OLYMPUS

Zoom Stereomicroscope

SZ61/SZ51

MACROSEARCH
YOUR SINGLE SOURCE OF PATHOLOGY AND MICROSCOPY

For Life Sciences

User Comfort is Essential for Consistent, Accurate Results

User comfort is a priority for Olympus, and the SZ61 and SZ51 microscopes set a new standard. The smoothly contoured finished, eyepiece, and the accessible, responsive controls make the microscopes easier and more comfortable to use.

The compact design is facilitated by the microscope's Greenough optical system, which delivers good flatness and ample depth of field along with clarity, detail, good color rendering, and small distortion. Dependable, high-performance optics enable consistent, accurate results while ergonomic features make long-duration tasks easier and less demanding to perform.

The SZ61/SZ51 microscopes deliver the comfort and functionality that are critical for modern biological microscope applications.

SZ51-60

SZ51

SZ61

SZ61TR

SZ61-60

High-performance optics in a compact, comfortable design

The microscopes' improved Greenough optical system enable the SZ61 and SZ51 microscopes to successfully meet the demand for a variety of observation and documentation options in a compact design. Clear, sharp image reproduction is matched by ergonomic design elements that maximize comfort and ease of use.

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

High 6.1:1 zoom ratio

The SZ61 microscope's magnification range extends from 6.7× through 45× (using 10× eyepieces), with a zoom ratio of 6.7:1. The advanced optical system enables quick, comfortable observations at appropriate magnification. The SZ51 provides a magnification range from 8× through 40× (using 10× eyepieces), with a zoom ratio of 5:1.

Outstanding depth of field and flatness

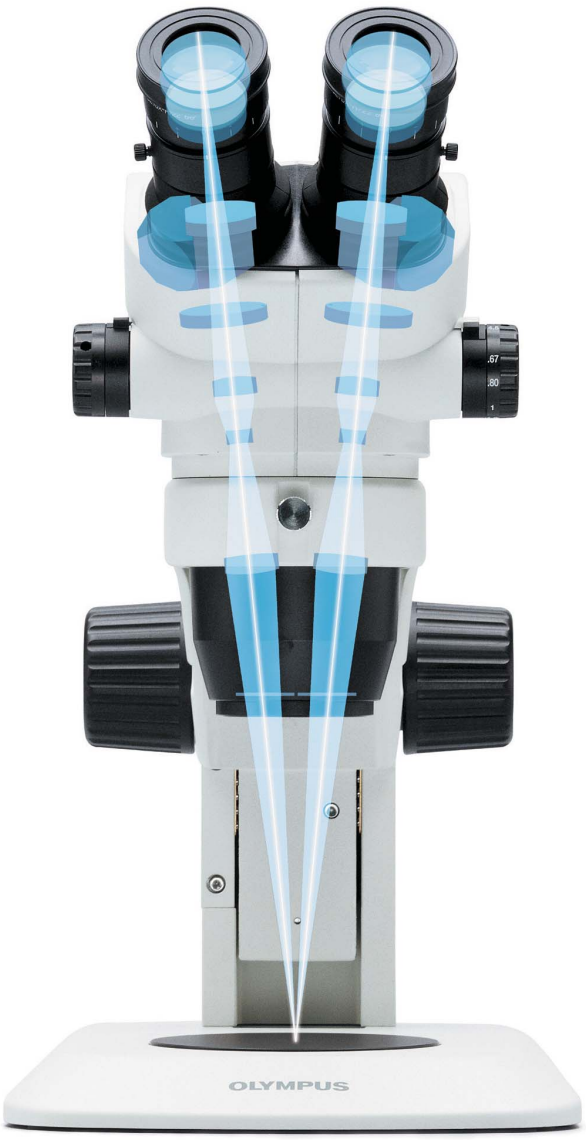
The 10-degree angle of convergence in the Greenough optical system produces excellent image flatness with a large depth of field.

High-fidelity color reproduction

Carefully selected lens surface coatings and glass materials throughout the optical system make it possible to observe and document specimens in their original, authentic colors.

Sharp, high-contrast images

High-contrast images and field flatness help achieve accurate reproduction and documentation of original specimen shapes.



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 , so you can easily attach 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.

SZ61TR

SZ51

The right accessory for every application

DP22 digital camera

The DP22 stand-alone digital camera enables easy observation, focusing, framing, and saving while enabling smooth, live display of high-definition images for professional-looking presentations. The dedicated control box provides smooth and intuitive operation using a touch screen monitor or a mouse (no PC required).

*DP22 digital camera is not for clinical diagnostic use.

