

OLYMPUS[®]

INSTRUCTIONS

SZ2-ILLC

COAXIAL ILLUMINATOR

This instruction manual is for the Olympus SZ2-ILLC Coaxial Illuminator. To ensure the safety, obtain optimum performance and to familiarize yourself fully with the use of this equipment, we recommend that you study this manual thoroughly before operating the system.
Retain this instruction manual in an easily accessible place near the work desk for future reference.



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IMPORTANT – Be sure to read this chapter for safe use of the equipment. –

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IMPORTANT

The coaxial illuminator enables coaxial reflected light observation when it is mounted at the bottom of an SZ2 series microscope.



SAFETY PRECAUTIONS

This unit can be used in combination with only the SZ2-LGB or LG-PS2 light guide illuminator.





For safety, use only one of the lamp bulbs designated in the following table.

For details, refer to the “ SAFETY PRECAUTIONS” in the instruction manual for the illuminator to be used.

illuminator	Lamp Bulb	Specifications
SZ2-LGB	12V22WHAL (JCR12V22WA/3)	Halogen bulb (with mirror), mfd. by PHILIPS, average life 100 hours
LG-PS2	JCR12V-100WB	Halogen bulb (with mirror), mfd. by USHIO, average life 1000 hours



Safety Symbols

The following symbols are found on the unit. Study the meaning of the symbols and always use the equipment in the safest possible manner.

Symbol	Explanation
	Indicates that the surface becomes hot, and should not be touched with bare hands.
	Before use, carefully read the instruction manual. Improper use could result in personal injury to the user and/or damage to the equipment.
	Indicates that the main switch is OFF.
	Protective grounding, which can be used only by the Olympus service personnel for incorporating grounding in machines. Do not use this grounding for other purpose than the above. (LG-PS2 only)

Warnings

Warning engravings are placed at parts where special precaution is required when handling and using the unit. Always heed the warnings.

Warning engraving position of the SZ2-LGB	Lamp housing (Left side panel)	 [High temperature warning]
Warning engraving position of the LG-PS2	Light source (Top and front panels)	 [High temperature warning]

1 Getting Ready

1. The coaxial illuminator is a precision instrument. Handle it with care and avoid subjecting it to sudden or severe impact.
2. Do not use the coaxial illuminator where it is subjected to direct sunlight, high temperature and humidity, dust or vibrations.
3. Applicable microscope bodies:
 - SZ2 series (SZ51, SZ51-60, SZ61, SZ61-60, SZ61TR)
4. Applicable stands and arms used with microscopes for equipment mounting
 - Standard stands: SZ2-ST (for SZ2 microscope bodies)
 - System-mounting focusing arms: SZ2-STS, SZ2-STB1
5. Applicable light guides
 - Light guides: SZ2-LGDF, LG-DF
6. Effective illumination area
Zoom magnification of 2X or more when the 10X eyepieces are used
(provided that no auxiliary objective is used).
7. Due to the mounting method of the coaxial illuminator, the WD (Working Distance) is reduced by 50 mm and the resolution tends to be degraded under high zoom magnifications.

2 Maintenance and Storage

1. To clean the lenses and other glass components, simply blow dirty away using a commercially available blower and wipe gently using a piece of cleaning paper (or clean gauze).

If a lens is stained with fingerprints or oil smudges, wipe it gauze slightly moistened with commercially available absolute alcohol.

▲ Since the absolute alcohol is highly flammable, it must be handled carefully.

Be sure to keep it away from open flames or potential sources of electrical sparks — for example, electrical equipment that is being switched on or off.

Also remember to always use it only in a well-ventilated room.

★ To clean the half mirror inside the coaxial illuminator, simply remove dust and dirt with a blower, etc. If the half mirror is still dirty after blowing, please contact Olympus.

2. Do not attempt to use organic solvents to clean the parts other than the glass components. To clean them, use a lint-free, soft cloth slightly moistened with a diluted neutral detergent.
3. Do not disassemble any part of the equipment as this could result in malfunction or reduced performance.

