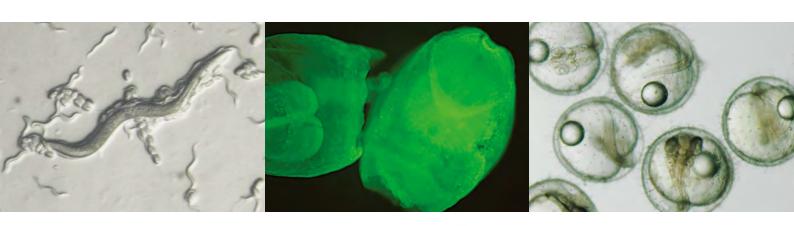




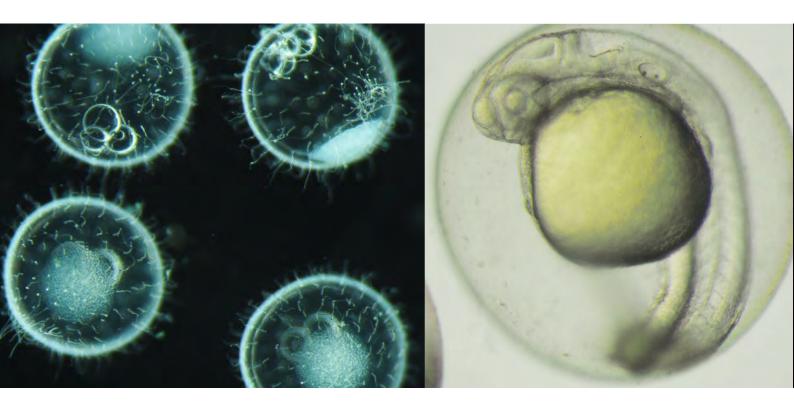
### SZX16/SZX10

# Meet the Challenge of Life Science Imaging





## A New Dimension in Stereo Microscopy



Olympus SZX2 series stereo microscopes are up to the challenge of leading-edge microscopy applications, offering an exceptionally wide zoom ratio and high numerical aperture (NA). Excellent image clarity and a flexible optical system make the SZX2 series easy to use, while their advanced optics, improved functionality, and ergonomic design deliver an outstanding user experience.

Modern life science laboratories require the most effective imaging tools to observe a vast quantity of live specimens. The SZX2 stereo microscope series is designed to meet these needs and is refined to the highest levels of quality and performance. The combination of a high NA and a multi-wavelength, astigmatism-free design yields high-resolution images with an increased depth of field. Furthermore, the quad-position LED transmitted light illumination base enables you to easily switch the observation method and contrast level by changing cartridges. The SZX2 microscope is redesigned with improved ergonomics that reduce operator fatigue and enable comfortable observation over a long period of time.



### ■P3-P8

## A New Dimension in Image Clarity

The images are consistently sharp due to the high NA and multi-wavelength, astigmatism-free design that reduces aberration. From low to high magnification, you can achieve excellent bright and fluorescence observation.

### ■P9-P10

### Comfortable to Use

The long working distance (W.D.), high NA, and illuminated base accommodate a variety of sample types for an efficient workflow.

### **■**P11-P12

### Flexible Transmitted Illumination

The LED illumination base enables the user to choose cartridges and to easily switch the observation method and contrast.

### **■**P13-P14

### **Digital Imaging**

From brightfield to fluorescence observation, users can acquire high-resolution images of various types of specimens.

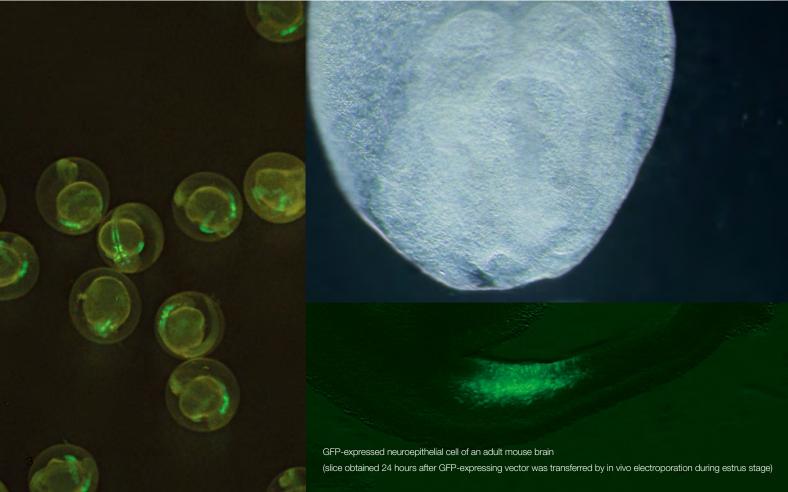
### **■**P15-P16

### Customizable to Suit Your Needs

Accessories for optimizing optical performance and operability include a variety of illumination bases, light guides, and stage plates.

# SDF Objectives Provide Suitable Specimen Viewing from Large Field Overviews to Microstructures





#### Wide 16.4:1 Zoom Ratio

The SZX16 microscope offers good optical performance for nearly any application. Olympus SDF objective lenses have a high numerical aperture (NA), providing remarkable detail and clarity when viewing microstructures. With an extra-wide zoom range of 7.0x-115x, this all-in-one microscope answers a range of needs from low-magnification imaging to detailed, high-magnification observations. These features enable the user to view live specimens with low contrast and observe microstructures.

