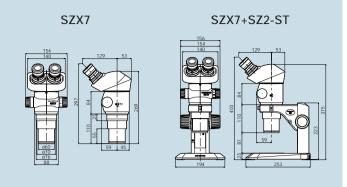
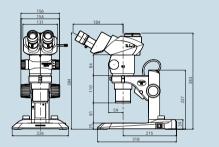
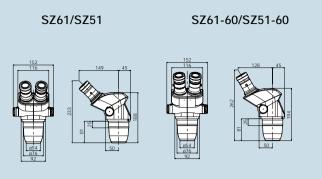
■ SZX7 dimensions



SZX7 (SZX2-TR30 configuration) +SZ2-ILST

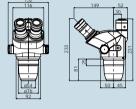


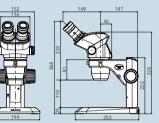
■ SZ61/SZ51 dimensions



SZ61TR

SZ61+SZ2-ST/ SZ51+SZ2-ST







OLYMPUS[®]

For Industrial Use





SZX7/SZ61/SZ51 are 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/

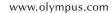
Specifications are subject to change without any obligation on the part of the manufacturer.



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Illumination devices for microscope have suggested lifetimes. Periodic inspections are required. Visit our Website for details.

OLYMPUS CORPORATION has obtained ISO9001/ISO14001





Comfort for your eyes — **precision for your work**

The human eye is a wonderful instrument, catching images of every moment of our lives. At the same time it is extremely sensitive, and can become exhausted if it is not treated with care. OLYMPUS has therefore made every possible effort to develop new optical systems that allow the human eye to feel comfortable and relaxed while working with stereo microscopes. This not only protects the eyes but also leads to much more precise and consistent results in daily work. All three models — the SZX7 with its advanced Galilean optical system, the full-featured SZ61 and the versatile SZ51 — provide 3D images with true color, high resolution and no distortion. Welcome to the comfort zone.

1



CONTENTS

Introduction — "The Comfort Zone"	1 - 12
-----------------------------------	--------

- SZX7 Optical Performance
- SZ61/SZ51 Optical Performance
- Ergonomic Design
- Illumination System
- Digital Imaging & Recording System
- Mounting System & Accessories

Specifications ------13 - 14

System diagram & dimensions SZX7-----15 - 16

System diagram & dimensions SZ61/SZ51-----17 - 18

SZX7

- SZX7: Galilean optical system using parallel light paths for outstanding performance and easy expandability.
- *SZ61*: Top-of-the-line optical performance, with zoom ratio of 6.7:1. Model variations: SZ61TR (with trinocular tube), SZ61-60 (with 60 degree observation tube inclination).
- SZ51: Versatile, cost-efficient, ideal in all line inspection applications.

Optical excellence and system expandability — SZX7 with Galilean optics

"Providing the optimal image for any specimen" by the adoption of the Galilean optical system and the DF (Distortion Free) objective lens series with maximum N.A. (Numerical Aperture).

7:1 the best zoom ratio of the class

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

The best resolving power in this class

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

A range of objective lenses to suit every specimen and everyapplication

• Superior image flatness:

The DFPIan objective lens series accurately reproduces the original shape of the specimen.

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

The objective lenses range from the SZX-ACH1x (90mm W.D.) to the DFPL0.5x (198mm W.D.). As a result, even specimen surfaces which are difficult to access can be observed easily.

• Ideal for high magnification:

Superior quality image is ensured up to 336x, by combining a 2x objective lens with 30x eyepieces. Also available is an excellent apochromatic objective lens DFPLAPO1.25x, which reaches the higher zoom range of 1x through 7x.



Galilean optics feature two (right/left) independent and parallel zoom optical paths to produce the focal point with one objective lens. The system enables high optical performance as well as functional modularity.

"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.

Accurate color reproduction

The careful selection of lens surface coating and glass materials in the entire optical system make it possible to observe and document specimens in their original, authentic colors

Sharp, clear, high-contrast images

The low, suppressed field curvature ensures accurate reproduction of original specimen shapes.

