guide LG-DFI/DI	Coaxial illuminator SZX2-ILLC16/10
Features	4-part LED ring illumination 4-part independent ON/OFF available	Bright, uniformly lit images without glaring reflections or obscuring shadows	Flexible illumination for any angle and position	Bright high contrast coaxial illumination. Effective for observing structure, such as imperfections on metal surfaces, patterns on IC or LCD
Specifications	Rotary, mirror function, ESD capability, RoHS compatibility, Class 1	Minimum WD: 30mm Installation diameter: 66mm Flexible part: 1000mm Attachment adapter*: SZX-LGR66 <small>*No adapter required for SZX16-LGR66 *Unable to attach to SDFPLAPO2XPFC/SDFPLAPO16XPF</small>	LG-DFI: Flexible part 900mm Inter-lock part 500mm LG-DI: Inter-lock part 500mm	Magnification factor: 1.5x Light guide: LG-DF Flexible part 1000mm 1/4 wave plate
Light source specifications	10-segment light intensity volume, fan-less ventilation, AC100-240V	Type: LG-PS2 Functions: Light intensity control and lamp ON/OFF control by external signal (DCO-5V), mechanical adjustment function Power consumption: 150W (350VA) Rated voltage: 100-120V/220-240V 50/60Hz Dimensions: 120(H)x120(H)x235(D)mm Weight: approx. 1.5kg		
Option	SZX-LGR66, adapter for SZX10	—	HILL301: spot lens LG-FAD: ϕ 25 filter adapter	

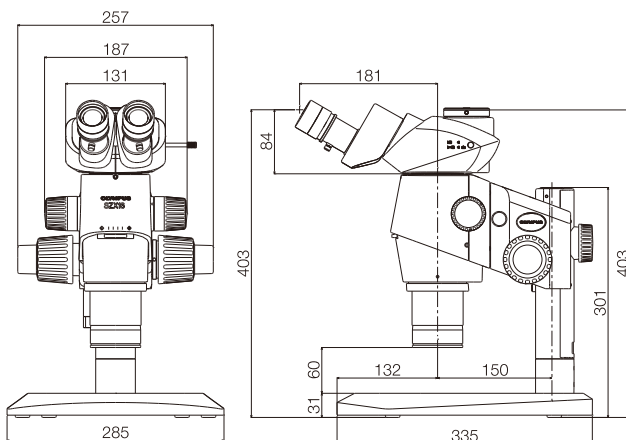
Total magnifications and actual field diameters of SZX2-ZB16/SZX2-ZB16A

Objective	Eyepiece							
	WHN10X-H		WHSZ15X-H		WHSZ20X-H		WHSZ30X-H	
	total mag.	field diameter (mm)	total mag.	field diameter (mm)	total mag.	field diameter (mm)	total mag.	field diameter (mm)
SDFPLFL0.3X	2.1x–34.5x	ϕ 104.8– ϕ 6.4	3.2x–51.8x	ϕ 76.2– ϕ 4.6	4.2x–69x	ϕ 59.5– ϕ 3.6	6.3x–103.5x	ϕ 33.3– ϕ 2.0
SDFPLFL0.5XPF	3.5x–57.5x	ϕ 62.9– ϕ 3.8	5.3x–86.3x	ϕ 45.7– ϕ 2.8	7x–115x	ϕ 35.7– ϕ 2.2	10.5x–172.5x	ϕ 20.0– ϕ 1.2
SDFPLAPO0.8X	5.6x–92x	ϕ 39.3– ϕ 2.4	8.4x–138x	ϕ 28.6– ϕ 1.7	11.2x–184x	ϕ 22.3– ϕ 1.4	16.8x–276x	ϕ 12.5– ϕ 0.8
SDFPLAPO1XPF	7x–115x	ϕ 31.4– ϕ 1.9	10.5x–172.5x	ϕ 22.9– ϕ 1.4	14x–230x	ϕ 17.9– ϕ 1.1	21x–345x	ϕ 10.0– ϕ 0.6
SDFPLAPO1.6XPF	11.2x–184x	ϕ 19.6– ϕ 1.2*	16.8x–276x	ϕ 14.3– ϕ 0.9	22.4x–368x	ϕ 11.2– ϕ 0.7	33.6x–552x	ϕ 6.3– ϕ 0.4
SDFPLAPO2XPFC	14x–230x	ϕ 15.7– ϕ 1*	21x–345x	ϕ 11.4– ϕ 0.7*	28x–460x	ϕ 8.9– ϕ 0.5	42x–690x	ϕ 5.0– ϕ 0.3