### **High NA**

The SZX16 has an outstanding NA rating with 2X objective lenses. The optical performance is 30% better than previous Olympus stereo microscopes.



Previous Olympus stereo microscope

SZX16 (with SDFPLAPO2XPFC)

### Six SDF Objectives for Various Uses

The SZX16 PLAN APO objective series meets many imaging needs from long working distance objectives for observing large specimens to high-magnification objectives with a high NA for observing microstructures.

Model	W.D. (mm)	Magnification*					
SDFPLFL0.3X	141	2.1X-34.5X					
SDFPLAPO0.5XPF	70.5	3.5X-57.5X					
SDFPLAPO0.8X	81	5.6X-92X					
SDFPLAPO1XPF	60	7X-115X					
SDFPLAPO1.6XPF	30	11.2X-184X					
SDFPLAPO2XPFC	20	14X-230X					
*Using WHN10X-H							



Wide-Angle Zoom Action for Versatile Operation

The SZX16 boasts a zoom range of 7.0x-115x\*. From sample verification and selection at low magnification to microstructure verification at high magnification, users can seamlessly image a variety of specimens.

### Two Objectives Combine with the Revolving Nosepiece for 3.5x - 230x Zoom

The Olympus parfocal series consists of 0.5X, 1X, 1.6X, and 2X objectives. Two parfocal objectives can be attached to the microscope's revolving nosepiece, enabling users to easily switch between lenses for smooth zooming between 3.5X and 230X (using WHN10X-H).



<sup>\*</sup> When using the SDFPLAPO 1X and WHN10X-H

Sharp Images That Enhance Your Research

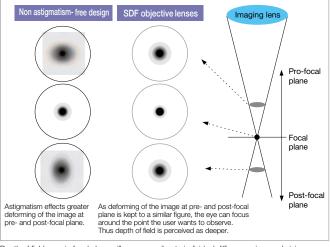


### Setting the Standard in Image Clarity

The microscope's multi-wavelength, astigmatism-free design effectively eliminates image-deforming aberrations, enabling remarkably sharp 3D imaging and enhanced specimen manipulation. With an apochromatic lens system that effectively reduces chromatic aberration, the latest proprietary SZX16 optical system provides vivid 3D observation images of various specimens.

### Sharp, Detailed Observation of Specimens

By reducing astigmatism, SDF objective lenses prevent the image deforming in the pre- and post-focal planes, offering a deeper depth of field. These design features enable stress-free use of forceps in the field of view during live sample selection and acquisition. When these objectives are combined with the transmitted light illumination base, users can observe low-contrast, transparent specimens. This reduces oversights for specimen selection, dissection, and manipulation.



Depth of field seen in focal plane will vary according to individual differences in users' vision.

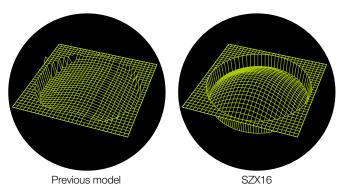
### Integrated Apochromatic System

The apochromatic system—integrated into the observation tubes, zoom body, and objectives—eliminates chromatic aberration throughout the zoom range and helps acquire high image quality without chromatic blur.



#### Optical Performance with Less Fatigue

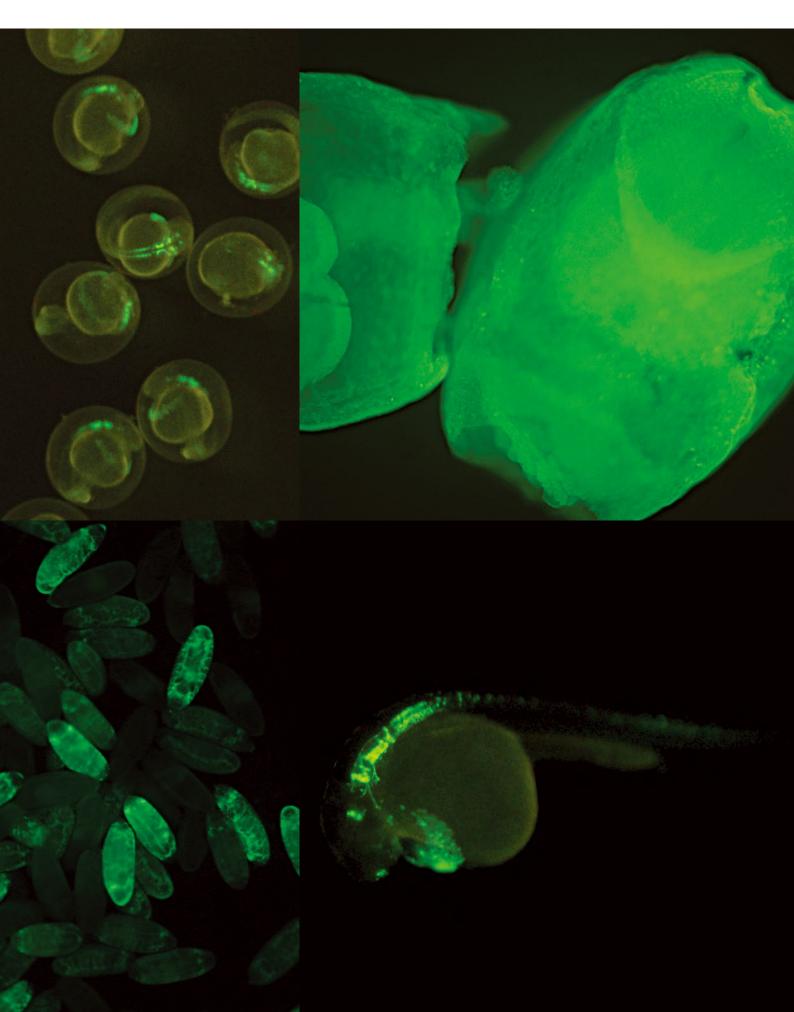
A 360° view of balanced images is made possible by accommodating vertical and horizontal parameters. Discomfort in the eyes and body, as well as stress from long periods of observation or operation, are effectively reduced.