3 Caution

If the coaxial illuminator is used in a manner not specified by this manual, the safety of the user may be imperiled. In addition, the equipment may also be damaged. Always use the equipment as outlined in this instruction manual.

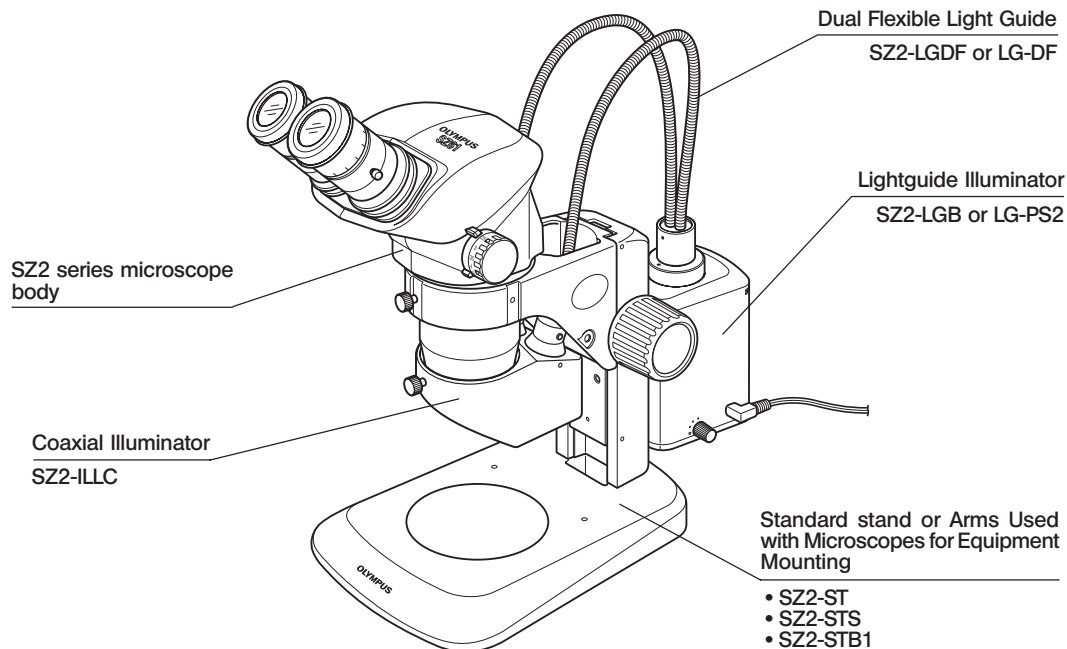
The following symbols are used to set off text in this instruction manual.

▲: Indicates that failure to follow the instructions in the warning could result in bodily harm to the user and/or damage to equipment (including objects in the vicinity of the equipment).

★: Indicates that failure to follow the instructions could result in damage to equipment.

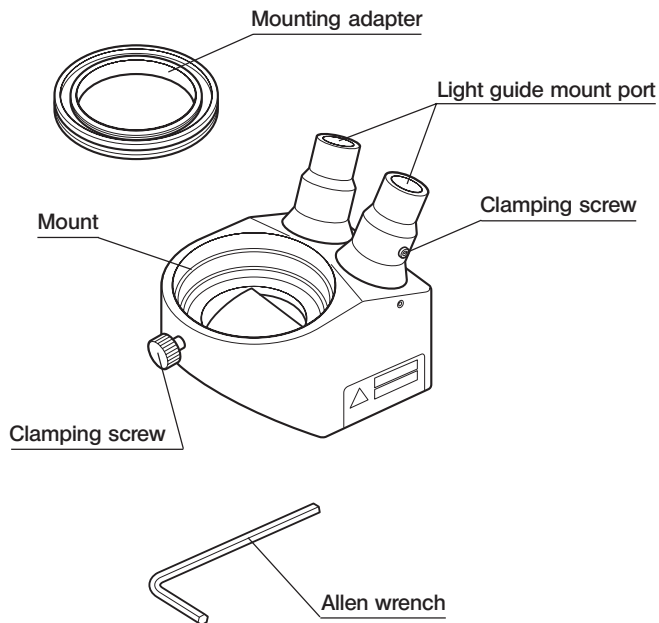
◎: Indicates commentary (for ease of operation and maintenance).