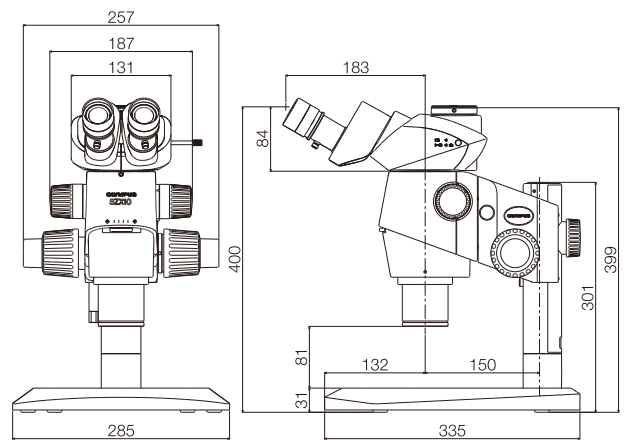
Some vignetting may occur from optical characteristics. This occurs in observations at low magnification.

Total magnifications and actual field diameters of SZX2-ZB10

Objective	Eyepiece							
	WHSZ10X-H		WHSZ15X-H		WHSZ20X-H		WHSZ30X-H	
	total mag.	field diameter (mm)	total mag.	field diameter (mm)	total mag.	field diameter (mm)	total mag.	field diameter (mm)
DFPL0.5X-4	3.2x–31.5x	ϕ 69.8– ϕ 7.0	4.7x–47.3x	ϕ 50.8– ϕ 5.1	6.3x–63x	ϕ 39.7– ϕ 4	9.5x–94.5x	ϕ 22.2– ϕ 2.2
DFPL0.75X-4	4.7x–47.3x	ϕ 46.6– ϕ 4.7	7.1x–70.9x	ϕ 33.9– ϕ 3.4	9.4x–94.5x	ϕ 26.5– ϕ 2.6	14.2x–141.8x	ϕ 14.8– ϕ 1.5
DFPLAPO1X-4 SZX-ACH1X	6.3x–63x	ϕ 34.9– ϕ 3.5	9.5x–94.5x	ϕ 25.4– ϕ 2.5	12.6x–126x	ϕ 19.8– ϕ 2	18.9x–189x	ϕ 11.1– ϕ 1.1
DFPLAPO1.25X SZX-ACH1.25X-2	7.9x–78.9x	ϕ 27.9– ϕ 2.8	11.8x–118.1x	ϕ 20.3– ϕ 2	15.8x–157.5x	ϕ 15.9– ϕ 1.6	23.6x–236.3x	ϕ 8.9– ϕ 0.9
DFPL1.5X-4	9.5x–94.5x	ϕ 23.3– ϕ 2.3	14.2x–141.8x	ϕ 16.9– ϕ 1.7	18.9x–189x	ϕ 13.2– ϕ 1.3	28.4x–283.5x	ϕ 7.4– ϕ 0.7
DFPL2X-4	12.6x–126x	ϕ 17.5– ϕ 1.7	18.9x–189x	ϕ 12.7– ϕ 1.3	25.2x–252x	ϕ 9.9– ϕ 1	37.8x–378x	ϕ 5.6– ϕ 0.6