A wide variety of observation tubes and intermediate tubes enable operators to obtain precisely the right image

Various different types of tubes are available, and can be freely combined to create the ideal system for any specified purpose.

SZX7 tubes:

- Aperture diaphragm unit / SZX-AS
 Macro tube / SZX-DA
 - Photo adapter / SZX-PHA
- Beam splitter / SZX2-LBS Eyepoint adjuster / SZX-EPA Side by side discussion tube / SZX-SDO2
- Filter adapter / SZX-FAD Coaxial reflected light illuminator / SZX2-ILLC10



Aperture diaphragm unit / SZX-AS



① 45 degree binocular head / SZX-BI45 ② Tilting trinocular head / SZX2-TTR ③ 30 degree trinocular head / SZX-TR30

Precise, functional and compact — SZ61/SZ51

"A practical range of functions for observation and documentation in a compact stereo microscope body" The SZ61/SZ51, incorporating the Greenough optical system.

6.7:1 the best zoom ratio of the class

The SZ61's class-leading magnification range extends from 6.7 through 45x (using 10x eyepiece), with the zoom ratio of 6.7:1. This derives from the 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 eyepiece), with the zoom ratio of 5:1.

Outstanding depth of focus and flatness

The 10-degree angle convergence of the image forming path in the Greenough optical system secures excellent image flatness with deep depth of focus.

"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.

Accurate color reproduction

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

Sharp, clear, high-contrast images

The low, suppressed field curvature ensures accurate reproduction of original specimen shapes.



The Greenough optical system has two zoom optical paths inclined at an inward angle. This enables a more compact microscope design while maintaining high performance.



Five zoom body variations with high performance

The SZ61 and SZ51 zoom bodies provide two different magnification ranges. They are available with an ergonomically designed 45-degree inclination tube for the use on the standard stands. For special applications where the zoom body has to be tilted for use with other equipment or mounting on a universal stand, models with 60-degree inclination tube (SZ61-60/SZ51-60) are available. For documentation purposes, OLYMPUS also offers the SZ61TR, which incorporates a trinocular tube for easy attachment of digital and video cameras.

Wide choice of auxiliary objective lenses

A wide choice of auxiliary objective lenses enables observations at magnifications from 2x to 270x and W.D. up to 350mm to comply with every application purpose.







Work more comfortably...and more productively

The Olympus approach to ergonomic design seeks to achieve improvements that make work easier, more comfortable, and more productive, all at the same time. That means applying advanced technological methods to maximizing operability, reducing factors that contribute to operator fatigue, and building in effective safety features like ESD design.

Ergonomic design based on 3D CAD analysis

The microscope body and stand feature a design of precisely curved contours developed through careful 3D CAD analysis. Key ergonomic features include an all-round finish that's smooth to the touch and helps to reduce fatigue in long period observations.

Convenient front-access operation

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

Tilting binocular tube for comfortable observations (SZX7) A comfortable position that minimizes the risk of back strain and muscle tension promotes productivity and quality in routine inspection tasks. The continuously adjustable tilting binocular tube helps the operator to quickly find the most comfortable eyepoint position.

Precise recall of specific magnification settings via integrated click-stop mechanism (SZX7) or zoom knob stopper (SZ61/SZ51)

Many inspection tasks require the use of the same zoom magnification setting to ensure consistent and comparable results. The integrated click-stop mechanism provides guick and easy access to this important function. The zoom knob stopper allows the user to choose magnification that can be quickly repeated, and the setting in use is clearly displayed on the front control panel.

New eyepiece reduces fatigue and excludes dust

This eyepiece features a pupillary aberration control mechanism whereby the image remains visible even if the operator's eyes move. This has been found to lessen operator fatigue in long lasting observations. The unique eyepiece mounting design excludes dust particles and keep the eyepiece firmly in place ensuring clear images and best eyepiece position.

ESD safety design

The increasing miniaturization and complexity of electronic devices raises the risk of damage by electric shock caused by electrostatic discharge. For this reason, OLYMPUS has taken special measures to design its stereo microscope bodies and main accessories to discharge static electricity from 1000V down to 100V in less than 0.2 seconds, protecting the equipment and preventing damage to samples.