### SZX16: Optics Easily Accommodate Thick Specimens

The ability to clearly perceive the depth and dimensions of thick specimens, such as eggs and embryos, is important in many applications. The SZX16 delivers clear 3D images from the surface and interior of live specimens for applications such as dissection.

Efficient Observation from Low to High Magnification, Even in Fluorescence Imaging



### SDF Objectives Significantly Improve Signal Intensity and Support Bright Fluorescence Observation

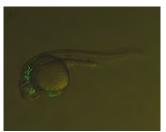
Bright fluorescence observation is important in biological and medical research. Weak fluorescence is a common problem when observing specimens at low magnification under a stereo microscope. The SZX16 microscope enables even and bright fluorescence observation from low to high magnifications.

#### High NA for Bright Fluorescence Observation

The SDF lenses' high NA greatly improves fluorescence sensitivity. Furthermore, the newly designed near-vertical reflected light illuminator's excitation light paths are independent from the observation paths, enabling substantially improved excitation light efficiency. These features provide far brighter fluorescence observation than conventional stereo microscopes at all magnifications. Transmitted light observation to verify the specimen's outline is possible even under reflected light fluorescence observation.







Fluorescence and transmitted light illumination

# Even and Seamless Fluorescence Observation from Low to High Magnification

The near-vertical reflected light illuminator works in conjunction with the zoom function to provide even illumination over the entire magnification range.



### SZX16 reflected light fluorescence illumination stand

### Five-Position Turret with Nine-Filter Selection

Six filter units, ranging from UV excitation to red fluorescent protein (RFP), enable imaging using various fluorescent dyes and proteins. Olympus high-quality (HQ) filters have an edge steepness and high transmission that efficiently detect the fluorescent light to enhance and capture brighter fluorescent images in precise detail.

Filter unit	Model	Remarks
For UV excitation	SZX2-FUV	Ex330-385/Em420-
For GFP	SZX2-FGFP	Ex460-490/Em510-
For GFP separation	SZX2-FGFPA	Ex460-495/Em510-550
High performance for GFP	SZX2-FGFPHQ	Ex460-480/Em495-540
For RFP 1	SZX2-FRFP1	Ex530-550/Em575-
For RFP 2	SZX2-FRFP2	Ex540-580/Em610-



SZX16 Fluorescent filter unit

Ergonomically Designed and Optimized for User Comfort



### Configure the Microscope to Match Your Needs

The SZX2 microscope handles a variety of specimens and operations—from large specimens such as mice to small ones, including Zebrafish, nematodes, C. elegans, or drosophila eggs—with an effective combination of high numerical aperture and wide working space. Moreover, the transmitted light illumination base is thin (only 41.5 mm (1.6 in.)) to provide a wide working space and enable multiple users to work comfortably.

#### Wide Working Space and High NA

#### W.D. 60 mm and NA 0.15 from the 1X objective

The 1X objective has a 60 mm working distance that gives the user room to move and an NA of 0.15 that meets the needs of advanced research. Also available are 0.8X objectives that

have a working distance of 81 mm, and provide not only a larger working space between objective lenses and sample but also a total magnification of 5.6x–92x (using the WHN10X-H).



#### Easy-to-access 2X objectives and correction collar

The intelligent design enables users to easily access objectives and delivers a high NA of 0.3 for easy specimen selection. An additional correction collar can adjust image quality independently

of the specimen.



#### Ergonomically Designed, User-Friendly Base

Offering a wide working space in which users can place several Petri dishes, these illumination bases have an ergonomic, beveled design so users can work comfortably and naturally.

### Observation Tube with Optimized Convergence Angle Relieves Eyestrain

Working with an ophthalmologist, Olympus investigated and confirmed a correlation between stereo microscope optical systems and eyestrain. Specifically, the angle between right and left lines of vision (convergence angle) directly impacts eyestrain. The SZX2 series has an optimized convergence angle designed to enable users to make observations from a natural position that minimizes eye fatigue. This solution effectively eliminates eyestrain during long periods of observation.

### Ergonomic Accessories Enable Users to Optimize the Microscope for Their Comfort

To improve the ergonomics of our stereo microscopes, Olympus introduced a long tilting trinocular tube (SZX2-LTTR). This trinocular can be adjusted from 5 to 45 degrees. In addition, the eyepoint adjuster (SZX2-EEPA) can raise and lower the eyepoint within a 120 mm range. Combining these units enables users to reduce stress and fatigue over longer periods of time by working in a natural posture.



