

# OLYMPUS®

Your Vision, Our Future

Stereomicroscope System

## SZX7

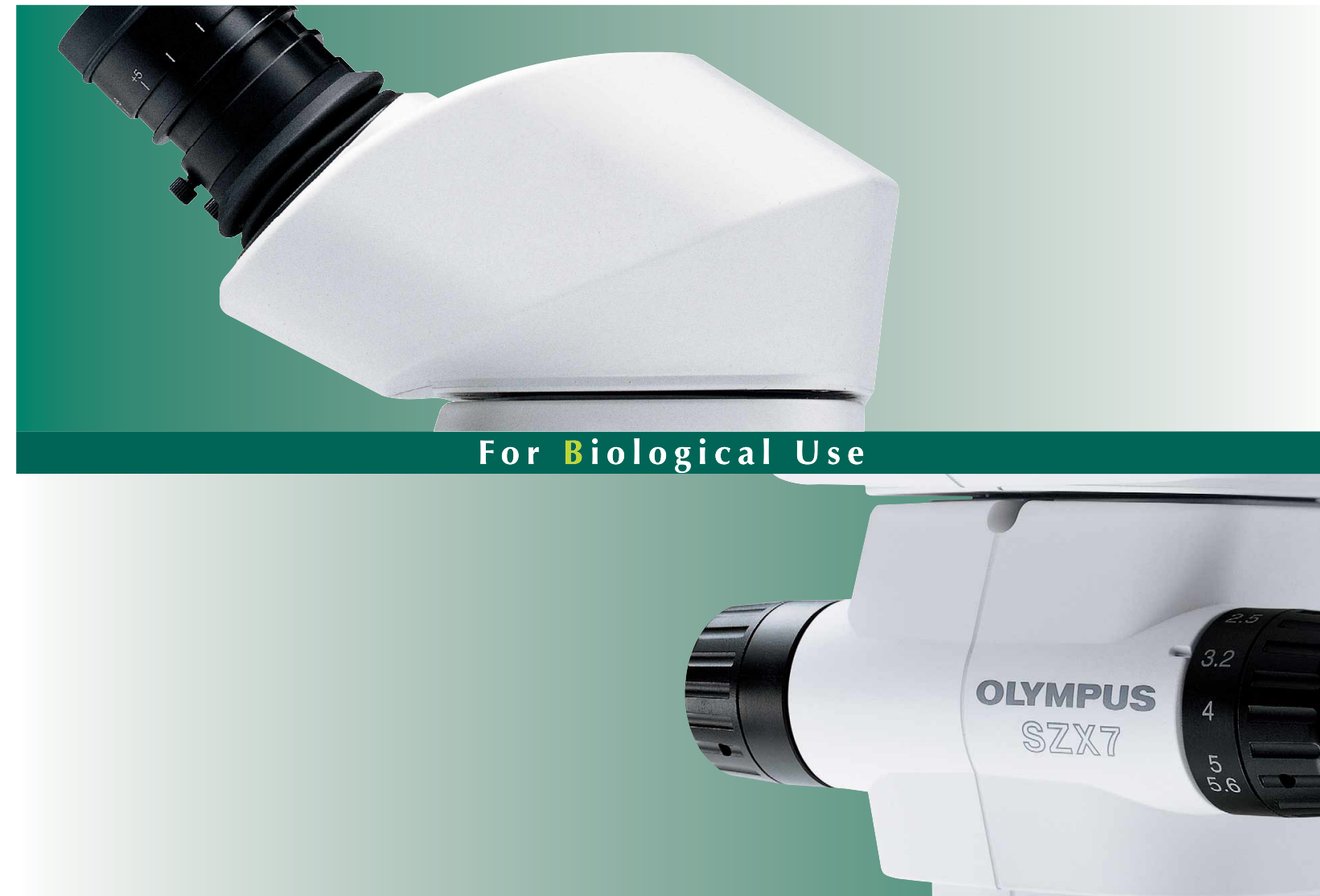


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For Biological Use



ECO-PRODUCTS

SZX7 is the environmental conscious product according to OLYMPUS's own standards.

Main features of OLYMPUS Eco-products are as follows.