1 NOMENCLATURE

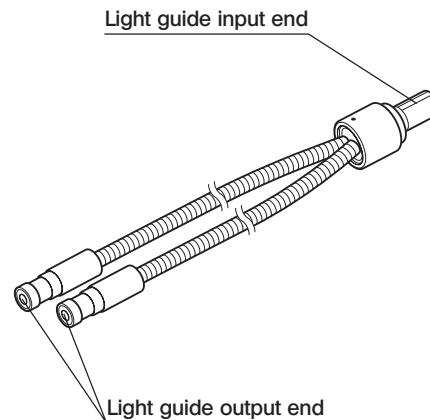


2 CONTROLS

Coaxial Illuminator SZ2-ILLC

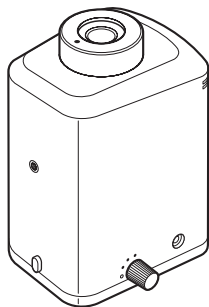


Dual Flexible Light Guide SZ2-LGDF or LG-DF



**Lightguide Illuminator
SZ2-LGB**

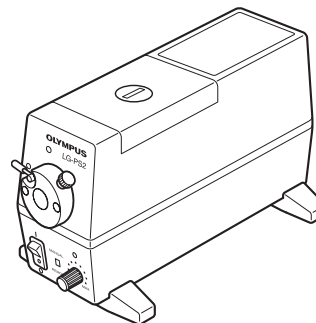
© Refer to the separate instruction manual.



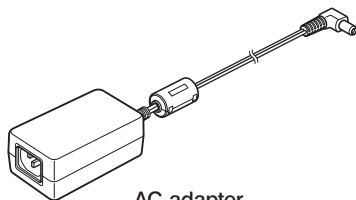
Lightguide illuminator

**Light Source
LG-PS2**

© Refer to the separate instruction manual.



Light source



AC adapter

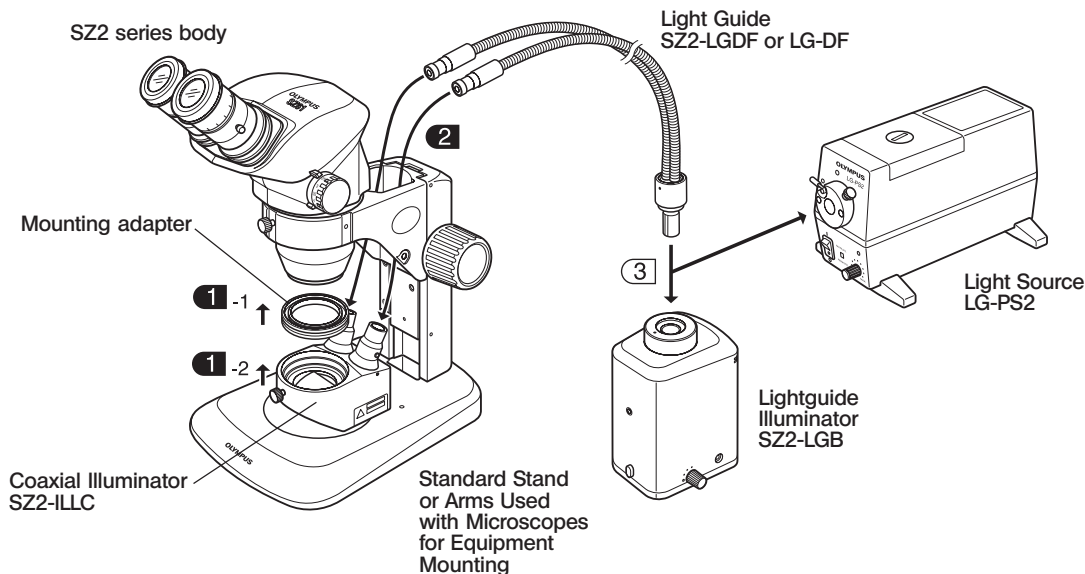
3 ASSEMBLY

The diagram below shows the sequence of assembly of the various modules. The numbers indicate the order of assembly.