Observation tube with convergence angle



Tilting trinocular tube

Choose the Right Contrast and Observation Method for Your Research



### Multiple Contrast and Observation Methods SZX2-ILLTQ/SZX2-ILLTS

With a slim 41.5 mm design that is approximately half the thickness of previous halogen transmitted light illumination bases, our LED transmitted light illumination bases have a lower height to enable a low eyepoint and easy access to base-mounted samples during observation and operation. The LED illumination base SZX2-ILLTQ with quad-position turret enables the user to choose cartridges and to switch from brightfield (standard/high/low), oblique (standard/high/low), darkfield, polarized illumination, and the shutter with a simple turn. A one-position LED illumination base is also an option (SZX2-ILLTS). This makes the SZX2 series a flexible all-in-one microscope for various samples and observation tasks. Another advantage of LED illumination is a cooler base surface, which is suitable for long duration manipulation of live specimens. Power consumption is lower than a conventional 30 W halogen light source. A life cycle of over 60,000 hours significantly reduces operation costs.





Observation Methods and Contrasts
. Brightfield, low-contrast
Brightfield, standard
Brightfield, high-contrast
Oblique, low-contrast
Oblique, standard
d Oblique, high-contrast
Shade plate
Darkfield
Polarization plate

### Designed to Meet Your Application Needs



### Reproduce True-to-Life Images with an Olympus Digital Camera

Each microscope digital camera in the SZX2 lineup captures images at high resolution. Olympus stereo microscopes and digital cameras contribute to leading-edge research in biology and medicine.

High-Performance Digital Cameras Provide Accurate and Detailed Image Capture (DP74/DP23)

#### DP74 Digital Camera

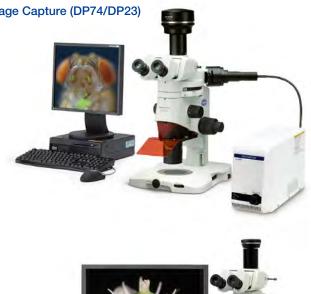
The DP74 color fluorescence camera captures realistic, high-quality images and has features that enable users to make their observations easily. With a wide field of view, operators can capture images of more of their sample, quickly. In applications like histology, the DP74 camera accurately reproduces colors to render natural images of your specimen. The camera displays a realistic image, so what appears on the monitor looks the same as what you see looking through the microscope's eyepieces. Users can remain comfortable during their work since they can just watch the monitor rather than having to go back and forth between the monitor and eyepieces. The camera is easy to use, so it integrates into any workflow, making it simple to capture publication-quality images.

\*DP74 is not for clinical diagnostic use.



The DP23 stand-alone camera smoothly displays live images in high-definition while enabling easy observation, focusing, framing, and image archiving. Fine structures are precisely reproduced, and subtle color differences enable users to accurately identify targets on the monitor rather than having to look through the eyepieces. The dedicated control box provides smooth and intuitive operation using a touch screen monitor or a mouse (no PC required).

\*DP23 is not for clinical diagnostic use.

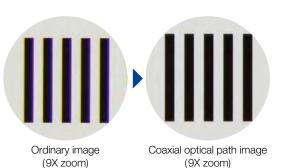




### **Vertical Observation**

The revolving nosepiece matches the objective lens center to the zoom lens optical path for images with reduced aberration. Image shifting from focus change is eliminated for effective 3D rendering by software.





### A Wide Array of Components to Observe Various Types of Specimens

### **Stands and Optional Units**

### Standard Stand (SZX2-ST)

This standard reflected light illumination stand supports observation conditions where no transmitted light is needed.



### Large Stand (SZX2-STL)

This stand provides a large working space to accommodate large specimens.



### Universal Stand Type 2 (SZ2-STU2)

Smooth horizontal movement and rotation enable specimen observation from various angles.



### **Transmitted/Reflected Light Illumination Base**

### Dual Inter-Lock Light Guide (LG-DI)

This light guide can be positioned to the observer's preference for bright, even illumination—which is especially effective when high-contrast images are required. The spot lens HLL301 can be mounted.



#### Coaxial Illuminator (SZX2-ILLC16/SZX2-ILLC10\*)

Used with the dual flexible light guide LG-DF, this illuminator provides bright, even illumination without the need for centering adjustments to the lamp.

\* Compatible with the SZX10 only.



### Dual Combination Light Guide (LG-DFI)

The SZX2 light guide can be mounted directly onto the focus drive, keeping the observation position properly illuminated, even when the focus is adjusted or when the specimen is exchanged.



### Ring Light Guide (LG-R66)

With its 66 mm diameter mount, this ring light illuminator has been specially developed for stereo microscope compatibility. When mounted with the ring light adaptor SZX-LGR66\*, it provides bright, uniformly lit images while avoiding glaring reflections or obscuring shadows.

 $^{\ast}$  Compatible with the SZX10 only.



### **Accessories**

### Analyzer (SZX2-AN)

The analyzer provides double-refractile image observation of specimens such as sea urchin larvae. The analyzer should be attached to the tip of the objectives.



### SZX10 Microscope— Cost-Effective Performance and Accurate Image Reproduction



#### Distortion-Free Design Provides Accurate Image Observation

A distortion-free design that has been continually improved by Olympus over the years reduces embossment of the image plane and provides accurate images.