- Lead-free and arsenic-free Eco-glass for optics, such as lenses and prisms.
- Adoption of cardboard for packing materials without styrene foam for promoting the recycling.
- \* Some accessories are inapplicable.

Please visit our web site for further information: <http://www.olympus.co.jp/en/eco-products/>

- OLYMPUS CORPORATION has obtained the ISO9001/ISO14001.
- OLYMPUS CORPORATION has obtained the MD540624/ISO13485.

• Illumination devices for microscope have suggested lifetimes. Periodic inspections are required. Please visit our web site for details.

\* Specifications and appearances are subject to change without any notice or obligation on the part of the manufacturer.

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## Easy on the eyes: user comfort is where precision performance begins

The new SZX7 stereo microscope from Olympus is easy on the eye in more ways than one — as users in every field of biological study will quickly discover. Because in operation, touch and optical performance, the SZX7 is designed to enhance ease of use and working comfort in every task, from advanced research to routine inspections. Its Galilean optical system, previously restricted to more specialized microscopes, offers the best zoom ratio in this class as well as outstanding image clarity, true color and accurate reproduction of the original specimen in crisp, well-defined detail. Flexible modularity and abundant accessories also ensure quick and easy system adaptation for specimen of any type and size. Welcome to the comfort zone.



## Quality optics and flexible system expansion for consistently superior image reproduction

Clear, accurate specimen observation without strain. With its smooth finish, apochromatic zoom optics, ComfortView eyepieces and easy adjustability, the SZX7 minimizes strain and fatigue while fulfilling the key mission of Olympus microscope designers — to provide the optimal image for any specimen. The clear, accurate performance of the high-level Galilean optical system is complemented by a Distortion Free objective lens series with maximum Numerical Aperture. The SZX7 microscope body is manufactured using newly developed lead-free optics, demonstrating Olympus' commitment to protect the environment.

### The best zoom ratio in this class

With a magnification range of 8x-56x (using a 1x objective/10x eyepieces), the SZX7 offers a zoom ratio of 7:1. This is the best in its class, and allows specimen to be observed at the most appropriate magnification.

### The best resolving power in this class

Superior quality objectives deliver accurate, high resolution observation images which show every specimen in minute detail.

### A range of objectives to suit every specimen and every application

- Superior Image quality with high resolution and excellent flatness:

The new DFPLAPO1x-4 objective lens provides utmost optical performance in this class, with Plan Apochromat correction and N.A. of 0.10.

- Longest working distance (W.D.) in this class:

Objectives range from the SZX-ACH1x (90 mm W.D.) to the DFPL0.5x-4 (171 mm W.D.). As a result, even surfaces which are difficult to access can be observed easily.

### Accurate color reproduction

Careful selection of lens surface coatings and apochromatic zoom optics make it possible to observe and document specimen in their original, authentic colors.



Observation tubes



Galilean optics feature two (right/left) independent and parallel zoom optical paths. This system enables high optical performance as well as system modularity.

### "ComfortView" eyepieces for greater comfort and faster work

Quick, comfortable observation and documentation are ensured by this completely new eyepiece design featuring Pupil Aberration Control and Appropriate Positioning in the eye point. The result is a field of view that is easy to find, comfortable to view, and easy to keep.

### Convenient front-access operation

Improved access to the most frequently used knobs and controls maximizes operator comfort and reduces neck and back strain.

### Tilting binocular tube for comfortable observation

A tilting binocular observation tube is available, which helps the user to quickly find their most comfortable viewing position.

### Fast recall of magnification settings via click-stop mechanism

Many inspection and documentation tasks require the use of a known zoom magnification setting to ensure consistent and comparable results. The integrated click-stop mechanism provides quick and easy access to this important function.



Objectives



Eyepieces



Tilting binocular head / SZX-TBI





## Fluorescence unit with coaxial illumination allows clear, bright observation even with weakly emitting specimen

This reflected light fluorescence unit is used to observe fluorescence in living cells under a stereo microscope. The high-performance fluorescence filter sets have sharp cutoffs and high transmission to capture even faint emissions from fluorescent proteins.

