

**OLYMPUS**<sup>®</sup>

Your Vision, Our Future

ZOOM STEREOMICROSCOPE

**SZ61/SZ51**

For Biological Use



The Comfort Zone

# Comfort at work: the key to consistent, accurate results

User comfort has always been an Olympus priority. Even so, the standards set by the new SZ61 and SZ51 are a revelation. The smoothly contoured finish, the newly designed "ComfortView" eyepiece, and the accessible, responsive controls make operation easier and less fatiguing than ever before.

The compact design owes much to the incorporation of the Greenough optical system, which delivers excellent flatness and ample depth of field as well as clarity, detail, accurate color and the least possible distortion. Dependable, high-performance optics are central to the achievement of consistent, accurate results in today's widening range of biological microscopy applications — as are ergonomic features which make even long-duration tasks easier and less demanding to perform.

Welcome to the comfort zone.



**SZ51-60**

**SZ51**



**SZ61**



**SZ61TR**



**SZ61-60**

*SZ61: offers the highest zoom ratio in its class.  
SZ51: offers superb cost efficiency with practical zoom ratio.*

## High-performance optics in a compact, comfortable design

Incorporating new improvements to the highly-regarded Greenough optical system, the SZ61 and SZ51 successfully meet the demand for a variety of observation and documentation options in a genuinely compact microscope design. Clear, sharp image reproduction is matched by new ergonomic design elements which maximize comfort and ease of use.

The SZ61 and SZ51 microscope bodies are manufactured using newly developed lead-free optics, demonstrating Olympus commitment to protect the environment.

### 6.7:1 — the best zoom ratio in this class

The SZ61's class-leading magnification range extends from 6.7x through 45x (using 10x eyepieces), with a zoom ratio of 6.7:1. This derives from a newly developed optical system and allows quick, comfortable observations at the most appropriate magnification. The SZ51 provides a magnification range from 8x through 40x (using 10x eyepieces), with a zoom ratio of 5:1.

### Outstanding depth of field and flatness

The 10-degree angle of convergence in the Greenough optical system secures excellent image flatness with large depth of field.

### Accurate color reproduction

The careful selection of lens surface coatings and glass materials in the entire optical system makes it possible to observe and document specimen in their original, authentic colors.

### Sharp, clear, high-contrast images

High contrast images and field flatness ensure accurate reproduction and documentation of original specimen shapes.

### "Comfort View" 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.



*The Greenough optical system has two zoom optical paths inclined at a 10° angle. This enables a compact microscope design with high performance.*



### Five variations in zoom performance

The SZ61 and SZ51 provide five system configuration choices. First, they can both be equipped with an ergonomically designed 45° inclination tube when mounted on standard stands. Second, operators can attach a 60° inclination tube (SZ61-60/SZ51-60) for special applications where the zoom body has to be tilted for use with other equipment or mounting on a universal stand. And for documentation purposes, OLYMPUS also offers the SZ61TR, which incorporates a trinocular tube for easy attachment of digital and video cameras.

### Convenient front-access operation

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



## The right accessory for every application

### Microscope digital camera DP12 (SZ61TR)

Compact overall design, with palm-size multi-function control unit integrating a 3.5" LCD monitor with 200,000-pixel display, and a small footprint that makes it easy to install and lay out any necessary auxiliary equipment. The 3.34 million-pixel and 1/1.8 inch progressive scanning CCD system ensures highly precise digital images which can be stored at a maximum resolution of 2048x1536. Stand alone camera is digital yet does not need to be connected to a PC.

### CAMEDIA Micro imaging system

A simple adapter enables an Olympus CAMEDIA digital camera to be attached to the eyepiece of a binocular body — an easy, practical and cost-efficient means of obtaining digital images.

### 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.



SZ61TR+DP12



SZ61+CAMEDIA Micro Imaging System



SZ61+SZ2-STU3



SZ51+SZ2-STU2



**Wide choice of auxiliary objectives and eyepieces**

A wide choice of auxiliary objectives enables observation at the optimum working distance (W.D.) for a variety of applications. W.D. can be changed between 250mm-350mm (0.3x objective) and 180mm-250mm (0.4x objective). Eyepieces are available ranging from 10x to 30x to optimize system magnification.



Auxiliary Objectives



Eyepieces

## Choose the illumination source that suits the task at hand



### 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. Tilttable mirror provides direct and oblique illumination for low contrast specimen. Available 22W and 100W lamphouses provide necessary power for a variety of illumination needs.