### Adjustable Depth of Field with the Built-In AS Zoom Body

Closing the aperture increases the depth of field.

### A Wide Array of Accessories Enhance the System for Various Observation and Documentation Methods

The SZX10 microscope's accessories achieve high performance during image capture and monitor observation. This versatile system can be used for a variety of applications.



### Extendable Eyepoint Adjuster (SZX2-EEPA)

This unit enables users to continuously adjust the height of the eyepoint between 30 mm to 150 mm depending on the user's eyepoint.



### Side-by-Side Discussion Tube (SZX-SDO2)

Ample distance (650 mm) between the main and secondary observer for easy imaging without disturbing the microscope operation. The color of the built-in pointer can be selected to contrast the specimen.



Binocular Tubes (SZX-BI30/BI45) Trinocular Tubes (SZX2-TR30/TTR/LTTR)

These tubes enable variable eye points, helping you conduct observations in a natural posture thanks to the tilting head with an incline angle varying between 5° and 45°.



Coaxial Fluorescence Illumination Stand (SZX-RFA)

This fluorescence unit enables observation of fluorescent proteins introduced into living cells.

### **Specifications**

### SZX16/SZX10 SPECIFICATIONS

Item	Specifications								
item	SZX2-ZB16 SZX2-ZB								
	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.								
Zoom microscope body	Zoom variable magnification system with parallel optical axis Zoom drive system: Horizontal handle Click-stop for various zoom positions incorporated								
	Manual zoom body (SZX2-ZB16, SZX2-ZB10)								
	AS: Built-in								
	Objective mounting: screw mount								
	For SZX2-ZB16				For SZX2-ZB10				
	Objectives	NA	W.D. (mm)	Objectives	NA	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			
bjective	SDFPLAPO0.8X	0.12	81	DFPLAPO1X-4	0.1	81			
DJCOUVE	SDFPLAPO1XPF	0.15	60	SZX-ACH1X	0.1	90			
	SDFPLAPO1.6XPF	0.24	30	DFPLAPO1.25X	0.125	60			
	SDFPLAPO2XPFC	0.3	20	SZX-ACH1.25X-2	0.125	68			
				DFPL1.5X-4	0.15	45.5			
				DFPL2X-4	0.2	33.5			
yepiece	WHN10X-H FN 22 WHSZ20X-H FN 12.5	WHSZ15X-H FN 16 WHSZ30X-H FN 7		WHSZ10X-H FN 22 WHSZ20X-H FN 12.5	WHSZ15X-H FN 16 WHSZ30X-H FN 7				
	SZX2-TTR/SZX2-TTRPT: Tilting trinocular tube Convergence angle, Tilting angle: 5°-45°, Interpupillary distance adjustment: 52–76 mm, 2-step optical path (selectable) (TTR observation: straight port = 100:0, 50:50) (TTRPT observation: straight port = 100:0, 0:100)								
	SZX2-TR30/SZX2-TR30PT: 30-degree trinocular tube Convergence angle, Tilting angle: 30°, Interpupillary distance adjustment: 52–76 mm, 2-step optical path (selectable) (TR30 observation: straight port = 100:0, 50:50) (TR30PT observation: straight port = 100:0, 0:100)								
Observation tube	SZX2-LTTR: Ergonomic Long Tilting Trinocular* <sup>4</sup> Convergence angle, Tilting angle: 5°–45°, Interpupillary distance adjustment: 57–80 mm, 2-step optical path (selectable) (straight port = 100:0, 50:50)								
		<u> </u>		SZX-Bl30: 30° binocula adjustment: 51–76 mm	r tube Tilting angle: 30° Inte	erpupillary distance			
				adjustificiti. OT 70 min					
		<del>-</del>		,	r tube Tilting angle: 45° Inte	erpupillary distance			
		—— nit / focus: rack and pinion e stroke: 80 mm, coarse h		SZX-BI45: 45° binocula adjustment: 52-76 mm que adjustment ring for c	r tube Tilting angle: 45° Into				
Focusing assembly	balance, coarse handle SZX2-FOF: Fine focus fine coaxial handle, bu		andle stroke per rotation: pinion with roller guide (wir rse handle stroke: 80 mm	SZX-Bl45: 45° binocula adjustment: 52–76 mm que adjustment ring for c 21 mm, load capacity: 0 th torque adjustment ring , coarse handle stroke pi	r tube Tilting angle: 45° Into coarse focusing), optional of 1–10 kg (0–22 lb) for coarse focusing), coar	counter rse and			
Focusing assembly	balance, coarse handle SZX2-FOF: Fine focus fine coaxial handle, bu stroke: 80 mm, fine ha SZX2-FOFH: Fine focu and fine coaxial handle	e stroke: 80 mm, coarse h ing unit / focus: rack and p ilt-in counter balance, coal	andle stroke per rotation: pinion with roller guide (wi rse handle stroke: 80 mm .77 mm, load capacity: 2 / focus: rack and pinion er balance, coarse handle	SZX-Bl45: 45" binocula adjustment: 52–76 mm que adjustment ring for c 21 mm, load capacity: 0 th torque adjustment ring , coarse handle stroke pi.7–15 kg (6–33 lb) with roller guide (with torge stroke: 80 mm, coarse la mm, coa	r tube Tilting angle: 45° Into carse focusing), optional co i-10 kg (0-22 lb) for coarse focusing), coar er rotation: 36.8 mm, fine lo que adjustment ring for co nandle stroke per	counter rse and handle arse focusing), coar			
Focusing assembly  Extendable Eyepoint adjuster	balance, coarse handle SZX2-FOF: Fine focus fine coaxial handle, bu stroke: 80 mm, fine ha SZX2-FOFH: Fine focu and fine coaxial handle rotation: 36.8 mm, fine	e stroke: 80 mm, coarse h ing unit / focus: rack and p ilt-in counter balance, coar ndle stroke per rotation: 0 ising unit for heavy loading b, built-in gas spring count	andle stroke per rotation: pinion with roller guide (wi ree handle stroke: 80 mm .77 mm, load capacity: 2 / focus: rack and pinion er balance, coarse handle ne handle stroke per rotat	SZX-Bl45: 45° binocula adjustment: 52–76 mm que adjustment ring for c 21 mm, load capacity: 0 th torque adjustment ring n, coarse handle stroke pc.7–15 kg (6–33 lb) with roller guide (with torce stroke: 80 mm, coarse lion: 0.77 mm, load capacity	r tube Tilting angle: 45° Into carse focusing), optional co i-10 kg (0-22 lb) for coarse focusing), coar er rotation: 36.8 mm, fine lo que adjustment ring for co nandle stroke per	counter rse and handle arse focusing), coar			
Extendable Eyepoint	balance, coarse handle SZX2-FOF: Fine focus fine coaxial handle, bu stroke: 80 mm, fine ha SZX2-FOFH: Fine focu- and fine coaxial handle rotation: 36.8 mm, fine SZX2-EEPA: Height ac SZX2-SEFA: Standard st	e stroke: 80 mm, coarse hing unit / focus: rack and pilt-in counter balance, coarnelle stroke per rotation: 0 ising unit for heavy loading phonit in gas spring counter handle stroke: 80 mm, fir	andle stroke per rotation: pinion with roller guide (wi ree handle stroke: 80 mm. 77 mm, load capacity: 2 / focus: rack and pinion er balance, coarse handle he handle stroke per rotat mm (with a scale attached m, base dimension (W ×	SZX-Bl45: 45" binocula adjustment: 52–76 mm que adjustment ring for c 21 mm, load capacity: 0 th torque adjustment ring , coarse handle stroke pi.7–15 kg (6–33 lb) with roller guide (with tore e stroke: 80 mm, coarse lion: 0.77 mm, load capacity)	r tube Tilting angle: 45° Into carse focusing), optional of i-10 kg (0-22 lb) for coarse focusing), coar er rotation: 36.8 mm, fine land que adjustment ring for con andle stroke per city: 8-25 kg (17.6-55 lb)	counter rse and handle arse focusing), coal			