### Reflected light fluorescence unit SZX-RFL2

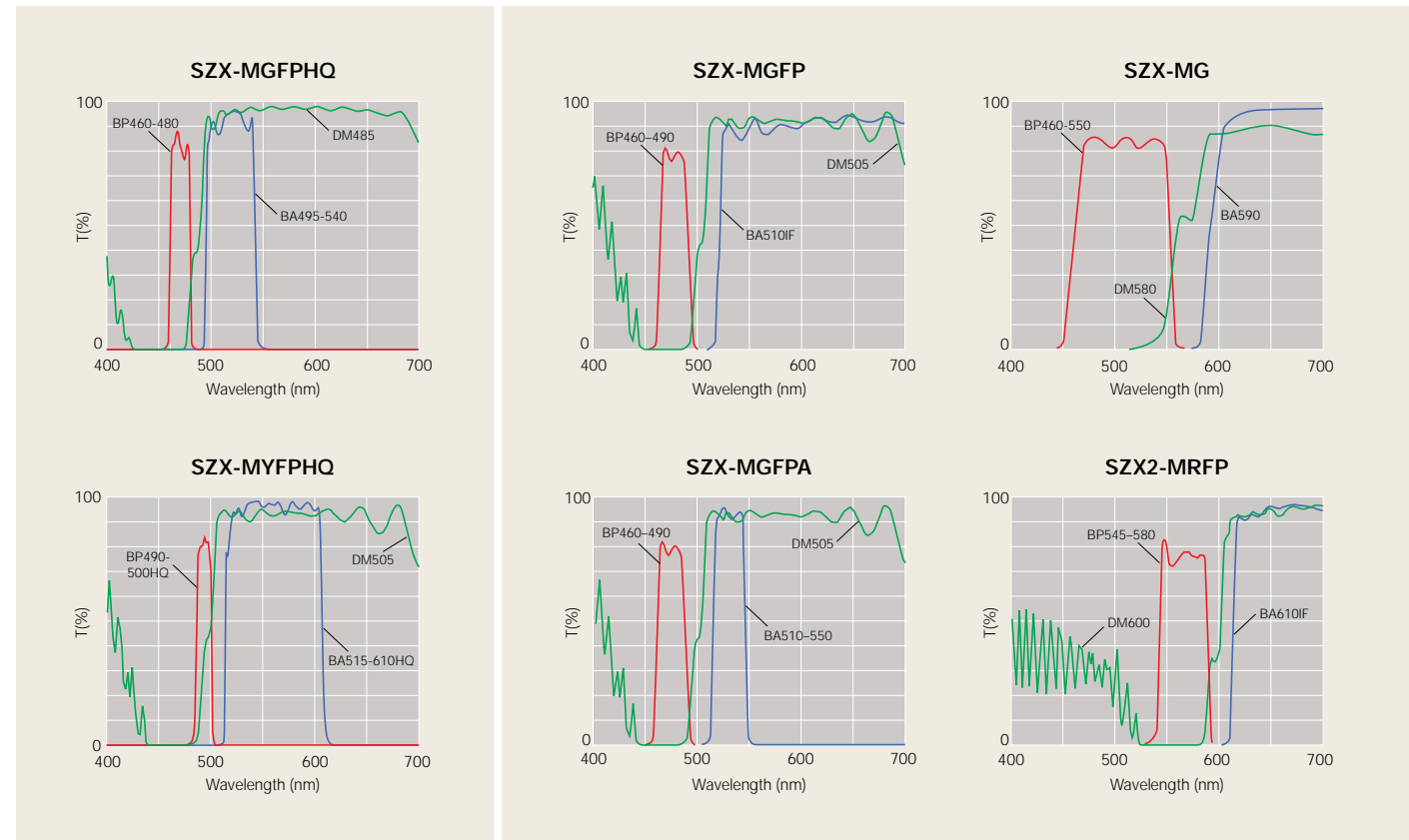
Three fluorescence filter blocks can be mounted in a 4-position slider. An open position is provided for easy access to transmitted light observation. The light source is a 100 W mercury lamp, for bright fluorescence observation with high contrast. A total of six filter sets can be selected, depending on the purpose.



Filter cubes

### High-performance filters for GFP/YFP

Two different types of high-performance filter sets are available for GFP/YFP. Optimized for the characteristics of GFP/YFP wavelengths, they have high transmission rates of 90% to 95% and sharp cutoffs for efficient detection of even weak fluorescence.



