OLYMPUS®

Your Vision, Our Future

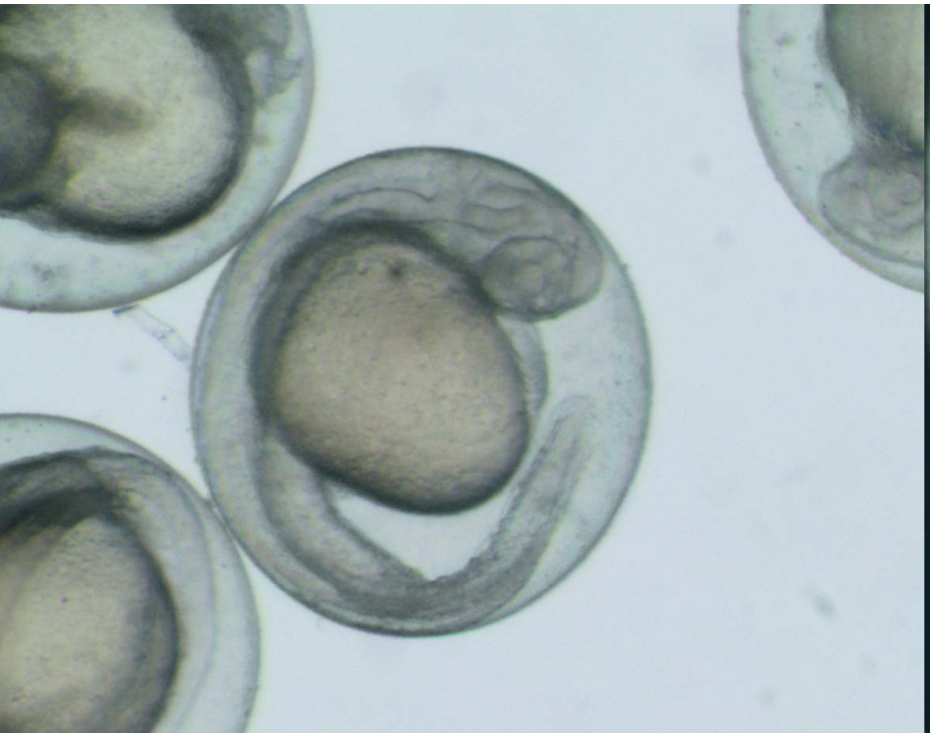
Research Stereo Microscope System

SZX16/SZX10

For Life Science Use

Meeting the Challenge of Life Science Imaging

A New Dimension in Microscopy

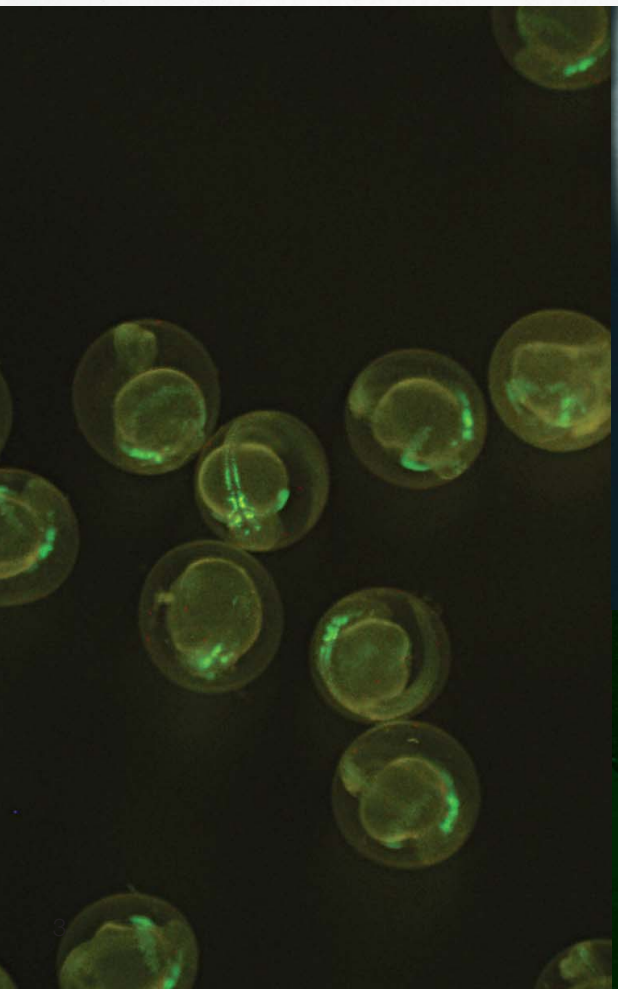


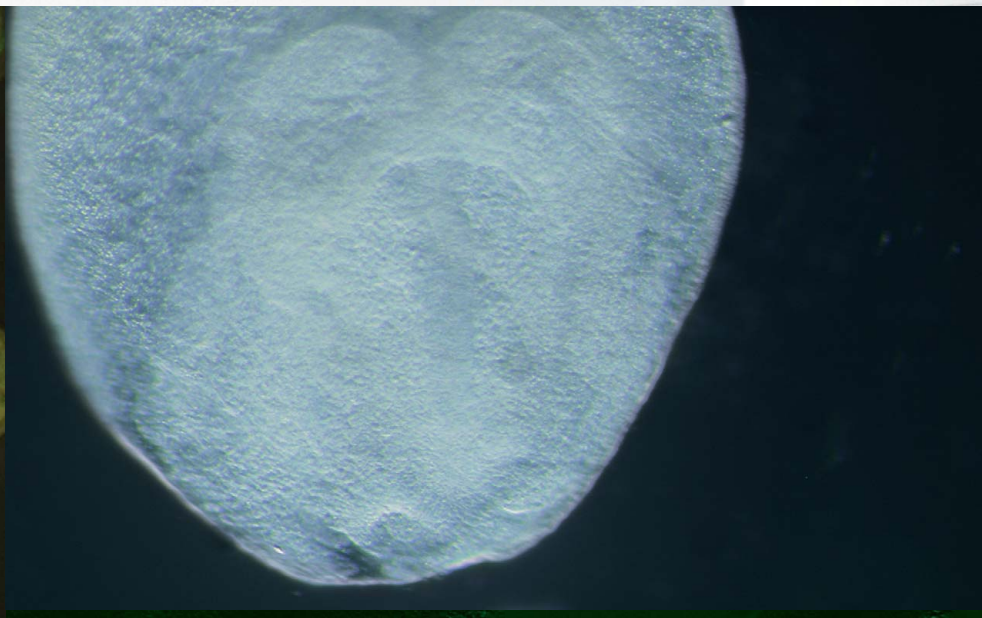
Olympus stereo microscopes are the ideal solution for leading-edge microscopy applications, offering an exceptionally wide zoom ratio and high numerical aperture (NA). Excellent image clarity and a flexible optical system make the SZX2 series easy to use. SZX2 stereo microscopes combine advanced optics,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