\*4 SZX2-LTTR: intermediate magnification is 1.25X

### TRANSMITTED ILLUMINATION BASE SPECIFICATIONS

Ham	Specifications					
Item	SZX2-ILLTQ	SZX2-ILLTS				
Light source	White LED (Average service life: about 60,000 hours by rated use.)					
Light intensity adjustment	Continuously variable system					
Effective illuminated area	Brightfield (Low contrast): φ63 mm, Brightfield (Standard/High)/Darkfield/Oblique/Polarized: φ35 mm					
Option filter	$\phi$ 45mm filter (for SZX2-CBF/SZX2-CBFH), 75 mm × 75 mm (3 in. × 3 in.) sheet filter for photo					
Illumination mode	Selection by changing cartridges (Cartridges are optional.), Brightfield illumination (Low/Standard/High contrast), Darkfield illumination, Oblique illumination (Low/Standard/High contrast), Polarized illumination					
Cntrast selection	Low/Standard/High	(Brightfield/Oblique)				
Turret position number for illumination base	4	1				
The height of stage (from desk surface)	41.5 mm (1.6 in.)					
Pillar height (from stage surface)	268.5 mm (10.6 in.)					
Weight	Approx. 4.1 kg (9.0 lb)	Approx. 3.8 kg (8.4 lb)				
Power source	AC100-240 V, 50-60 Hz (AC adaptor)					

### REFLECTED LIGHT ILLUMINATORS SPECIFICATIONS

Type	Ring light guide LG-R66	Dual ring light guide LG-DFI/DI	Coaxial illuminator SZX2-ILLC16/10		
Features	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 glossy sample, such as insects, plants, new materials, etc.		
Illumination specifications	Minimum W.D.: 30 mm Mount diameter: 66 mm Flexible part: 1000 mm Attachment adaptor*: SZX-LGR66 *No adaptor required for SZX16-LGR66 *Unable to attach to SDFPLAPO2XPFC/ SDFPLAPO1.6XPF	LG-DFI: Flexible part 1000 mm Inter-lock part 500 mm LG-DI: Inter-lock part 500 mm	Magnification factor: 1.5X Light guide: LG-DF Flexible part 1000 mm 1/4 wavelength retardation plate included		
Light source specifications	Type: LG-LSLED (LED light source for light guide Functions: Continuous Electronic Dimming (0~10 AC100-240 V, 50-60 Hz (AC adaptor) Dimension (W x D x H): 231 mm x 114 mm x 1: Weight: Approx. 2.7 kg (6.0 lb) including AC adaptor)	$_{200}^{(0)}$ ), Filter slider, Silent fan, Power Consumption: 37 mm (9.1 in. × 4.5 in. × 5.4 in.)	max. 37 W Operating Voltage, Frequency:		
Options	_	HILL301: Spot lens	_		