### High-level transmitted light illuminator / SZX-ILLB2

With continuously adjustable contrast settings, this stand provides clear, effective illumination. An adjustable slit aperture adds contrast to a variety of specimen types. Light intensity and color temperature are adjusted by built-in filter sliders.



### Brightfield/darkfield transmitted light illuminator / SZX-ILLD2

This stand provides bright and high contrast brightfield and darkfield illumination. The illuminated field is up to 63mm in brightfield and 33mm in darkfield.



**Flexible light guide / SZ2-LGSF**

A single fiber optic guide is fixed at the back of the objective so as not to disturb microscope operation.



**Interlock dual light guide / SZ2-LGDI**

Standard oblique semi-rigid fiber optic light guide. The light source position on the rear side of the stand saves desk space.



**Ring light guide / SZ2-LGR**

Used with LGB illumination system, this ring light guide provides bright and uniform images.



**Coaxial reflected light illuminator / SZ2-ILLC**

It combines a polarizer and a  $1/4\lambda$  plate, for easier viewing of specimens which are difficult to examine under oblique reflected light illumination.

## ■ SZ61/SZ51 Specifications

Item	Specifications				
Microscope body	SZ61	SZ61-60	SZ61TR	SZ51	SZ51-60
SZ61	Magnification	0.67x to 4.5x			0.8x to 4x
SZ61-60	Zoom ratio	6.7: 1			5: 1
SZ61TR	Working distance	110mm			
SZ51	Tube inclination angle	45°	60°	45°	60°
SZ51-60	Interpupillary distance adjustment	Left/right interlocked Adjustment range: 52 to 76 mm (using the WHSZ10X eyepieces)			
	Video camera adaptability	—		C-mount (0.5x built in)	—
	Zoom adjustment knob	Left/right single-shaft horizontal knob Interpupillary distance high/low magnification stopper incorporated.			
	Optical components	Lead-free			
Auxiliary objective	Mounting by screwing into the thread at the bottom of frame (M48 thread x0.75)				
Eyepiece	"Comfort View" WHSZ series Lead-free				
Stand	SZ2-ST			SZ2-ILST	
SZ2-ST	Standard stand			LED reflected/transmitted illumination stand	
SZ2-ILST	Frame installation	Mounting diameter: 76mm			
	Focusing adjustment	Focusing stroke: 120mm			
	Stage plate	SZ2-SPBW (Black & white for anti-ESD) SP-C (Clear glass plate)		The dedicated glass plate in 100mm 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: 100-120V/200-240V ~0.15/0.1A, 50/60Hz	
Weight	Zoom body only	1,300g	1,500g	1,300g	1,300g
	Configuration 3	3,520g	3,720g	3,520g	3,520g

Configuration3: Zoom body + WHSZ10X-H(2) + SZ2-ST

## ■ SZ61/SZ51 optical performance

Microscope Body	Zoom magnification	WHSZ10x-H WHSZ10x		WHSZ15x-H		WHSZ20x-H WHSZ20x		WHSZ30x-H	
		F.N. 22		F.N. 16		F.N. 12.5		F.N. 7	
		Total magnification	Field of view (mm)	Total magnification	Field of view (mm)	Total magnification	Field of view (mm)	Total magnification	Field of view (mm)
SZ61	0.67x	6.7	32.8	10.1	23.9	13.4	18.7	20.1	10.4
	1x	10	22	15	16	20	12.5	30	7.0
	2x	20	11	30	8	40	6.3	60	3.5
	3x	30	7.3	45	5.3	60	4.2	90	2.3
	4.5x	45	4.9	67.5	3.6	90	2.8	135	1.6
SZ51	0.8x	8	27.5	12	20	16	15.6	24	8.8
	1x	10	22	15	16	20	12.5	30	7.0
	2x	20	11	30	8.0	40	6.3	60	3.5
	3x	30	7.3	45	5.3	60	4.2	90	2.3
	4x	40	5.5	60	4.0	80	3.1	120	1.8

\* No auxiliary objective lens is attached

## ■ Auxiliary objective for SZ61/SZ51

	Working distance (mm)
110AL0.25x	400
110ALK0.3x	250-350
110ALK0.4x	180-250
110AL0.5x	200
110AL0.62x	160
110AL0.75x	130
110AL1.5x	61
110AL2x	38

## ■ "Comfort View" 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: 24mm diameter, t1.5

As of Oct. 1, 2003, Olympus Optical Co., Ltd. is named OLYMPUS CORPORATION.

Specifications are subject to change without any obligation on the part of the manufacturer.

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