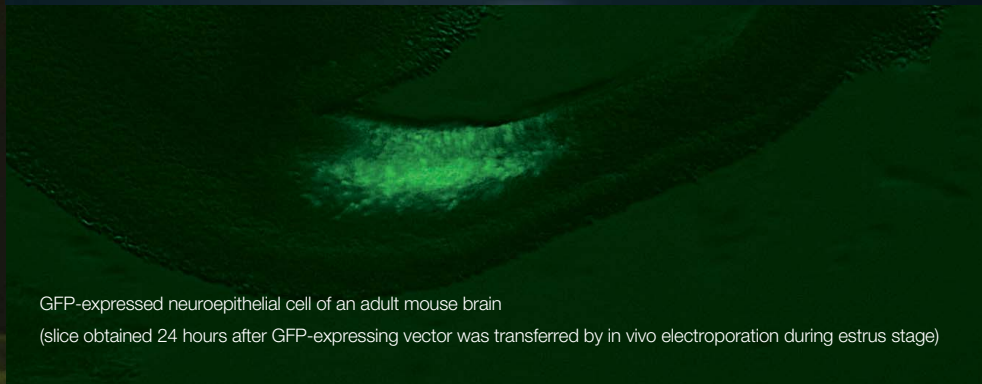
Modern biological and medical laboratories require the most effective imaging tools to observe a vast quantity of live specimens. The SZX2 stereo microscope series is designed to meet these needs and is refined to the highest levels of quality and performance. The combination of a high NA and a multi-wavelength, astigmatism-free design yields high resolution images with an increased depth of field. The SZX2 is redesigned with improved ergonomics that reduce operator fatigue and enable comfortable observation over a long period of time.

SZX16

Olympus SDF Objective Lenses Provide Optimum Specimen Viewing from Large Field Overviews to Microstructures







GFP-expressed neuroepithelial cell of an adult mouse brain
(slice obtained 24 hours after GFP-expressing vector was transferred by in vivo electroporation during estrus stage)

The Wide 1:16.4 Zoom Ratio Makes it Easy to View Specimens. From Low to High Magnification, Several Different Observation Tasks can be Accomplished on one Microscope

The SZX16 offers peak optical performance for nearly any application. Olympus SDF objective lenses have a high 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 SDFPLAPO2×PFC)

SDF Lineup: Six Objectives for Various Uses

The SZX16 PLAN APO objective series meets many imaging needs from long W.D. 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 WHN10×-H

SDF Objective Lens Series

Wide-Angle Zoom Action for Versatile Operation

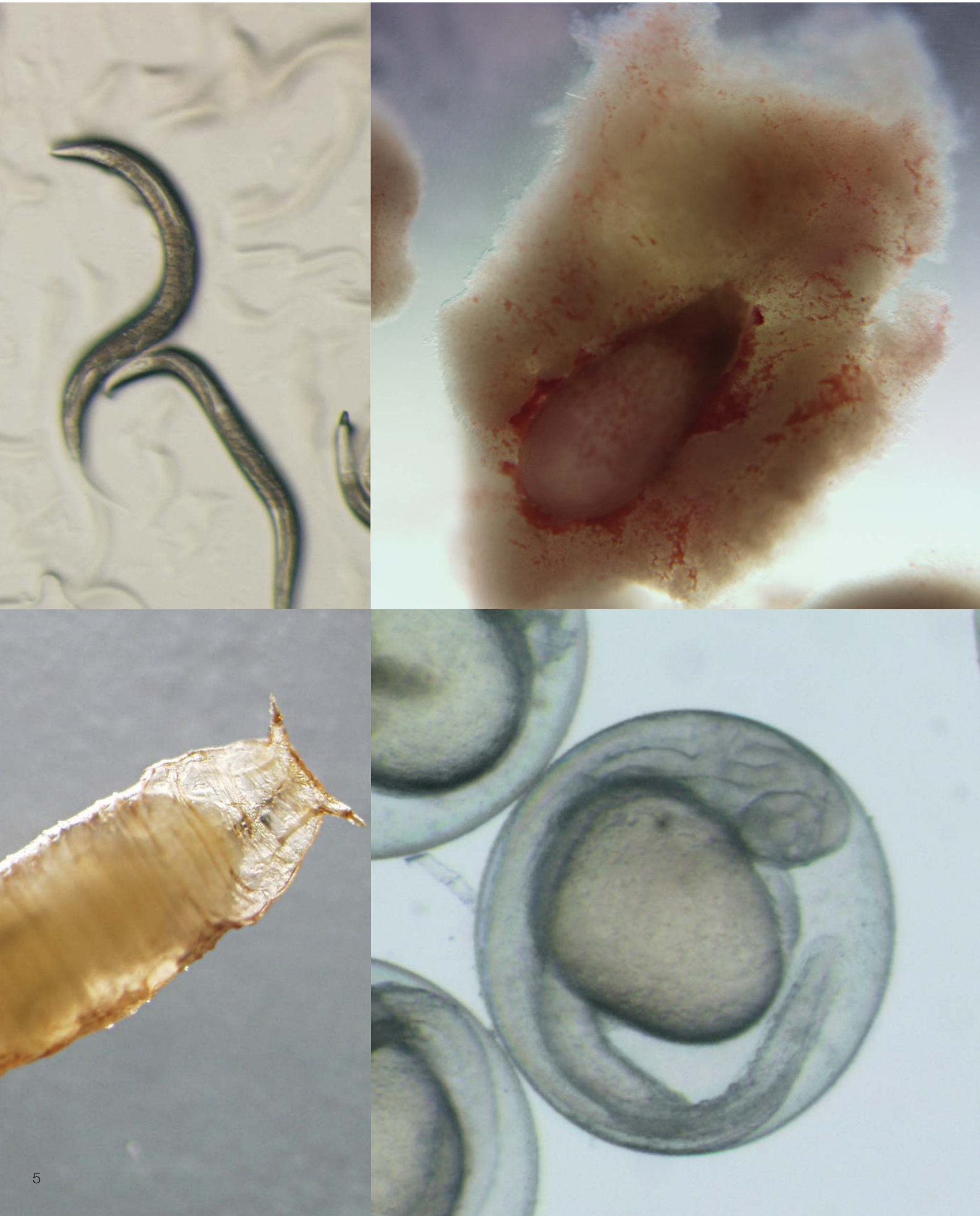
The SZX16 boasts a zoom range of 7.0X–115X*. From sample verification and selection at low magnification to microstructure verification at high magnification, users can seamlessly image a variety of specimens.