## Multiple illumination sources ensure the right light for every task



### LED illuminator stand / SZ2-ILST

The world's first LED stand features a thin design to keep sample positions low and to optimize operability. Simultaneous transmitted and reflected light are available on this stand. LED light offers both long lifetime and constant color temperature at any intensity.



### Transmitted illumination attachment / SZ2-ILA

Used with the SZ2-ST stand, this cost-effective illumination stand provides bright, uniform illumination from low to high magnifications. Tiltable mirror provides direct and oblique illumination for low contrast specimen. Available 22 W and 100 W lamphouses provide necessary power for a variety of illumination needs.



### Brightfield/darkfield transmitted light illumination base / SZX2-ILLD

Enables darkfield observation under illumination twice as bright as conventional models. Flat and thin specimens like brain tissue slices are vividly displayed on a black background.



### Slim LED transmitted light illumination base / SZX2-ILLT

With a slim design of 41 mm, this transmitted light illumination base has a lower height to enable a low eyepoint and easy access to base-mounted samples during observation and operation.



Variety of fiber guide illumination systems are available.



Flexible light guide / SZ2-LGSF



Interlock dual light guide / SZ2-LGDI



Ring light guide / SZ2-LGR



Coaxial reflected light illuminator / SZX2-ILLC10



## Compliance with various needs, from digital imaging to observation of large-size specimens



### Digital camera / DP72

By combining Olympus digital camera technologies with special high-speed processing hardware, images with up to 12.8 million pixels can be captured at high speed maintaining image quality, accuracy and color fidelity. The DP72 employs a 2/3 inch CCD. Images can be captured at resolutions up to 4140 x 3096 pixels.

### Light beam splitter / SZX2-LBS

Two digital cameras can be attached simultaneously. The light path can be changed between three different settings: 100% observation, 100% digital camera, and 50% observation and 50% to both left and right cameras.

### Photo adapter / SZX-PHA

Various adapters are available for different kinds of CCD cameras, and can be used with the beam splitter.



### Side by side discussion tube / SZX-SDO2

Ample distance (650 mm) is provided between the main and secondary observers, making observations easy without disturbing microscope operation. The color of the built-in pointer can be selected to contrast the specimen.



### Digital camera / DP20

Equipped with a 2 million pixel CCD which enables display with 6 times the amount of information of an ordinary TV screen, the DP20 provides smooth live display, at a 15 fps speed, of high-resolution images close to that of high-definition TV. Also, as both live and stored images are expressed with 8-bits each for RGB (16.7 million colors), color reproduction is faithful to the specimen.



### Various universal stands

A variety of universal stands are available for the observation of large size specimens. No matter how big the samples are or how much they vary in size, OLYMPUS has the right choice of stands to suit any requirements.





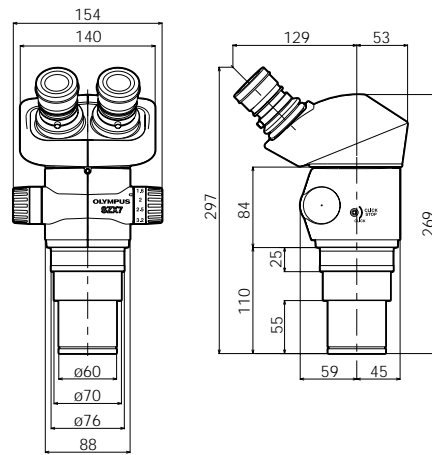
### Warming plate

The temperature of this plate can be kept at 37°C. The temperature reaches virtually the entire surface, so several specimens can be warmed simultaneously.