### REFLECTED LIGHT FLUORESCENCE ILLLUMINATOR

Туре	Reflected light fluorescence illuminator/Fine focusing unit SZX2-RFA16	Reflected light fluorescence illuminator SZX-RFA		
Illumination method	Near-vertical reflected light fluorescence illumination that corresponds to the microscope zoom function; zooming on the illuminator is independent of the microscope body's zoom function.	Coaxial illumination		
Filter turret	Five-position turret Maximum 5 sets of excitation/emission filter sliders are attachable. Comes with shutter that prevents flash-light caused by switching.	Four-step slide switch Maximum 3 mirror units are attachable. Comes with shutter that prevents flash-light caused by switching.		
Filter holder slider	Three-step switch by shutter and two holes. ND filter can be attached at the holes.			
Filter slider	One excitation balancer can be attached.	<del>-</del>		
Focusing assembly	Built-in 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: 69 mm, coarse handle stroke per rotation: 36.8 mm, fine handle stroke: 69 mm, fine handle stroke per rotation: 0.77 mm, load capacity: 2.7–15 kg (6–33 lb)	_		
Light source	100 W Hg lamp housing or LED and LDP light source			

### TOTAL MAGNIFICATIONS AND ACTUAL FIELD DIAMETERS OF SZX2-ZB16\*1

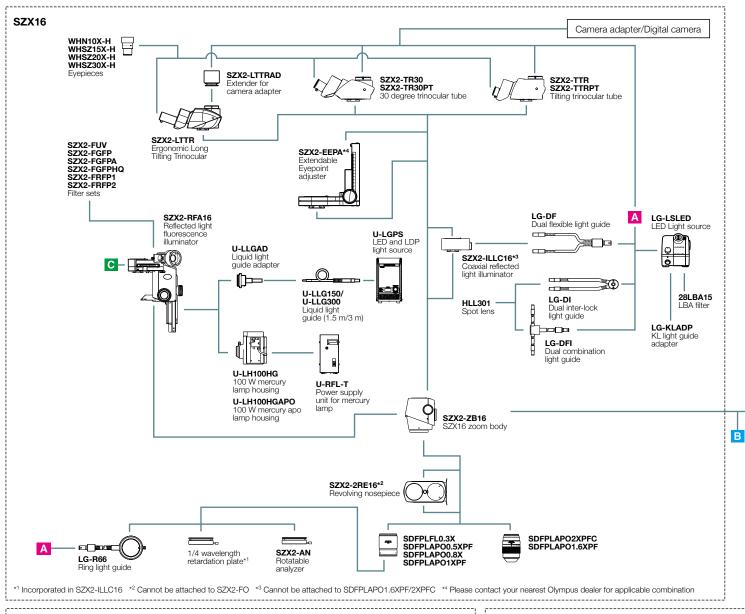
Objective	Eyepiece							
	WHN10X-H		WHSZ15X-H		WHSZ20X-H		WHSZ30X-H	
	total mag.	field diameter (mm)	total mag.	field diameter (mm)	total mag.	field diameter (mm)	total mag.	field diameter (mm)
SDFPLFL0.3X	2.1X-34.5X	ø104.8–ø6.4	3.2X-51.8X	ø76.2–ø4.6	4.2X-69X	ø59.5-ø3.6	6.3X-103.5X	ø33.3-ø2.0
SDFPLFL0.5XPF	3.5X-57.5X	ø62.9–ø3.8	5.3X-86.3X	ø45.7-ø2.8	7X-115X	ø35.7–ø2.2	10.5X-172.5X	ø20.0-ø1.2
SDFPLAPO0.8X	5.6X-92X	ø39.3–ø2.4	8.4X-138X	ø28.6–ø1.7	11.2X-184X	ø22.3–ø1.4	16.8X-276X	ø12.5–ø0.8
SDFPLAPO1XPF	7X-115X	ø31.4–ø1.9	10.5X-172.5X	ø22.9–ø1.4	14X-230X	ø17.9–ø1.1	21X-345X	ø10.0-ø0.6
SDFPLAPO1.6XPF	11.2X-184X	ø19.6–ø1.2*²	16.8X-276X	ø14.3–ø0.9	22.4X-368X	ø11.2–ø0.7	33.6X-552X	ø6.3-ø0.4
SDFPLAPO2XPFC	14X-230X	ø15.7–ø1*²	21X-345X	ø11.4-ø0.7*²	28X-460X	ø8.9–ø0.5	42X-690X	ø5.0-ø0.3

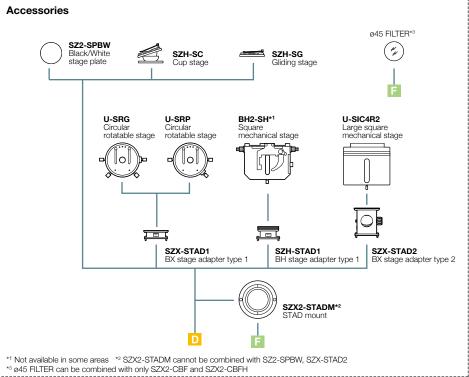
<sup>\*1</sup> SZX2-LTTR: intermediate magnification is 1.25X \*2 Some vignetting may occur from optical characteristics. This occurs in observations at low magnification.