* When using the SDFPLAPO 1X and WHN10X-H

Two Objectives Combine with 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).

Excellent Depth of Field and Crisp Images Enhance Efficiency for a Variety of Tasks Including Specimen Manipulation

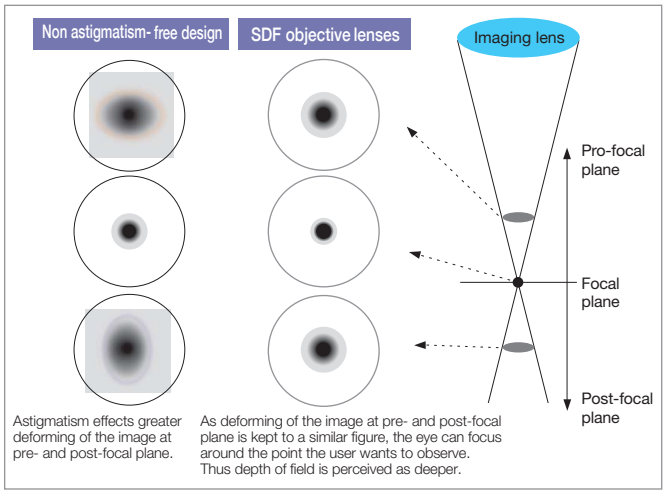


New Standards in Image Clarity Begin With a Multi-Wavelength, Astigmatism-Free Design

The microscope's new 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

Newly designed SDF objective lenses reduce astigmatism. This effectively eliminates image deforming at pre- and post-focal plane for 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 newly developed transmitted light illumination base, users can observe low contrast, transparent specimens. This reduces oversights for specimen selection, dissection, and manipulation.



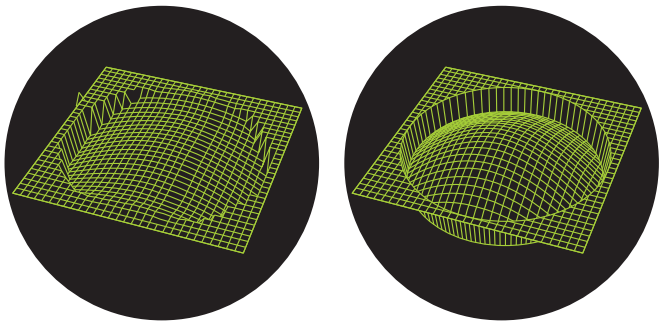
• Depth of field seen in focal plane will vary according to individual differences in users' vision.

Integrated Apochromatic System

The apochromatic system–integrated into observation tubes, zoom body, and objectives–eliminates chromatic aberration throughout the zoom range and ensures excellent 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, is effectively eliminated.