Assembly steps enclosed in **■** will be detailed on the subsequent pages.

★ **When assembling the unit, make sure that all parts are free of dust and dirt, and avoid scratching any parts or touching glass surfaces.**

◎ To obtain efficient illumination, it is recommended to use one of the specific combinations of the light guide and illuminator, that is, use the SZ2-LGB when using the SZ2-LGDF or use the LG-PS2 when using the LG-DF.



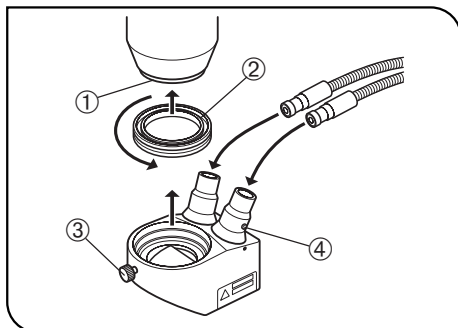


Fig. 1

1 Installing the Coaxial Illuminator

(Fig. 1)

★ If a auxiliary objective is attached, remove it.

1. Screw the mount adapter ② fully into the bottom of the SZ2 series microscope body ① by turning the mount adapter in the direction of the arrow.
2. Loosen the clamping screw ③ of the SZ2-ILLC coaxial illuminator, fit the illuminator into the mount adapter ② and tighten the clamping screw again.

★ Make sure that the SZ2-ILLC is installed correctly in the frontward orientation. Otherwise, it would be impossible to attach the light guide.

2 Attaching the Light Guide

(Fig. 1)

1. Using the Allen wrench provided with the SZ2-ILLC, loosen the clamping screw ④ of the light guide mount port and insert the output end of the light guide all the way into it.
2. Tighten the clamping screw ④.

4

COAXIAL REFLECTED LIGHT OBSERVATION

◎ The applicable observation magnifications are zoom magnifications of 2X or more when the 10X eyepieces are used.

1. Place a specimen on the stage plate.
2. Set the main switch of the illuminator to ON and adjust the brightness.
3. Look through the eyepieces and rotate the focus adjustment knob to bring the specimen into focus.
4. Observe the specimen under optimum brightness.

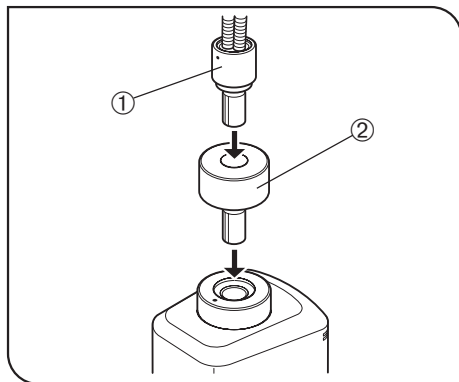


Fig. 2

◎ Brightness adjustment of the SZ2-LGB illuminator

A specimen with high reflectivity (mirror surface) may be glaring even when the light intensity control knob of the SZ2-LGB is set to the minimum position. In this case, disconnect the light guide ① once and connect it again via the spacer ② (provided with the SZ2-LGDF) to reduce the glare.

5 TROUBLESHOOTING GUIDE

SZ2-ILLC

Under certain conditions, performance of the unit may be adversely affected by factors other than defects. If problems occur, please review the following list and take remedial action as needed. If you cannot solve the problem after checking the entire list, please contact Olympus.

Problem	Cause	Remedy
Field of view is not evenly illuminated.	The light guide is attached improperly.	Attach it properly.
	The lamp bulb is attached improperly.	Mount it properly.
Color reproduction in the photomicrographs is poor.(LG-PS2 only)	The light intensity control knob of the light source is not set to the maximum position.	Set the light intensity control knob to the maximum position.
	Filters (30.5S-LB80 and 30.5S-LBD) are not mounted (when a daylight type film is used).	Mount the filters (30.5S-LB80 and 30.5S-LBD) on the LG-PS2 light source.

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