SZ61TR+DP22

Various universal stands

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

SZ61+SZ2-STU2

SZ61+SZ2-STU3

Wide range of auxiliary objectives and eyepieces

Auxiliary objectives enable you to make observations at the suitable working distance (W.D.) for a variety of applications. W.D. can be changed between 250 mm–350 mm (0.3× objective) and 180 mm–250 mm (0.4× objective). Eyepieces are available ranging from 10× to 30× to optimize system magnification.

Auxiliary Objectives

Eyepieces

Choose the right illuminator for your work

LED illuminator stand / SZ2-ILST

The LED stand features a thin design to maintain a low sample position and sample positions low and to optimize operability. Simultaneous transmitted and reflected light are available on this stand. LED light offers both a long lifetime and consistent 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. A tiltable mirror provides direct and oblique illumination for low-contrast specimens. Available LED light sources (SZ2-CLS or BX3M-LEDT) provide the necessary power for a variety of illumination needs.

Choice of Your Suitable Contrast and Observation Method / SZX2-ILLTQ/SZX2-ILLTS

With a slim 41.5 mm (1.6 in.) design that is approximately half the thickness of previous halogen lamp 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 shutter with a simple turn. A one position LED illumination base is also an option (SZX2-ILLTS). This makes the SZ2 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 lifetime of over 60,000 hours significantly reduces operation costs.

	Product	Observation Methods and Contrasts
①	SZX2-CBFL	Brightfield, low-contrast
②	SZX2-CBF	Brightfield, standard
③	SZX2-CBFH	Brightfield, high-contrast
④	SZX2-COBL	Oblique, low-contrast
⑤	SZX2-COB	Oblique, standard
⑥	SZX2-COBH	Oblique, high-contrast
⑦	SZX2-CSH	Shade plate
⑧	SZX2-CDF	Darkfield
⑨	SZX2-CPO	Polarization plate