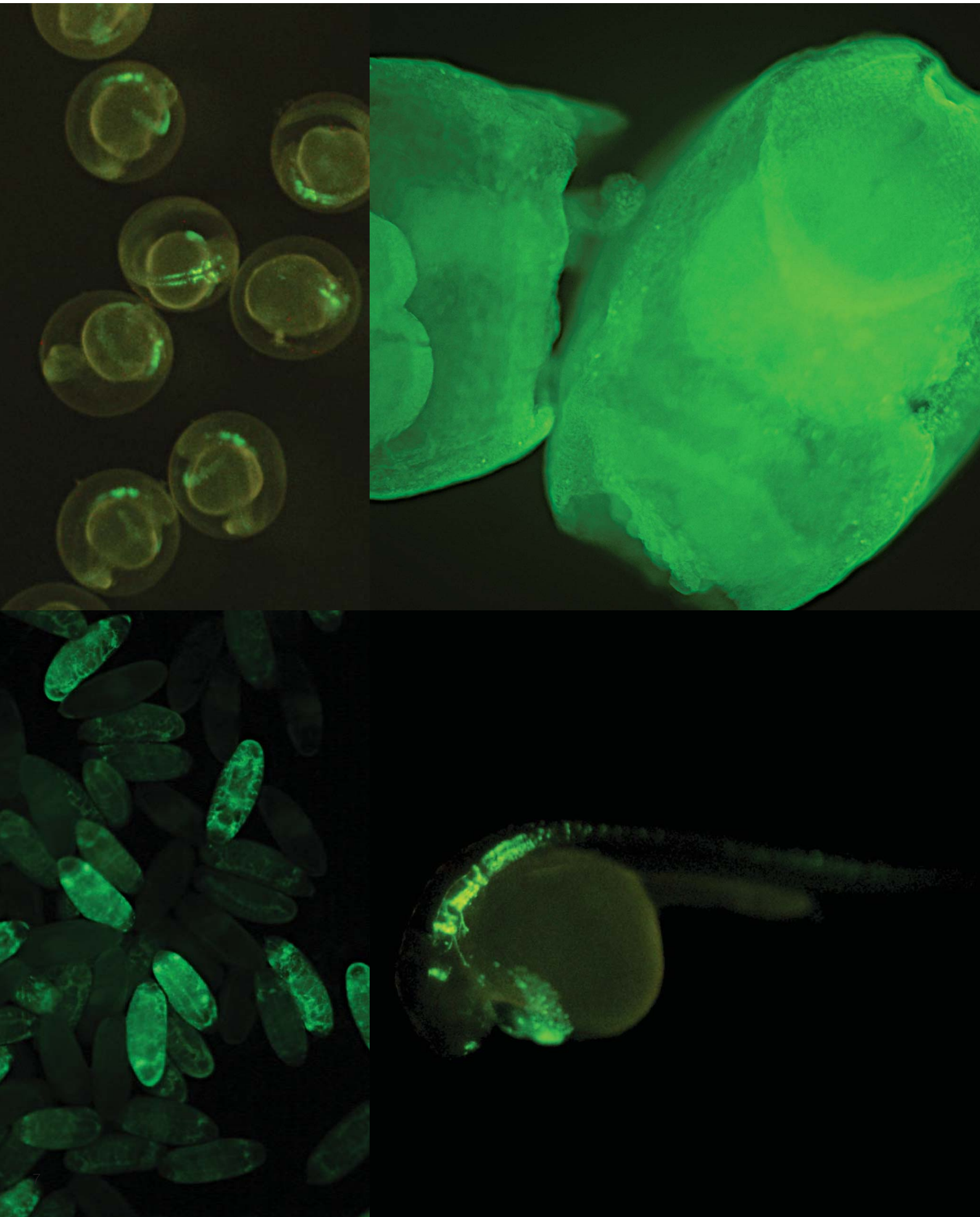


Previous model SZX16

SZX16: New Optics Easily Accommodate Thick Specimens

The ability to clearly perceive the depth and dimensions of thick specimens, like eggs or 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



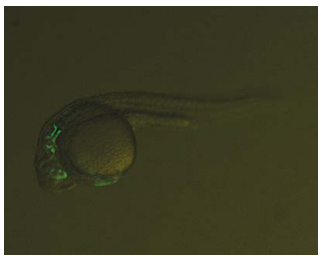
The Newly Designed SDF Objective Lenses Significantly Improve Signal Intensity and Support Bright Fluorescence Observation

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

High NA for Bright Fluorescence Observation

The outstanding NA characteristics of SDF lenses greatly improve 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 for verification of specimen outline is possible even under reflected light fluorescence observation.

Fluorescence illumination only



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. Motorized focus and zoom units make for easy viewing using a hand switch.

SZX16 reflected light fluorescence illumination with motorized focus stand

SZX16 reflected light fluorescence illumination stand

Five-Position Turret with Nine-Filter Selection

Nine 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 BV excitation	SZX2-FBV	Ex400–440/Em475–
High performance for CFP	SZX2-FCFPHQ	Ex425–445/Em460–510
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
High performance for YFP	SZX2-FYFPHQ	Ex490–500/Em510–560
For RFP 1	SZX2-FRFP1	Ex530–550/Em575–
For RFP 2	SZX2-FRFP2	Ex540–580/Em610–

SZX16 Fluorescent filter unit

Ergonomically Designed with a Wide Working Space Optimized for User Comfort

Configure the Microscope to Match Your Needs

The SZX2 handles a variety of specimens and operations–from large specimens like mice to small ones like zebra fish, nematode, or drosophila eggs–with an effective combination of high numerical aperture and wide working space. Moreover, the newly designed transmitted light illumination base is thin (only 41 mm) 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, which provide not only a larger working space between objective lenses and sample but also a total magnification of 5.6X–92X (using 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 selection of specimens. An additional correction collar can adjust image quality independently of the specimen–a first in stereo microscopes.

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.

High-level transmitted light illumination base (SZX2-ILLB)

This unit provides effective contrast for oblique illumination and easily selected “high” and “low” contrast settings. Light volume and color temperature are adjusted by means of built-in filters (LBD/ND). It also has a cooling fan to prevent overheating of the base surface.

Brightfield/darkfield transmitted light illumination base (SZX2-ILLD)

This base enables darkfield observation under illumination that is twice as bright as previous Olympus stereo microscopes. Flat and thin specimens, like brain tissue slices, are vividly displayed on a black background. A cooling fan prevents the illumination base surface from overheating.

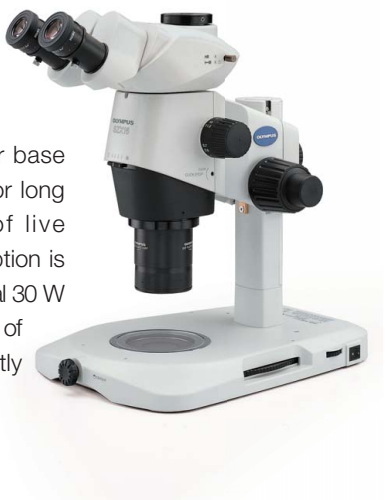
Transmitted light illumination base (SZX2-ILLK)

Offering outstanding, cost-efficient performance, this illumination base uses oblique illumination for high-contrast images of transparent specimens.

Slim 41 mm LED Illumination Base

Slim LED transmitted light illumination base (SZX2-ILLT)

With a slim 41 mm design, that is approximately half the thickness of previous Olympus stereo microscopes, the SZX16 transmitted light illumination base has a lower height to enable a low eyepoint and easy access to base-mounted samples during observation and operation. The LED four-position turret enables the user to switch from brightfield, oblique, and darkfield illumination with a simple turn. This makes the SZX16 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 about half that of a conventional 30 W halogen light source. A life cycle of over 10,000 hours significantly reduces operation costs.



Ergonomic Accessories Reduce Stress Even for Long-Duration Microscope Use

Tilting Trinocular Tube Reduces Fatigue and Stress

The SZX2 brings greater comfort with an observation tube featuring a convergence angle designed to relieve eyestrain. Moreover, the tilting trinocular tube and slim transmitted light illumination base enable natural posture for increased efficiency during lengthy observation and manipulation tasks.