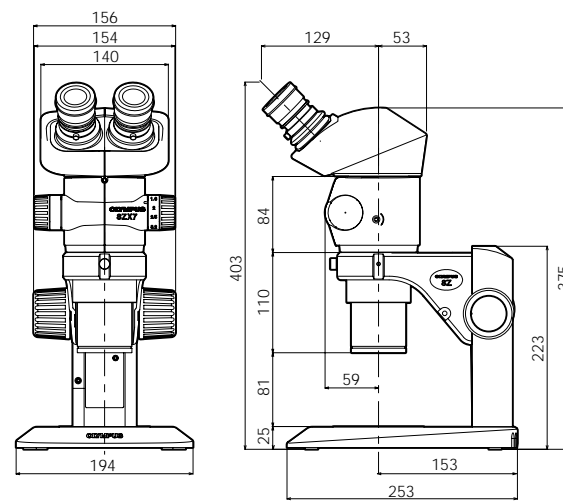
### ■ SZX7 dimensions

(Unit: mm)

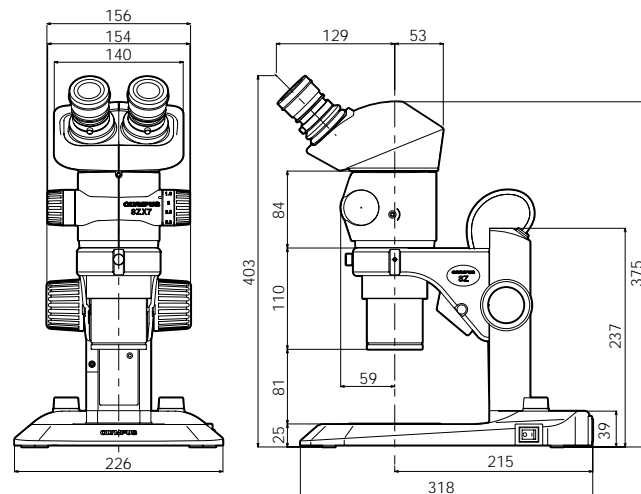
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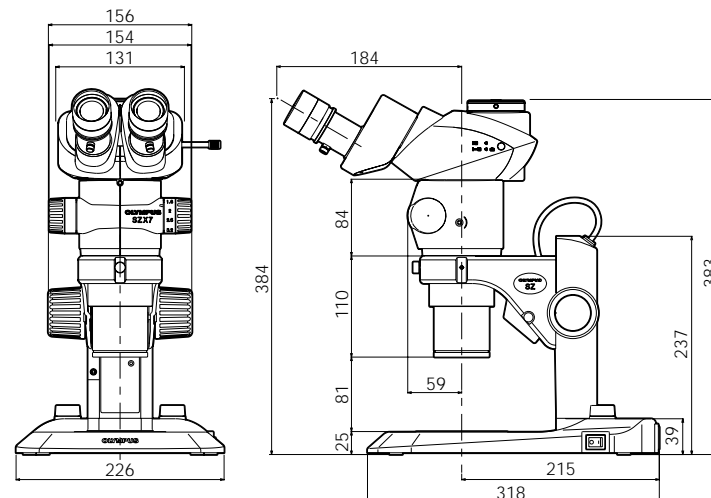
SZX7+SZ2-ST