LED Transmitted / Reflected Light Illumination Stand



Tilting trinocular / binocular head (SZX7)



CLICH



Click-stop mechanism (SZX7)

Zoom knob stopper (SZ61/SZ51)





Eyepiece lock



Ground wire connection (back side)

OLYMPUS light solutions maximizes visibility in different tasks

OLYMPUS offers a range of light solutions perfectly tuned to the optical system of the zoom stereo microscope, to maximize the visibility of even minute characteristics.

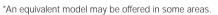
The new LED integrated reflected/transmitted illumination stand

The world's first universal reflected/transmitted light LED illumination stand brings together all the advantages of LED technology. It allows the simultaneous use of reflected and transmitted illumination, and can alter their respective intensities continuously and separately by means of convenient dials on the stand. The use of super slim, high-brightness LED's successfully integrates transmitted illumination in a very slim base just 25mm thick that allows easy specimen access and manipulation. The complete microscope including LED integrated stand is extremely lightweight, compact and easy to carry.

Universal reflected illumination systems

Fiber optic illumination systems offer the highest illumination quality and flexibility. OLYMPUS offers a compact, cost effective 22W light source (SZ2-LGB) and a 100W light source (LG-PS2*) for professional use. Homogeneous illumination can be achieved by a ring light. For special contrast effects on free

form 3D shapes, OLYMPUS offers a choice of single and double self supporting spot illumination fiber guides and precisely adjustable flexible fiber guides.





Homogeneous light

Transmitted light illumination systems

For all transparent materials as well as for background illumination for the inspection of through holes, the OLYMPUS choice of illumination stands ranges from simple brightfield/simple oblique (SZX2-ILLK) up to brightfield/ darkfield (SZX2-ILLD) and brightfield/

oblique Koehler (SZX2-ILLB) illumination models. Also available is a brightfield/oblique illumination attachment (SZ2-ILA) that can accommodate various light sources including a 100W halogen lamp housing.

Special Illumination Techniques Looking into holes

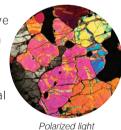
OLYMPUS offers effective coaxial illuminators for the SZX7 (SZX2-ILLC10) and the SZ61/SZ51 (SZ2-ILLC) which direct the light through the microscope's optical axis onto the specimen.

Mirrored Surfaces

The illumination of highly reflective specimens needs special techniques in order to avoid disturbing light reflections. For spot and ring light illuminators as well as for coaxial



Darkfield light



illuminators, OLYMPUS offers dedicated polarizing equipment which eliminates such light effects (LG-R66PL for ring light illumination). Making stress in transparent materials visible

Also available are simple and advanced transmitted illumination stands with polarizing equipment (SZX2-AN, SZX-POL and SZ-POL2) for the efficient evaluation of tensions in transparent materials like plastic and glass. Their ease of use allows continuous, reliable production control of processes like injection molding.







Flexible angle of LED light source Homogeneous illuminations fiber optic systems



Intelligent LED ring illumination



White LED illumination unit





Single illuminations fiber optic systems



The transmitted/reflected integrated LED illumination stand's slim body and easy operation enables quick observations in a comfortable posture.

Transmitted and coaxial illuminations with fiber optic systems



High power fiber optic illumination system

Digital imaging



Ultra-high Resolution Digital Camera DP72

Thanks to its high-speed hardware technology, images equivalent to 12.8 million pixels can be captured in about 2.5 seconds. The live images is displayed in 15 fps (frames per second) at maximum. The camera's high sensitivity (ISO1600) clearly detects slight differences of color and microscopic defects. (available in autumn 2008)

Digital Camera DP25

This outstanding, high-resolution 5 megapixel color CCD camera includes accurate color reproduction and advanced color control among a wealth of features. It's also versatile enough for work with all types of samples. Includes image acquisition software analySIS getIT for a PC controller.