Observation Tube with Optimized Convergence Angle Relieves Eyestrain

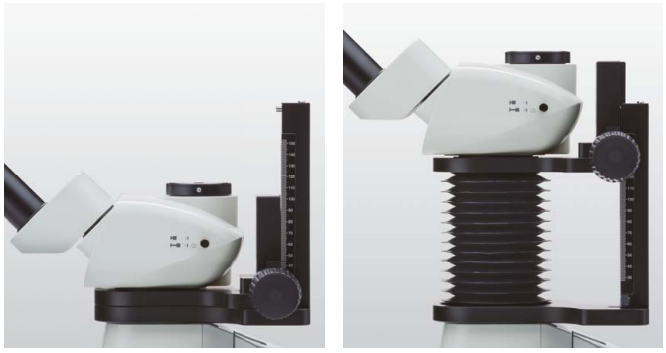
Working with an ophthalmologist, Olympus investigated and confirmed a correlation between stereo microscope optical systems and eyestrain. Specifically, the angle between right and left lines of vision (convergence angle) directly impacts eyestrain. The SZX2 series has an optimized convergence angle 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.

Observation tube with convergence angle

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

In order to improve the ergonomics of the our stereo microscopes, Olympus introduced a new 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 enable users to reduce stress and fatigue over longer periods of time by working in a natural posture.

Tilting trinocular tube



Extendable Eyepoint adjuster

Slim Design Reduces Fatigue and Lowers Eyepoint

Illumination bases are designed not only to be easy to use but also fatigue-free. The slim LED transmitted light illumination base, at 41 mm, lowers the eyepoint and makes access to specimens easier than ever. The wide stage surface easily accommodates Petri dishes and other specimen containers during observation and manipulation.

Slim LED transmitted light Illumination base

Whether Viewing Images in Brightfield or Using Fluorescence, the SZX16 is 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.

The High-Performance Digital Cameras Provide Accurate and Detailed Image Capture (DP73/DP22)

Digital Camera (DP73)

The DP73 displays uncompressed high-definition live images (1600 x 1200 pixels) at a rate of 15 frames-per-second. Microstructures and fine lines that are hard to distinguish at low magnification are displayed clearly and distinctly. With Olympus' new fine-detail processing that uses algorithms to enhance resolution, the DP73 acquires clear images with fewer artifacts, like pseudo-colors and moiré, that hamper observation of microstructures at low magnification. With algorithms to correct for pixel-shift photobleaching, the DP73 can also image fluorescence at an unparalleled maximum resolution of 17.28 megapixels and avoid block noise.

*DP73 is not for clinical diagnostic use.

Digital Camera (DP22)

The DP22 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 via a touchscreen monitor or a mouse (no PC required).

*DP22 is not for clinical diagnostic use.

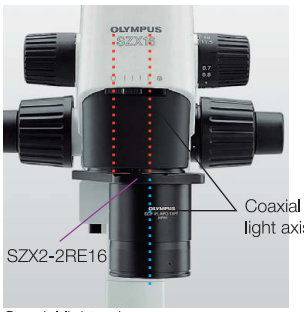
Besides DP73/DP22, Olympus offers wide range of microscope digital cameras to meet variable applications. Please visit www.olympus-lifescience.com for information about our full line of advanced cameras.

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

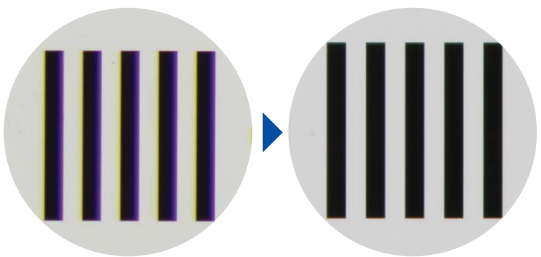
The motorized focus unit has a maximum load capacity of 23 kg and facilitates operation when accessories such as heavy cameras are attached. Adding motorized zoom simplifies both focusing and zooming through use of a hand switch–the ideal solution for improving examination efficiency. Remote operation is also possible, enabling observation on a monitor.

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.



Coaxial light axis



Ordinary image
(9X zoom)

Coaxial optical path image
(9X zoom)

A Wide Array of Accessories 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 Type2 (SZ2-STU2)

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

Transmitted/Reflected Light Illumination Base

Transmitted Light Guide Adaptor (SZX-TLGAD) /Light Guide (LG-SF)

As the light guide LG-SF power source is mounted away from the transmitted light illumination base, the surface temperature of the illumination base remains cool.

Dual Inter-Lock Light Guide (LG-DI)

This light guide can be positioned as the observer likes for bright, even illumination—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.

Accessories

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 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 ring light adapter SZX-LGR66*, it provides bright, uniformly lit images while avoiding glaring reflections or obscuring shadows.

* Compatible with the SZX10 only.

Light Beam Splitter (SZX2-LBS)

The adapter enables a digital camera or other imaging unit to be attached on both sides of the SZX2-LBS body. The light path to the camera port can be switched between 100% and 50% light. The 100% light path to the camera port enables dark specimens to be imaged.

Simple Polarizer (SZX-PO) and Analyzer (SZX2-AN)

This simple polarizer should be used with a transmitted light illumination base. It provides double-refractile image observation of such specimens as sea urchin larvae. The analyzer should be attached on the tip of objectives.

A zoom ratio of 1:10 is suitable for operations such as specimen selection or dissection. SZX10 provides wide viewing and reduces operator fatigue, minimizing mistakes. Choose from a wide range of accessories to suit users' sample needs.

SZX10

SZX10: The Versatile Research Stereo Microscope

Cost-Effective Performance and Accurate Image Reproduction

Distortion-Free Design Provides Accurate Observation of Images

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

Adjustable Depth of Field From the Finest 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'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) is between the main and secondary observer for easy imaging without disturbing microscope operation. The color of the built-in pointer can be selected to contrast the specimen.