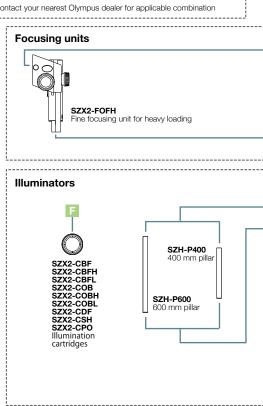
### TOTAL MAGNIFICATIONS AND ACTUAL FIELD DIAMETERS OF SZX2-ZB10\*3

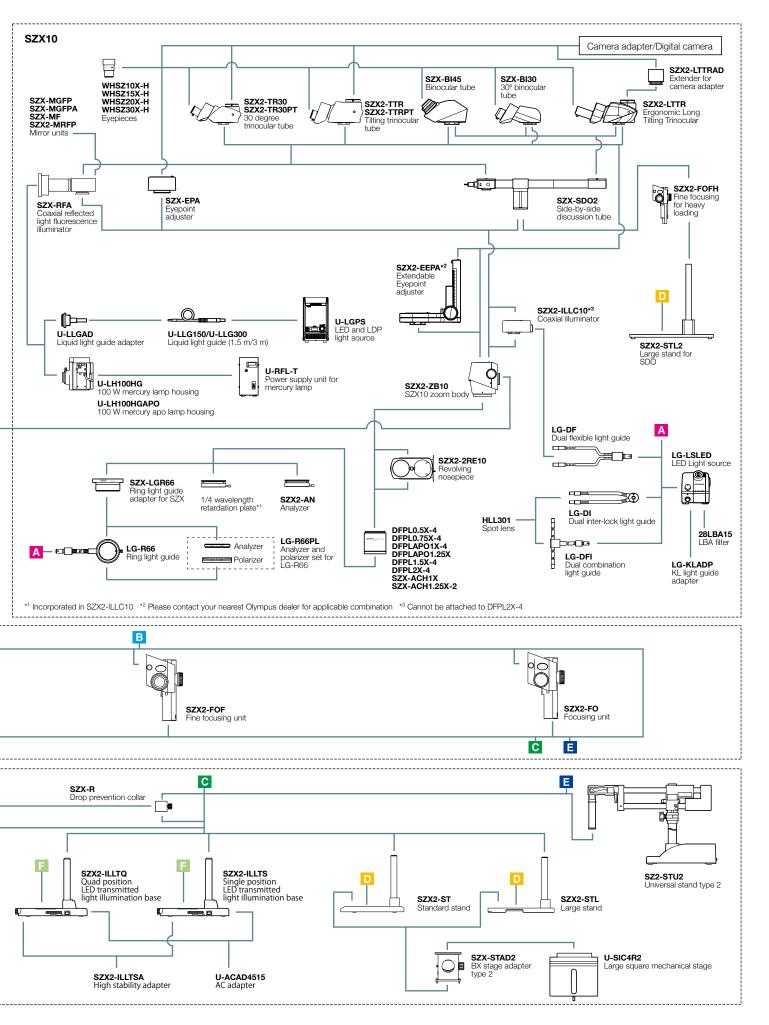
Objective	Eyepiece							
	WHN10X-H		WHSZ15X-H		WHSZ20X-H		WHSZ30X-H	
	total mag.	field diameter (mm)	total mag.	field diameter (mm)	total mag.	field diameter (mm)	total mag.	field diameter (mm)
DFPL0.5X-4	3.2X-31.5X	ø69.8–ø7.0	4.7X-47.3X	ø50.8–ø5.1	6.3X-63X	ø39.7–ø4	9.5X-94.5X	ø22.2-ø2.2
DFPL0.75X-4	4.7X-47.3X	ø46.6–ø4.7	7.1X-70.9X	ø33.9–ø3.4	9.4X-94.5X	ø26.5-ø2.6	14.2X-141.8X	ø14.8–ø1.5
DFPLAPO1X-4 SZX-ACH1X	6.3X-63X	ø34.9–ø3.5	9.5X-94.5X	ø25.4-ø2.5	12.6X-126X	ø19.8–ø2	18.9X–189X	ø11.1–ø1.1
DFPLAPO1.25X SZX-ACH1.25X-2	7.9X-78.9X	ø27.9–ø2.8	11.8X–118.1X	ø20.3–ø2	15.8X–157.5X	ø15.9–ø1.6	23.6X-236.3X	ø8.9–ø0.9
DFPL1.5X-4	9.5X-94.5X	ø23.3-ø2.3	14.2X-141.8X	ø16.9–ø1.7	18.9X-189X	ø13.2–ø1.3	28.4X-283.5X	ø7.4–ø0.7
DFPL2X-4	12.6X-126X	ø17.5–ø1.7	18.9X-189X	ø12.7–ø1.3	25.2X-252X	ø9.9–ø1	37.8X-378X	ø5.6-ø0.6

### **System Diagram**









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