SZX7 in combination with DP72 digital camera system



DP20 digital camera mounting on the SZ61

High-speed, Compact Digital Camera DP20

Image display, storage, and simple measurement can be done from a compact, palm-size control unit. The outstanding operation with the functional key layout allows starting up quickly and continuously shoot images at 1 second intervals. The UXGA (1600 x 1200 pixel) compatible monitor enables realtime 15 fps display, and the system is also ideal for highresolution monitoring applications without a PC.

Wide range of accessories to meet the needs of every application

Easy mounting with other equipment (bonder and prober arms) The SZX7, SZ61 and SZ51 are designed to be integrated into process equipment. OLYMPUS offers various bonder and prober arms for all common brands.



① B & L style bonder arm / SZ2-STB1 ② Bonder arm / SZ2-STB2 ③ Bonder arm / SZ2-STB3 ④ Prober arm / SZ2-STP ⑤ Arm for SZX stand /SZ2-STS ⑥ Adapter for B & L bonder arm / SZ-BLAD



Ergonomic low positioned focus handle and more stage adapters

With the focusing unit SZ2-FO, focus adjustment can be done with the hands resting on the work surface. The action of focusing requires minimal force as the microscope zoom body does not need to be moved. This allows prolonged work on difficult samples without fatigue. There are also more stage

adapters including the cup stage SZH-SC which gives the specimen a slant angle till 30 degrees from the level.



S) 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.



SZX7+SZ2-STU2



SZ61+SZ2-STU3

■ SZX7 specifications

Item		Specifications							
Zoom micros SZX-ZB7	cope body	Zoom drive: Horizontal knob system Click stop for each zoom magnification: O Zoom ratio values: 7:1 (0.8x to 5.6) Zoom magnification indication: 0.8, 1, 1.2 Objective lens mouting: Screw mounting i Lead-free materials used	5, 1.6, 2, 2.5, 3.2, 4, 5						
		Aperture iris diaphragm control: The AS unit (SZX-AS) is mountable							
Observation t	tube	SZX-BI45	SZX-TBI /	SZX2-TTR	SZX2-TR30				
SZX-BI45 SZX-TBI SZX2-TTR SZX2-TR30		Binocular tube Tilting binocular (tr View inclination angle 45° Lead-free materials used		binocular (trinocular) tube iliting angle 5° to 45° Light path selec (Binocular 100% Video 50%/Bino					
		Interpupillary distance adjustable range: 5. Eyepiece clamping knob provided	Interpupillary distance adjustable range: 52 to 76 mm Eyepiece clamping knob provided						
Stand		SZ2-ST			SZ2-ILST				
SZ2-ST		Standard stand		LED reflected/transmitted illumination stand					
SZ2-ILST	Frame installation	Mounting diameter 76mm							
	Focusing adjustment		nsion adjustment roke 120mm	adjustment 20mm					
	Stage plate	SZ2-SPBW (Black & white) SP-C (Glass clear transparen	t)	The dedicated glass plate in 100mm dia. included					
	Light source	Fiber optic illumination syster SZ2-LGB mountable (option Transmitted light illuminatior attachment (SZ2-ILA) mountable () 1	Transmitted illumination: LED Reflected illumination: LED Average LED life span: 6000 hrs. Input rating: 100-120V/200-240V∿0.15/0.1A, 50/60Hz					
Objective len	s	Model		Working distance					
*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 SZX-ACH1.25x-2 DFPL1.5x-4 DFPL2x-4 All objective lenses: lead-free m	aterials	171mm 116mm 81mm 90mm 60mm 68mm 45.5mm 33.5mm					
Eyepeices		"Comfort <i>View</i> " WHSZ series All eyepieces: lead-free materials							
Weight	Configuration 1	4,360g	5,40	400g 5,200g					
-	Configuration 2	5,160g	6,20)0a	6,000g				