Drawing Attachment (SZX-DA)

Enables users to accurately draw the specimen for scientific study or illustration—a traditional alternative to photomicrography. The accessory can be mounted on either side of the microscope, depending on preference.

Binocular Tubes (SZX-B130/BI45)

These binocular tubes enable variable eye points. Users will find observation can be done in a natural posture, thanks to the tilting head with an incline angle varying between 5º and 45º.

Coaxial Fluorescence Illumination Stand (SZX-RFA)

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

Discussion Tube (SZX-DO)

Face-to-face, discussion-style intermediate tube enables primary and secondary observers to sit opposite one another during specimen observation. The secondary observer can support the primary observer more effectively in their tasks.

Specifications

SZX16/SZX10 SPECIFICATIONS

Item	Specifications					
	SZX2-ZB16/SZX2-ZB16A			SZX2-ZB10		
Zoom microscope body	Zoom ratio: 16.4 (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 (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					
	Motorized zoom body (SZX2-ZB16A), Manual zoom body (SZX2-ZB16, SZX2-ZB10)					
	AS: Built-in					
	Objective mounting: screw mount					
Objective	For SZX2-ZB16/SZX2-ZB16A			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
	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
	SDFPLAPO2XPFC	0.3	20	SZX-ACH1.25X-2	0.125	68
				DFPL1.5X-4	0.15	45.5
				DFPL2X-4	0.2	33.5
Eyepiece	WHN10X-H FN 22 WHSZ15X-H FN 16 WHSZ20X-H FN 12.5 WHSZ30X-H FN 7			WHSZ10X-H FN 22 WHSZ15X-H FN 16 WHSZ20X-H FN 12.5 WHSZ30X-H FN 7		
Observation tube	SZX2-TTR/SZX2-TTRPT: Tilting trinocular tube Convergence angle, Tilting angle: 5°–45°, Interpupillary distance adjustment: 52–76 mm, 2 steps 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 steps optical path selectable (TR30 observation: straight port = 100:0, 50:50) (TR30PT observation: straight port = 100:0, 0:100)					
	SZX2-LTTR: Ergonomic Long Tilting Trinocular*4 Convergence angle, Tilting angle: 5°–45°, Interpupillary distance adjustment: 57–80 mm, 2 steps optical path selectable (straight port = 100:0, 50:50)					
	—			SZX-BI30: 30° binocular tube Tilting angle: 30° Interpupillary distance adjustment: 51–76 mm		
	—			SZX-BI45: 45° binocular tube Tilting angle: 45° Interpupillary distance adjustment: 52–76 mm		
Focusing assembly	SZX2-FO: Focusing unit / focus: rack and pinion with roller guide (with torque adjustment ring for coarse focusing), optional counter balance, coarse handle stroke: 80 mm, coarse handle stroke per rotation: 21 mm, load capacity: 0–10.0 kg					
	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: 80 mm, coarse handle stroke per rotation: 36.8 mm, fine handle stroke: 80 mm, fine handle stroke per rotation: 0.77 mm, load capacity: 2.7–15.0 kg					
	SZX2-FOFH: Fine focusing unit for heavy loading / focus: rack and pinion with roller guide (with torque adjustment ring for coarse focusing), coarse and fine coaxial handle, built-in gas spring counter balance, coarse handle stroke: 80 mm, coarse handle stroke per rotation: 36.8 mm, fine handle stroke: 80 mm, fine handle stroke per rotation: 0.77 mm, load capacity: 8.0–25.0 kg					
	SZX2-FOA: Motorized focus unit / focus: rack and pinion with roller guide, focusing stroke: 78 mm, motorized focusing speed coarse: 2.7 mm/s, fine: 0.27 mm/s load capacity: 0.0–23.0 kg					
Extendable Eyepoint adjuster	SZX2-EEPA: Height adjustment range: 30–150 mm (with a scale attached)					
Stand	SZX2-ST: Standard stand / Pillar height: 270 mm, base dimension (W × D × H): 284 mm × 335 mm × 31 mm, stage clips are mountable, with stage adapter fixing screw holes					
	SZX2-STL: Large stand / Pillar height: 400 mm, base dimension (W × D × H): 400 mm × 350 mm × 28 mm, stage clips are mountable, with stage adapter fixing screw holes					

*4 SZX2-LTTR: intermediate magnification is 1.25X

TRANSMITTED ILLUMINATION BASE SPECIFICATIONS

Item	Specifications			
	SZX2-ILLT	SZX2-ILLB	SZX2-ILLK	SZX2-ILLD
Light source	LED (Average service life: over 10,000 hrs by rated use.)	6 V 30 W Halogen 6 V 30 W HAL PHILIPS 5761 (average lamp service life: approx. 100 hours by rate use.)		
Light intensity adjustment	Continuously variable system			
Effective illuminated area	Brightfield: ø63 mm Darkfield / Oblique: ø35 mm	ø40 mm		Brightfield: ø40 mm Darkfield: ø35 mm
Built-in filter	—	LBD, ND6, ND25 one for each	—	LBD (bright field only)
Add-on filter	—	—	ø45LBD filter	—
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)	41 mm	82 mm		
Pillar height	270 mm			
Weight	Approx. 3.7 kg	Approx. 5.0 kg	Approx. 4.6 kg	Approx. 5.4 kg
Power source	AC 100–240 V 50/60 Hz (AC adapter)	AC 100–120/220–240 V 50/60 Hz		

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 structure, such as imperfections on metal surfaces, patterns on IC or LCD
Illumination specifications	Minimum W.D.: 30 mm Mount diameter: 66 mm Flexible part: 1000 mm Attachment adapter*: SZX-LGR66 *No adapter required for SZX16-LGR66 *Unable to attach to SDFPLAPO2XPFC/ SDFPLAPO1.6XPF	LG-DFI: Flexible part 900 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-PS2 Functions: Light intensity control and lamp ON/OFF control by external signal (DC 0-5 V), mechanical adjustment function Power consumption: 150 W (350 VA) Rated voltage: AC 100–120 V/220–240 V 50/60 Hz 3.0 A/1.8 A Dimension (W × D × H): 126 mm x 131.4 mm x 251 mm, Weight: approx. 1.7 kg		
Option	LG-R66PL: Polarizer/analyzer set for LG-R66	HILL301: Spot lens	—