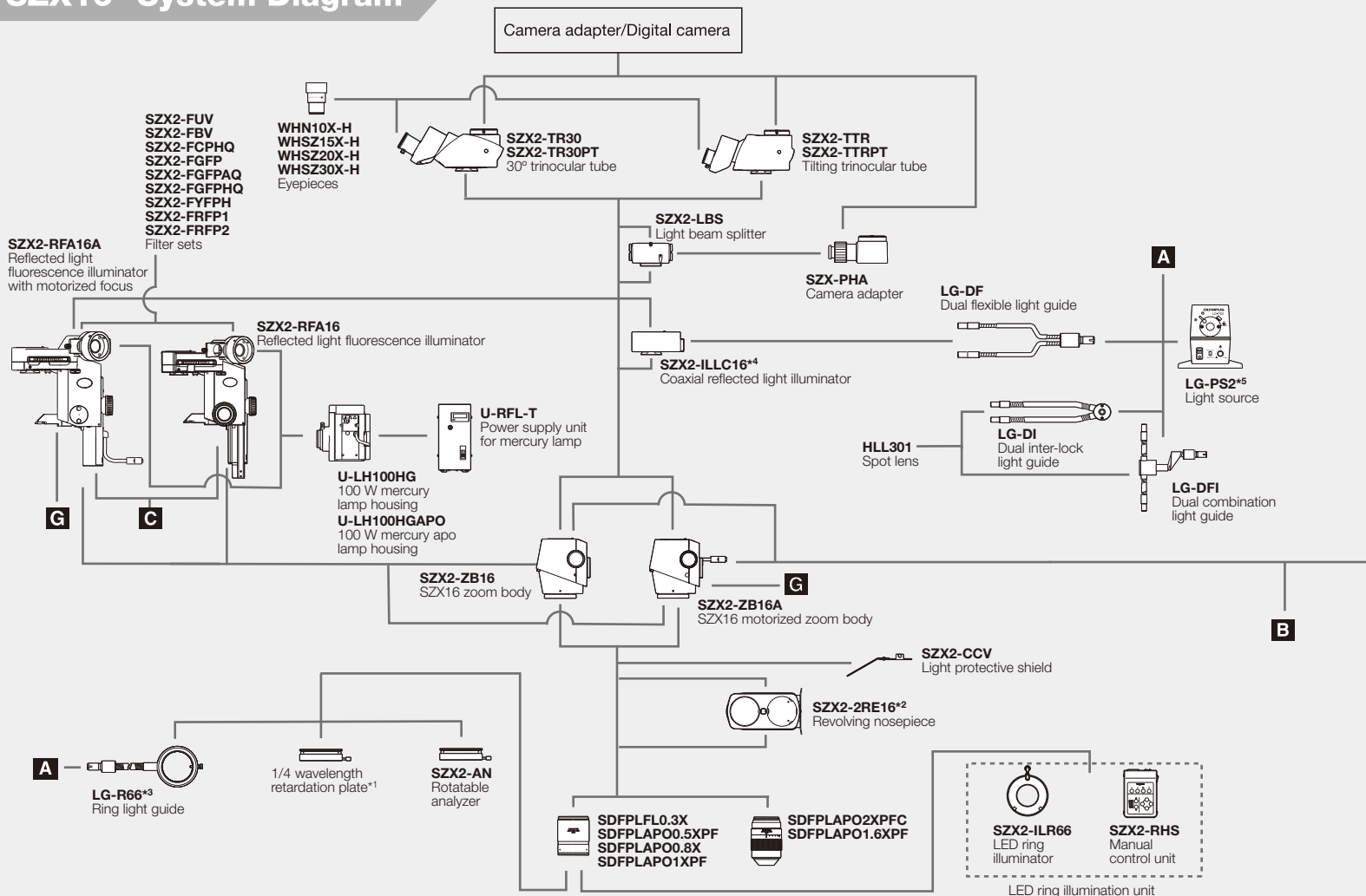


SZX16 dimensions



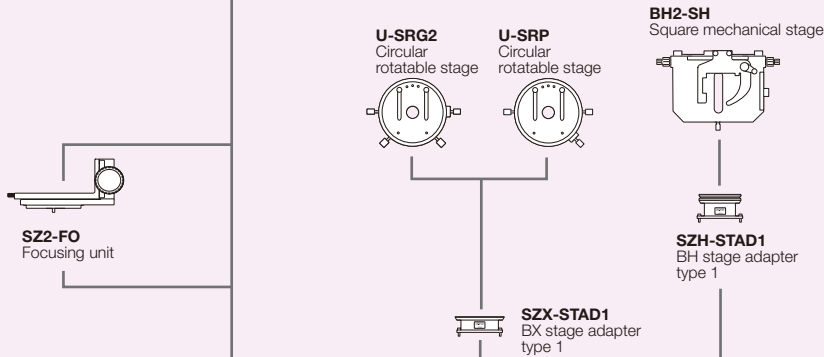
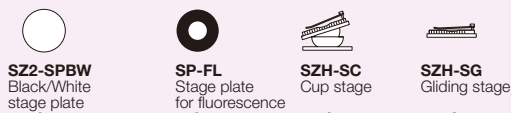
SZX10 dimensions

SZX16 System Diagram

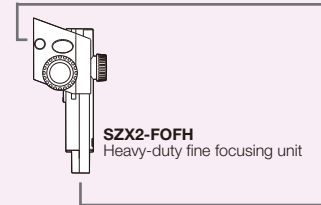


*1 Incorporated in SZX2-ILLC16 *2 Cannot be used with SZX2-FO and has some limitations with SZX2-ILR66 or LG-R66 *3 Please contact your nearest Olympus dealer as for LG-R66PL combination *4 Cannot be attached to SDFPLAPO1.6XPFC/2XPFC *5 Different types may be offered in some areas including EU countries