SZX7+SZ2-ILST



SZX7 (SZX2-TR30 configuration) + SZ2-ILST



### ■ SZX7 specifications

Item	Specifications			
<b>Zoom microscope body</b> SZX-ZB7	Zoom drive: Horizontal knob system Click stop for each zoom magnification: ON-OFF switching possible Zoom ratio values: 7:1 (0.8x to 5.6) Zoom magnification indication: 0.8, 1, 1.25, 1.6, 2, 2.5, 3.2, 4, 5, 5.6 Objective mounting: Screw mounting into thread Lead-free			
Aperture iris diaphragm control: The AS unit (SZX-AS) is mountable				
<b>Observation tube</b> SZX-BI45 SZX-TBI SZX2-TR30 SZX2-TR30PT	<b>SZX-BI45</b> Binocular tube View inclination angle 45°	<b>SZX-TBI</b> Tilting binocular tube View tilting angle 5° to 45°	<b>SZX2-TR30</b> Trinocular tube View inclination angle 30° Light path selection: 2 steps (Binocular 100%, Binocular 50%/Photo 50%)	<b>SZX2-TR30PT</b> Trinocular tube View inclination angle 30° Light path selection: 2 steps (Binocular 100%, Photo 100%)
All observation tubes: Lead-free				
Interpupillary distance adjustable range: 50 to 76 mm Eyepiece clamping knob provided				
<b>Stand</b> SZ2-ST SZ2-ILST	<b>SZ2-ST</b> Standard stand		<b>SZ2-ILST</b> LED reflected/transmitted illumination stand	
Frame installation	Mounting diameter 76 mm			
Focusing adjustment	Knob rotation tension adjustment Focusing stroke 120 mm			
Stage plate	SZ2-SPBW (Black & white) SP-C (Glass clear transparent)		The dedicated glass plate in 100 mm dia. included	
Light source	Fiber optic illumination system SZ2-LGB mountable (option) Transmitted light illumination attachment (SZ2-ILA) mountable (option)		Transmitted illumination: LED Reflected illumination: LED Average LED life span: 6000 hrs. Input rating: 100-120 V/200-240 V~0.15/0.1 A, 50/60 Hz	
<b>Objective lens</b>	<b>Model</b>	<b>N.A.</b>	<b>Working distance</b>	
*1 The SZ2-ET auxiliary sleeve is required when the SZ2-ST/SZ2-ILST is used.	DFPL0.5x-4*1 DFPL0.75x-4 DFPLAPO1x-4 SZX-ACH1x DFPLAPO1.25x-2 SZX-ACH1.25x DFPL1.5x-4 DFPL2x-4 All objectives: Lead-free	0.05 0.075 0.10 0.10 0.125 0.125 0.15 0.20	171 mm 116 mm 81 mm 90 mm 60 mm 68 mm 45.5 mm 33.5 mm	
<b>Eyepieces</b>	"ComfortView" WHSZ series All eyepieces: Lead-free			
<b>Weight</b>	Configuration 1	4,360 g	5,400 g	5,200 g
	Configuration 2	5,160 g	6,200 g	6,000 g

Configuration 1: SZX-ZB7 + DFPLAPO1x-4 + individual observation tube + WHSZ10x-H (2) + SZ2-ST  
Configuration 2: SZX-ZB7 + DFPLAPO1x-4 + individual observation tube + WHSZ10x-H (2) + SZ2-ILST

### ■ SZX7 optical performance

Eyepiece	WHSZ10x-H WHSZ10x		WHSZ15x-H		WHSZ20x-H WHSZ20x		WHSZ30x-H	
	F.N. 22		F.N. 16		F.N. 12.5		F.N. 7	
Objective lens	Total magnification	Field of view (mm)	Total magnification	Field of view (mm)	Total magnification	Field of view (mm)	Total magnification	Field of view (mm)
0.5x	4x-28x	55-7.8	6x-42x	40.0-5.7	8x-56x	31.3-4.5	12x-84x	17.5-2.5
0.75x	6x-42x	36.7-5.2	9x-63x	26.7-3.8	12x-84x	20.8-3.0	18x-126x	11.7-1.7
1x	8x-56x	27.5-3.9	12x-84x	20.0-2.9	16x-112x	15.6-2.2	24x-168x	8.8-1.3
1.25x	10x-70x	22-3.1	15x-105x	16.0-2.3	20x-140x	12.5-1.8	30x-210x	7.0-1.0
1.5x	12x-84x	18.3-2.6	18x-126x	13.3-1.9	24x-168x	10.4-1.5	36x-252x	5.8-0.83
2x	16x-112x	13.8-1.9	24x-168x	10.0-1.4	32x-224x	7.8-1.1	48x-336x	4.4-0.63