REFLECTED LIGHT FLUORESCENCE ILLLUMINATOR

Type	Reflected light fluorescence illuminator/Motorized focusing unit SZX2-RFA16A	Reflected light fluorescence illuminator/Fine focusing unit SZX2-RFA16	Reflected light fluorescence illuminator SZX-RFA
Illumination method	Near vertical reflected light fluorescence illumination which is corresponded to microscope zoom function zooming of illuminator independent to zoom function of microscope body is possible.		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.		—
Focusing assembly	Built-in Motorized focus unit / focus: rack and pinion with roller guide, focusing stroke: 67 mm, motorized focusing speed coarse: 2.7 mm/s, fine: 0.03 mm/s load capacity: 0.0–19.3 kg	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: 2.7–15.0 kg	—
Light source	100 W Hg lamp housing or 130 W Hg light guide illumination		

TOTAL MAGNIFICATIONS AND ACTUAL FIELD DIAMETERS OF SZX2-ZB16/SZX2-ZB16A*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

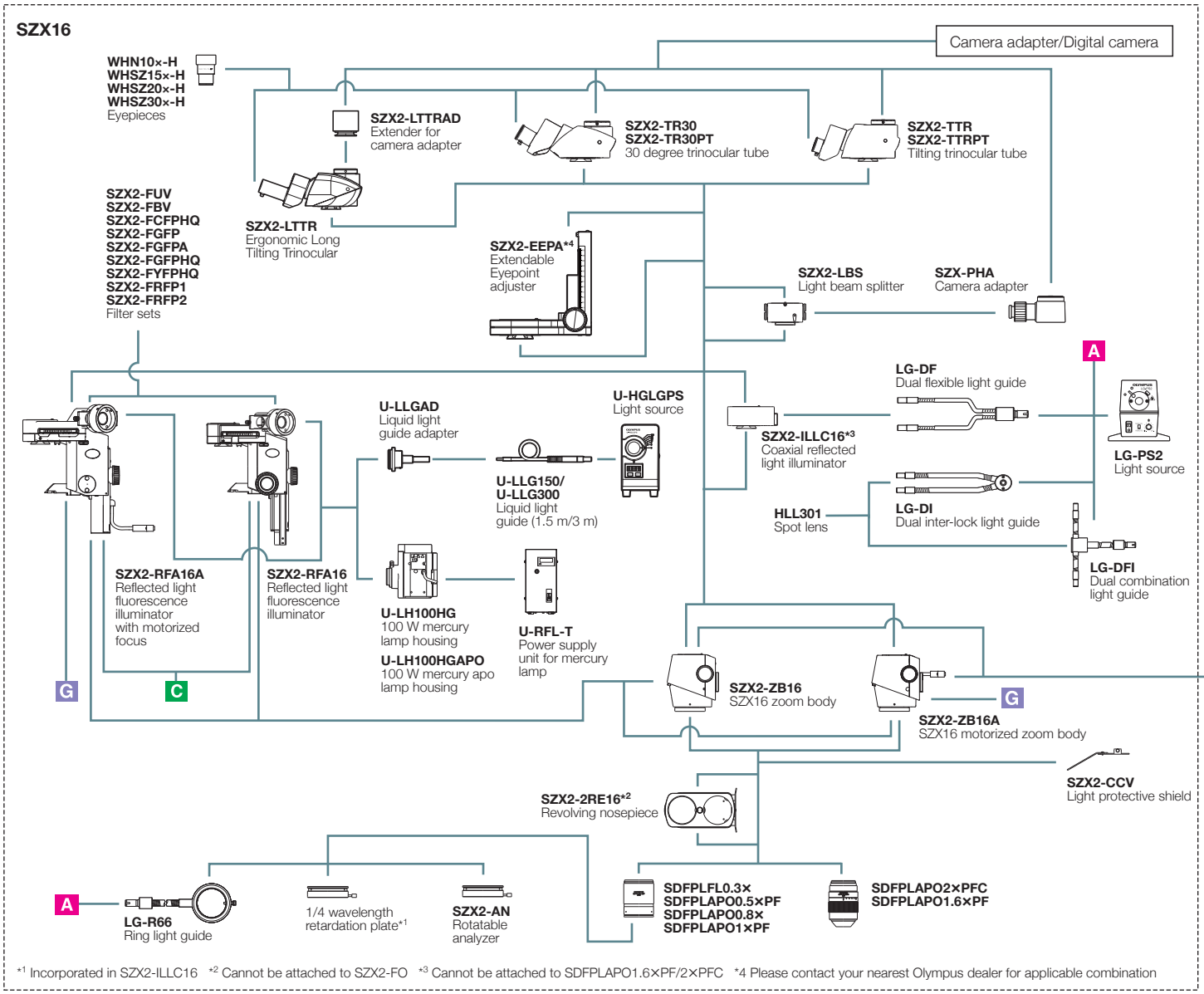
*1 SZX2-LTTR: intermediate magnification is 1.25X *2 Some vignetting may occur from optical characteristics. This occurs in observations at low magnification.