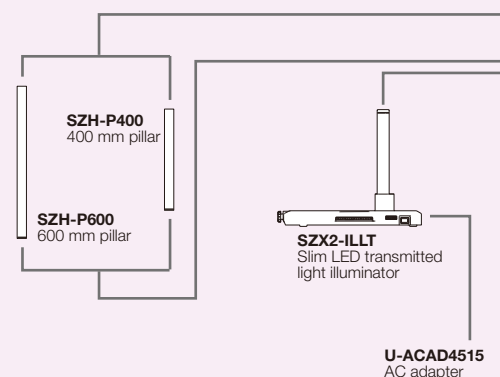
Accessories



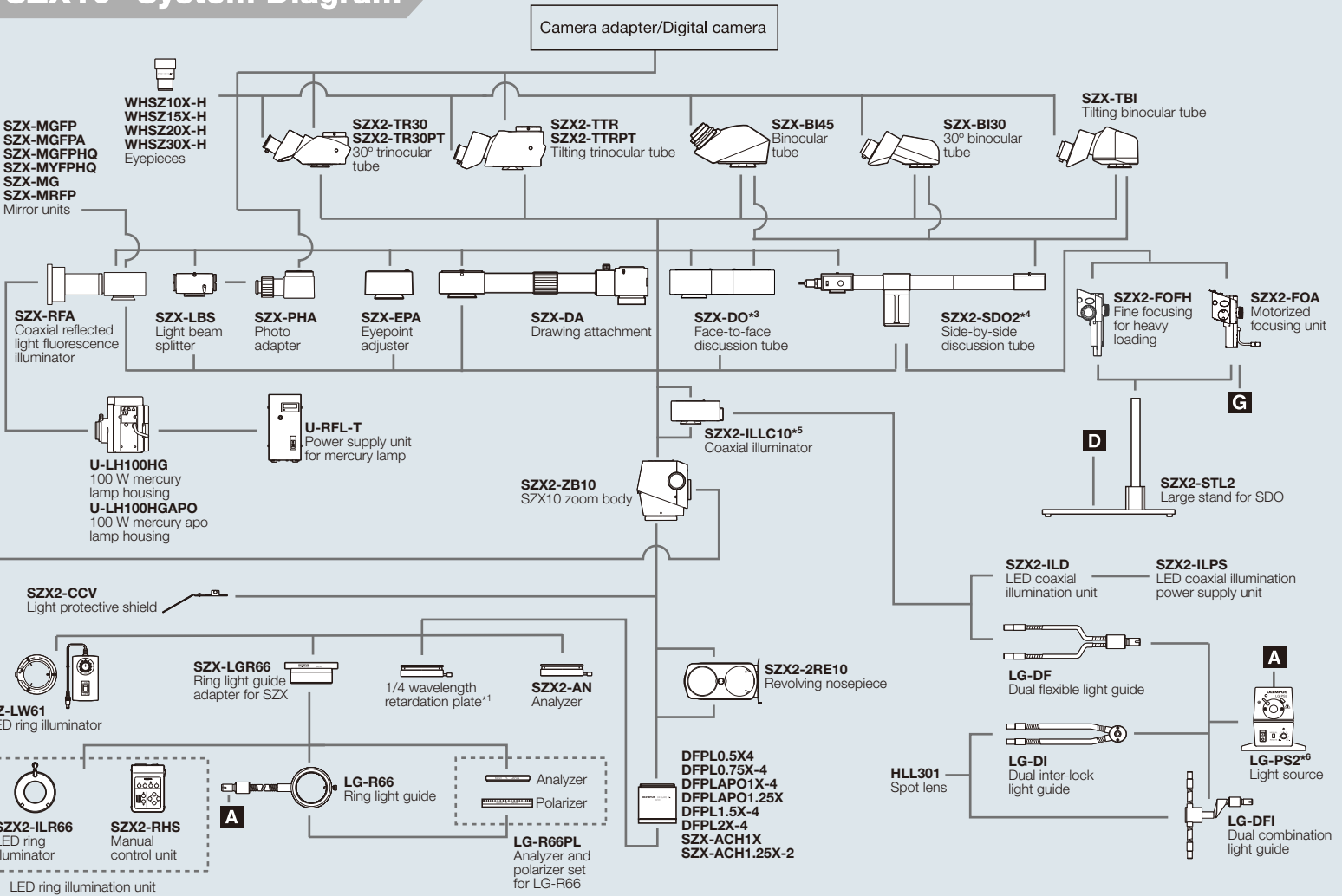
Focusing units



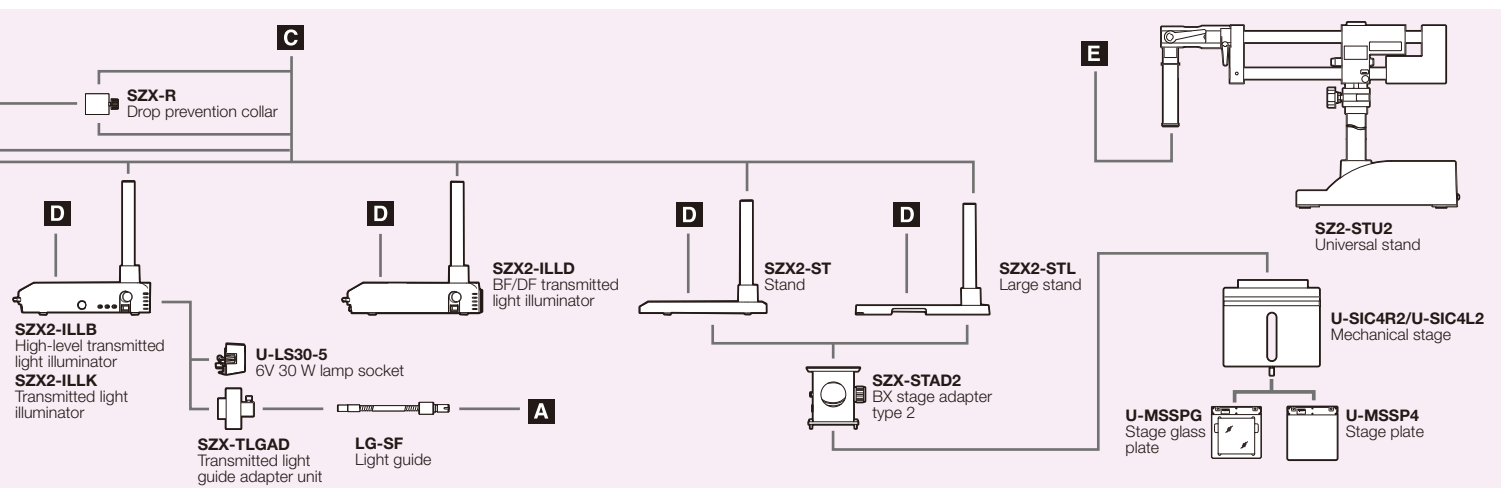
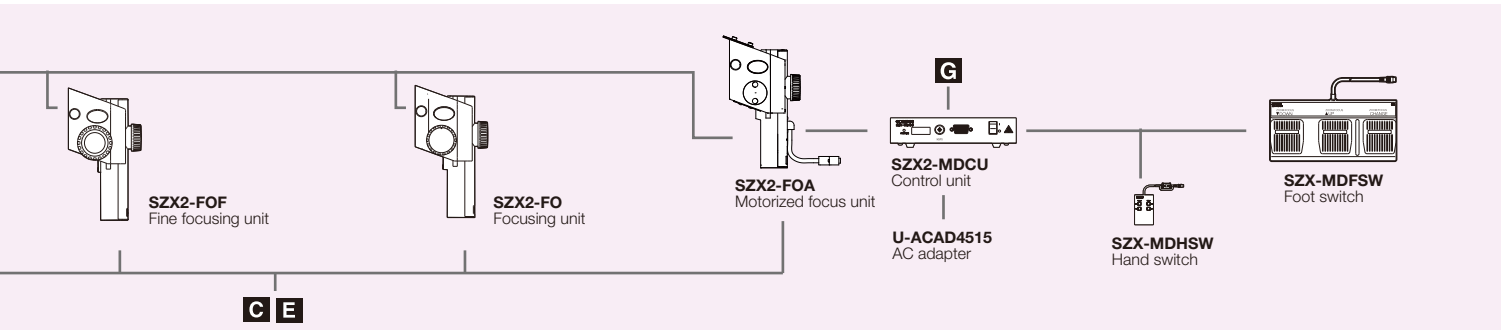
Illuminators



SZX10 System Diagram



^{*1} Incorporated in SZX2-ILLC10 ^{*2} The SZX2-FOFH is highly recommended for SZX-SDO use focusing unit ^{*3} Please contact your nearest Olympus dealer for applicable observation tube combination
^{*4} SZX2-FOFH and SZX2-STL2 are required when using SZX-SDO2. ^{*5} Cannot be attached to DFPL2X-4 ^{*6} Different types may be offered in some areas including EU countries



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*1 Digital zoom till 30X available

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