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

■ SZ61/SZ51 specifications

Item		Specifications					
Microscope body		SZ61	SZ61-60	SZ6	1TR	SZ51	SZ51-60
SZ61	Magnification		0.8x to 4x				
SZ61-60 SZ61TR	Zoom ratio		5: 1				
SZ51	Working distance		nm				
SZ51-60	Tube inclination angle	45°	60°		45°		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 materials used					
Auxilliary objective le	ens	Mounting by screwing into the thread at the bottom of frame (M48 thread x0.75)					
Eyepiece		"Comfort View" WHSZ series Lead-free materials used					
Stand		SZ2-ST				SZ2-ILST	
SZ2-ST		Standard stand LE			LED refle	ected/transmitted ill	lumination stand
SZ2-ILST	Frame installation		N	neter: 76mm			
	Focusing adjustment		F	ocusing stro	troke: 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)			Ave	ransmitted illuminat Reflected illuminatio erage LED life span ut rating: 100-120V ~0.15/0.1A, 50/	on: LED : 6000 hrs. //200-240V
Weight	Zoom body only	1,3	300g	1,50	1,500g 1,300g		00g
	Configuration 3	3,520g 3,72		3,72	0g	3,5	20g

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

■ "Comfort View" WHSZ eyepiece

		5 1			
	F.N.	Diopter adjustment	Reticle	Focal magnification	
WHSZ10x	22	—	N.A.	—	110ALK0.3x
WHSZ20x	12.5	—	N.A.	—	110ALK0.4x
WHSZ10x-H	22	-8-+5	Yes*2	_	110AL0.5x
WHSZ15x-H	16	-8-+5	Yes*2	_	110AL0.62x*3
WHSZ20x-H	12.5	-8-+5	Yes*2	1.3x	110AL0.75x
WHSZ30x-H	7	-8-+5	Yes*2	2x	110AL1.5x
^{*2} Applicable reticle	size: 24mi	m diameter, t1.5			110AL2x

SZX7 optical performance

Eyepiece	WHSZ10x-H WHSZ10x		WHSZ15x-H		WHSZ20X-H WHSZ20x		WHSZ30x-H	
F.N.	22		16		12.5		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

■ SZ61/SZ51 optical performance

Microscope Body	Zoom magnification	WHSZ10x-H WHSZ10x		WHSZ15x-H		WHSZ WHS		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)
	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
SZ61	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
-	0.8x	8	27.5	12	20	16	15.6	24	8.8
	1x	10	22	15	16	20	12.5	30	7.0
SZ51	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

Fiber optic illumination system

Item		Specifications	Specifications						
Type of fiber optic		SZ2-LGR	SZ2-LGDI	SZ2-LGDF	SZ2-LGSI	SZ2-LGSF			
Type of illumination	method	Homogenous	Double spot	Double spot	Single spot Single spot				
Tube Type Flexible		Interlocked (self supporting)	Flexible	Interlocked (self supporting)	Flexible				
	Length	800mm	500mm	400mm	500mm	400mm			
Fiber	Туре		Multi-component LB56N equivalent, 50mm diameter						
	N.A.	0.56							
Bundle diameter	Input end	8mm	5.65mm	5.65mm	4mm	4mm			
	Output end	70 x 0.22t mm	4mm	4mm	4mm	4mm			
Minimum bending radius		30mm	65mm	30mm	65mm	30mm			

Compact halogen light source SZ2-LGB

Item	Specifications	Item	Specifications
Dimensions and weight	90(W) x 153 (H) x 100(D) mm, 600g (AC adapter 200g)	Features	4-part LED ring illumination
Rated voltage	AC adapter: input/100-240V/50/60Hz, output/ 12VDC2A		4-part independent ON/OFF available
Power consumption	22W	Illumination	Operation modes : rotary, mirror ESD compatible, Clean class 1
Bulb type	12V22W halogen bulb with mirror		
Bulb model	12V22WHAL (Philips JCR12V22WA/3)	Light source	17-step light intensity adjustable AC100-240V
Average life span of bulb	2000 hours (STEP1, Min.), 580 hours (STEP2, Middle), 100 hours (STEP3, Max.)	Others	SZX-LGR66/SZ-LGR66 adapters are required for SZX7/SZ61 respectively
Light intensity adjustment	Voltage adjustment (3 steps)		
Applicable stand	SZ2-ST		

■ Auxiliary objective lens for SZ61/SZ51

*3Upon special order basis

■ LED ring illumination SZX2-ILR66