Flexible light guide / SZ2-CLGSF

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

Dual interlock light guide / SZ2-CLGDI

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

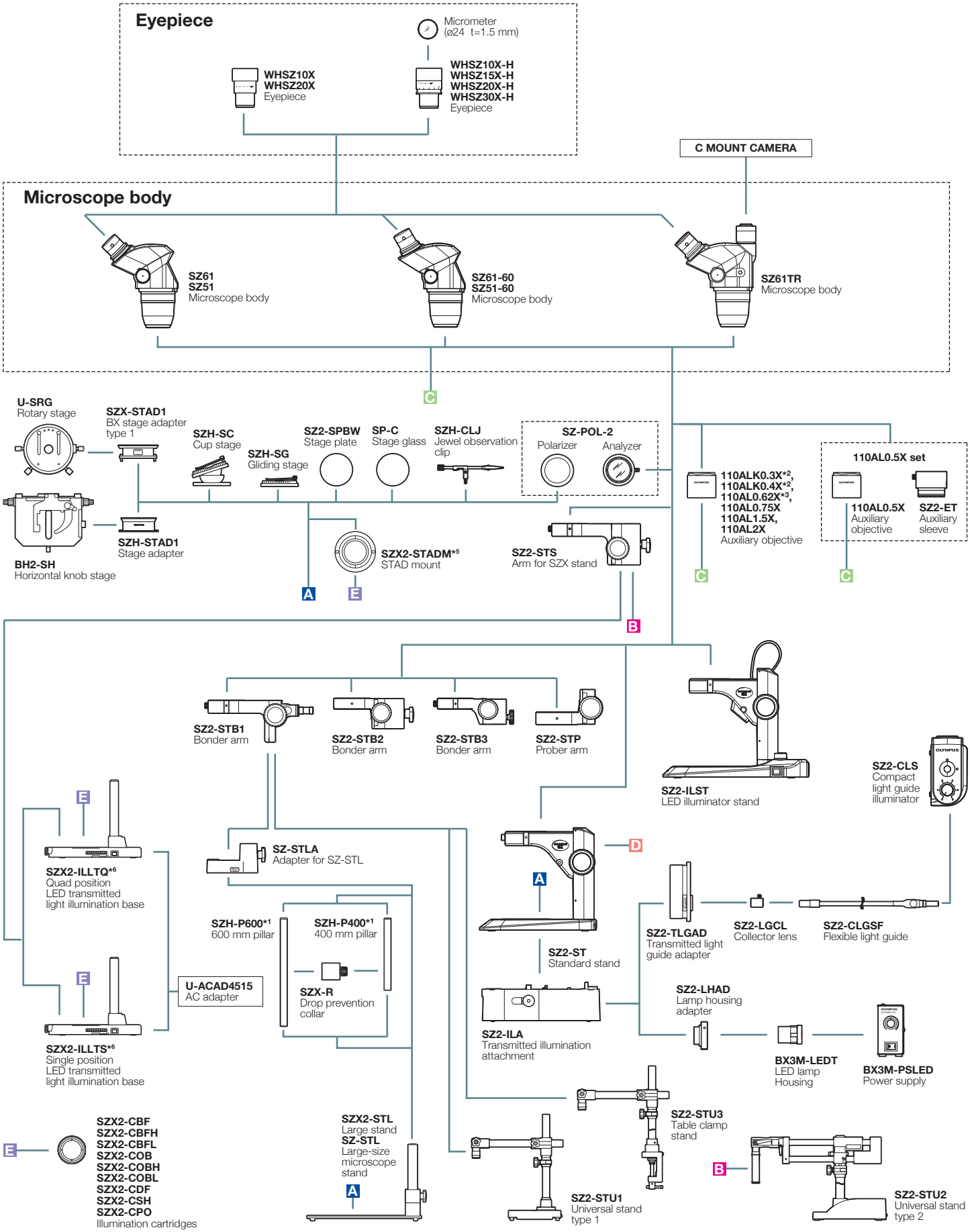
Six-point ring light guide / SZ2-CLGR

Used with the SZ2-CLS illumination system, this ring light guide provides bright and uniform images.

Coaxial reflected light illuminator / SZ2-ILLC

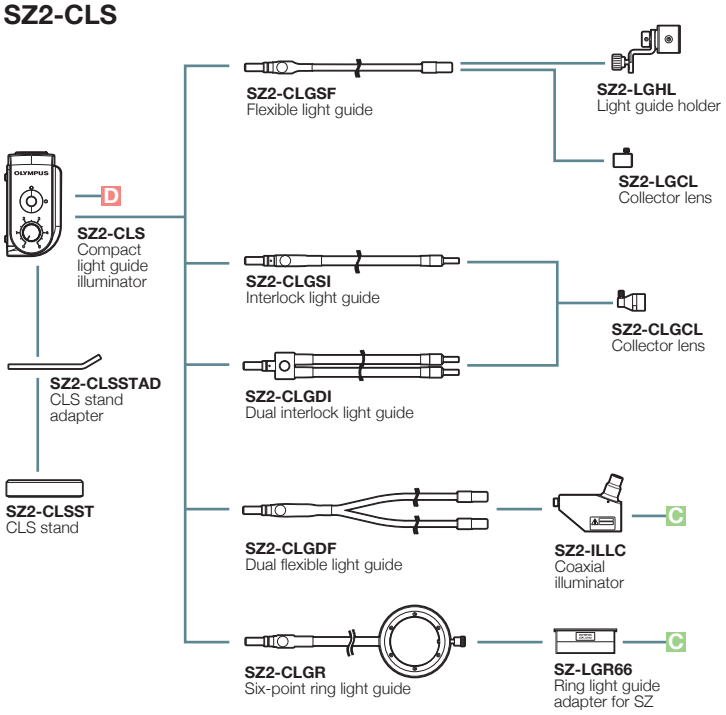
It combines a polarizer and a 1/4λ plate, making it easier to view samples that are difficult to examine under oblique reflected light illumination.

■ SZ61/SZ51 system diagram

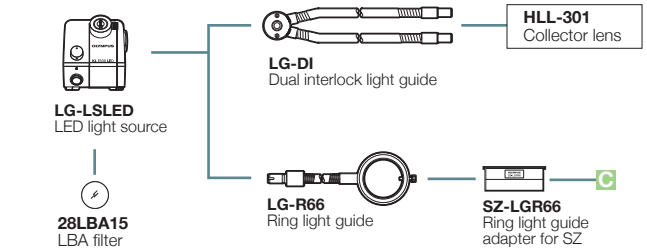


*1 SZH-P400 and SZH-P600 can be attached to the transmitted light Illuminators. *2 For information about configurable illumination base or stand, contact your nearest Olympus dealer.
*3 Made to order. *4 Not available in some areas. *5 SZX2-STADM cannot be combined with SZ2-SPBW, SP-C and SZ-POL-2. *6 SZX2-ILLTQ/ILLTS cannot be combined with SZH-CLJ.