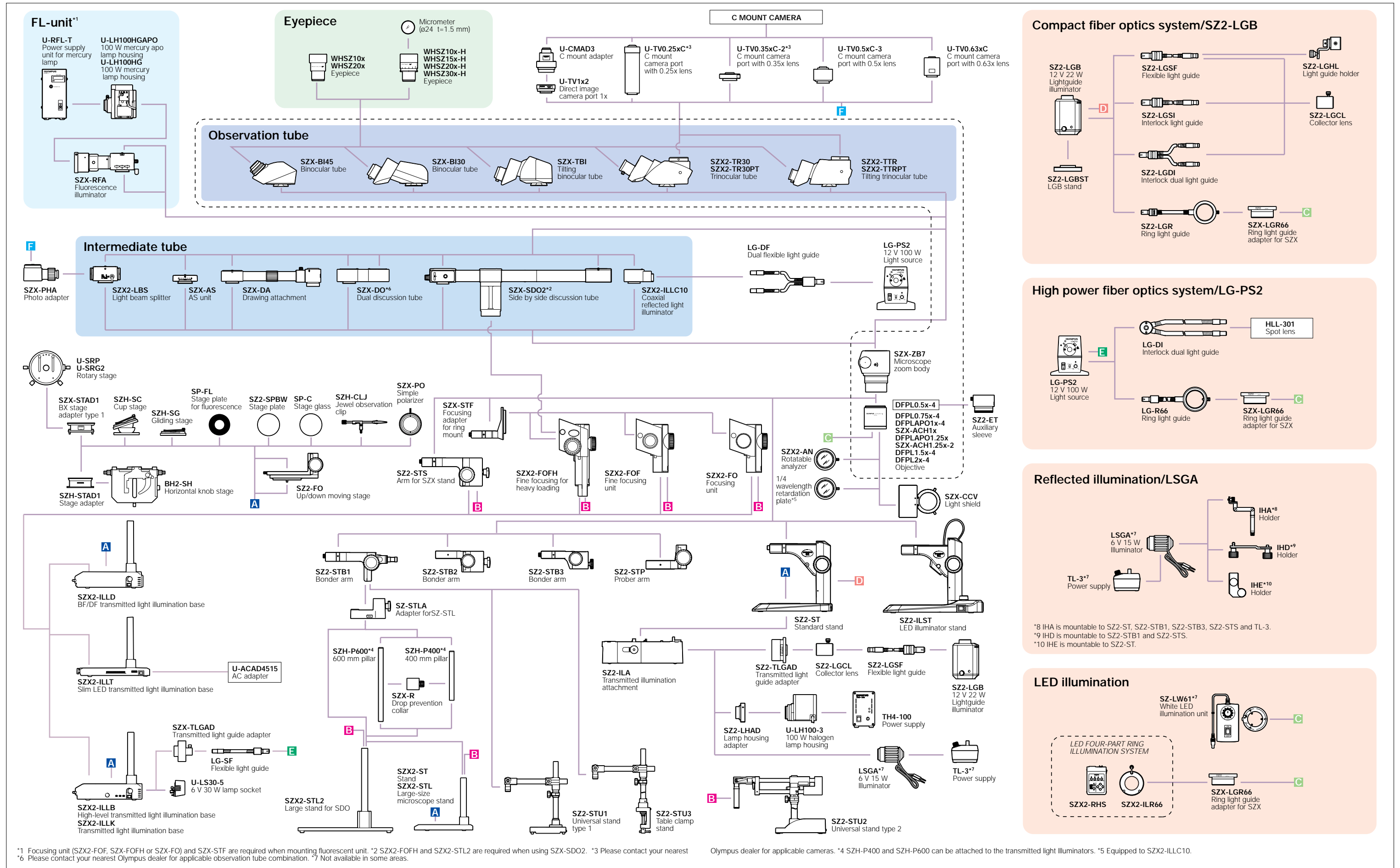
### ■ "ComfortView" WHSZ eyepiece

	F.N.	Diopter adjustment	Reticle	Focal magnification
WHSZ10x	22	—	N.A.	—
WHSZ20x	12.5	—	N.A.	—
WHSZ10x-H	22	-8+5	Yes*2	—
WHSZ15x-H	16	-8+5	Yes*2	—
WHSZ20x-H	12.5	-8+5	Yes*2	1.3x
WHSZ30x-H	7	-8+5	Yes*2	2x

\*2Applicable reticle size: 24 mm diameter, 11.5



■ SZX7 system diagram



\*1 Focusing unit (SZX2-FOF, SZX2-FOFH or SZX2-FO) and SZX2-STF are required when mounting fluorescent unit. \*2 SZX2-FOFH and SZX2-STL2 are required when using SZX-SDO2. \*3 Please contact your nearest Olympus dealer for applicable cameras. \*4 SZH-P400 and SZH-P600 can be attached to the transmitted light illuminators. \*5 Equipped to SZX2-ILLC10. \*6 Please contact your nearest Olympus dealer for applicable observation tube combination. \*7 Not available in some areas.