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

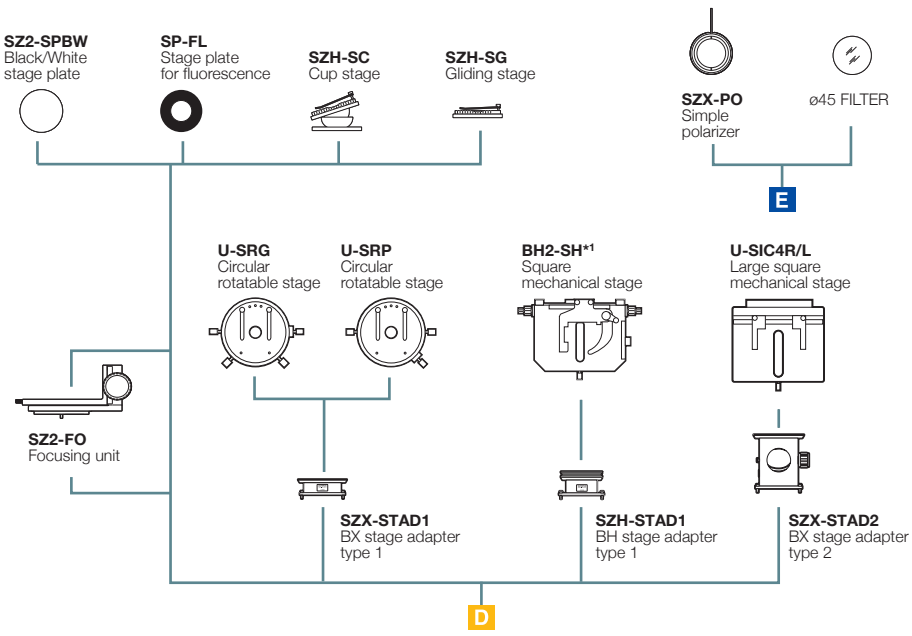
*3 SZX2-LTTR: intermediate magnification is 1.25X

System Diagram



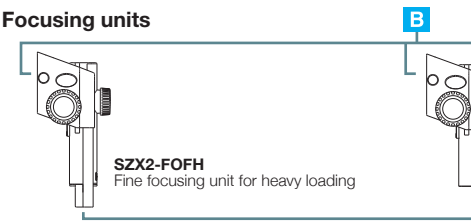
*1 Incorporated in SZX2-ILLC16 *2 Cannot be attached to SZX2-FO *3 Cannot be attached to SDFPLAPO1.6×PF/2×PFC *4 Please contact your nearest Olympus dealer for applicable combination

Accessories

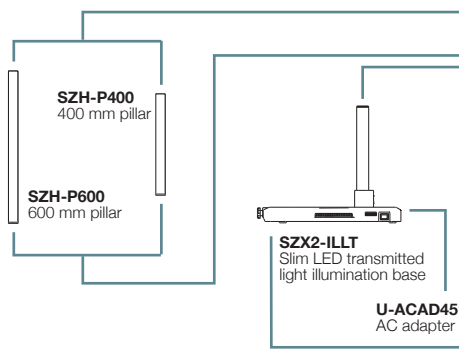


*1 Not available in some areas

Focusing units



Illuminators



SZX10

Camera adapter/Digital camera

SZX-MGFP
SZX-MGFPA
SZX-MGFPHQ
SZX-MYFPHQ
SZX-MF
SZX-MG
SZX2-MRFP
Mirror units

WHSZ10×-H
WHSZ15×-H
WHSZ20×-H
WHSZ30×-H
Eyepieces

SZX2-TR30
SZX2-TR30PT
30 degree trinocular tube

SZX2-TTR
SZX2-TTRPT
Tilting trinocular tube

SZX-BI45
Binocular tube

SZX-BI30
30° binocular tube

SZX2-LTTRAD
Extender for camera adapter

SZX2-LTTR
Ergonomic Long Tilting Trinocular

SZX-RFA
Coaxial reflected light fluorescence illuminator

SZX2-LBS
Light beam splitter

SZX-PHA
Photo adapter

SZX-EPA
Eyepoint adjuster

SZX-DA
Drawing attachment

SZX-DO*2
Face-to-face discussion tube

SZX-SDO2
Side-by-side discussion tube

SZX2-FOFH
Fine focusing for heavy loading

SZX2-FOA
Motorized focusing unit

G

SZX2-EEPA*2
Extendable Eyepoint adjuster

SZX2-ILLC10*3
Coaxial illuminator

U-LLGAD
Liquid light guide adapter

U-LLG150/U-LLG300
Liquid light guide (1.5 m/3 m)

U-HGLGPS
Light source

U-LH100HG
100 W mercury lamp housing

U-LH100HGAPO
100 W mercury apo lamp housing

U-RFL-T
Power supply unit for mercury lamp

SZX2-ZB10
SZX10 zoom body

SZX2-STL2
Large stand for SDO

D

SZX2-CCV
Light protective shield

LG-DF
Dual flexible light guide

A

LG-PS2
Light source

SZX-LGR66
Ring light guide adapter for SZX

1/4 wavelength retardation plate*1

SZX2-AN
Analyzer

SZX2-2RE10
Revolving nosepiece

LG-DI
Dual inter-lock light guide

HLL301
Spot lens

A

LG-R66
Ring light guide

Analyzer
Polarizer

LG-R66PL
Analyzer and polarizer set for LG-R66

DFPL0.5×-4
DFPL0.75×-4
DFPLAPO1×-4
DFPLAPO1.25×
DFPL1.5×-4
DFPL2×-4
SZX-ACH1×
SZX-ACH1.25×-2

LG-DFI
Dual combination light guide

*1 Incorporated in SZX2-ILLC10 *2 Please contact your nearest Olympus dealer for applicable combination *3 Cannot be attached to DFPL2×-4

SZX2-FOF
Fine focusing unit

SZX2-FO
Focusing unit

C

SZX2-FOA
Motorized focus unit

G

SZX2-MDCU
Control unit

U-ACAD4515
AC adapter

SZX-MDHSW
Hand switch

SZX-MDFSW
Foot switch

SZX-R
Drop prevention collar

C

SZ2-STU2
Universal stand type 2

D E

SZX2-ILLB
High-level transmitted light illumination base

SZX2-ILLK
Transmitted light illumination base

U-LS30-5
6V 30 W lamp socket

SZX-TLGAD
Transmitted light guide adapter unit

D E

SZX2-ILLD
BF/DF transmitted light illumination base

D

SZX2-ST
Standard stand

D

SZX2-STL
Large stand

LG-SF
Light guide

A

SZX-STAD2
BX stage adapter type 2

U-SIC4R/L
Mechanical stage

SZX2-DMP
Dumper for SZX2 illumination base

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(page 1, left; page 3, lower left; pages 5 & 7, lower right; page 8).

RIKEN Center for Developmental Biology,
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(page 1, right; page 3, middle right; page 5, top right; page 7, top right).

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Drosophila melanogaster
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