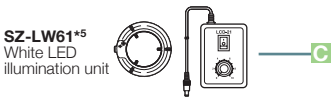
SZ2-CLS



LG-LSLED



LED ring illumination

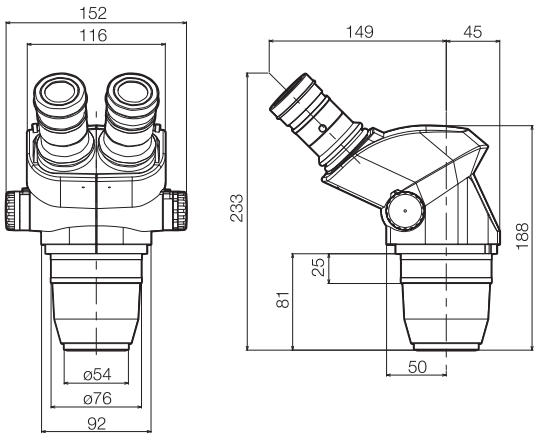


*5 SZ-LW61 cannot be combined with SZ2-ILST.

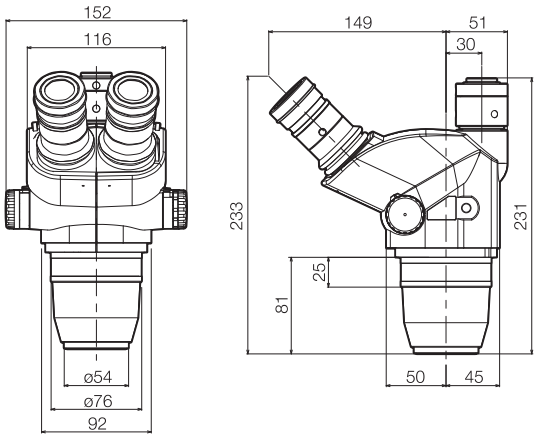
SZ61/SZ51 dimensions

(Unit: mm)

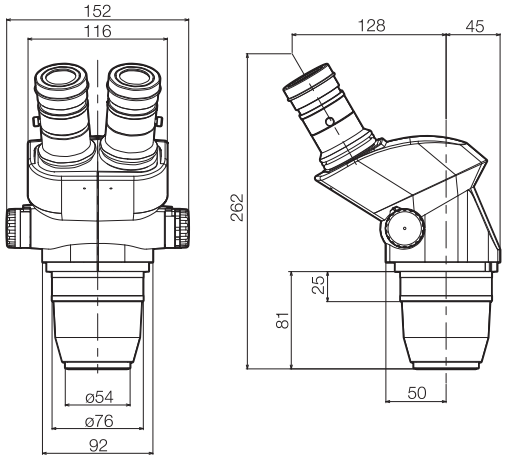
SZ61 / SZ51



SZ61TR



SZ61-60 / SZ51-60



■ SZ61/SZ51 specifications

Item		Specifications				
Microscope body		**SZ61**	**SZ61-60**	**SZ61TR**	**SZ51**	**SZ51-60**
SZ61 **SZ61-60** **SZ61TR** **SZ51** **SZ51-60**	**Magnification**	0.67X to 4.5X			0.8X to 4X	
	Zoom ratio	6.7:1			5:1	
	Working distance	110 mm				
	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				
Auxiliary objective		Mount by screwing into the thread at the bottom of frame (M48 thread X0.75)				
Eyepiece		WHSZ series Lead-free				
Stand		**SZ2-ST**		**SZ2-ILST**		
SZ2-ST **SZ2-ILST**		Standard stand		LED reflected/transmitted illumination stand		
	Frame installation	Mounting diameter: 76 mm				
	Focusing adjustment	Focusing stroke: 120 mm				
	Stage plate	SZ2-SPBW (Black & white for anti-ESD) SP-C (Clear glass plate)		100 mm diameter dedicated glass plate is included		
	Light source	Compact light guide illuminator SZ2-CLS 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 ~0.15/0.1 A; 50/60 Hz		
Weight	**Zoom body only**	1,300 g (2.9 lb)		1,500 g (3.3 lb)	1,300 g (2.9 lb)	
	Configuration 3	3,520 g (7.8 lb)		3,720 g (8.2 lb)	3,520 g (7.8 lb)	

Configuration: 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	
		FN 22		FN 16		FN 12.5		FN 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
	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
	2X	20	11	30	8	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	80	3.1	120	1.8

No auxiliary objective is attached

■ Auxiliary objective for SZ61/SZ51

	Working distance (mm)
110ALK0.3X	250 – 350
110ALK0.4X	180 – 250
110AL0.5X	200
110AL0.62X*1	160
110AL0.75X	130
110AL1.5X	61
110AL2X	38

*1 Made to order

■ WHSZ eyepiece

	FN	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

*2 Applicable reticle size: 24 mm diameter, t1.5

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Printed in Japan M1623E-052019