

## High Resolution Fluorescence Microscope



**Make of equipment:** Olympus

**Model:** BX 61

**Specification:**

Optical system	UIS2 optical system (infinity-corrected)
Microscope frame	Illumination- Reflected/transmitted, External 12 V 100 W light source, Light preset switch, LED voltage indicator, Reflected/transmitted changeover switch
	Focus- Motorized focusing, Stroke 25 mm, Minimum graduation 0.01 $\mu\text{m}$ ,
	Max. specimen height-
Observation tubes	Widefield- Inverted: binocular, trinocular, tilting binocular; Erect: trinocular, tilting binocular
	Super widefield- Inverted: trinocular; Erect: trinocular, tilting trinocular
Reflected light illumination	BX-RLAA, Motorized BF/DF changeover , Motorized AS
	Reflected fluorescence- BX-RFAA, Motorized 6 position turret Built-in motorized shutter with FS, AS
Transmitted light	100W halogen, Abbe/long working distance condensers Built-in transmitted light filters
Revolving nosepieces	Motorized sextuple
Stages	Coaxial left(right) handle stage: 76 (X) x 52 (Y) mm, with torque adjustment; Large-size coaxial left (right) handle stage: 100 (X) x 105 (Y) mm, with lock mechanism in Y axis
Dimensions	Approx. 318 (W) x 602 (D) x 541 (H) mm
Weight	Approx. 25.5 kg (Microscope frame 11.4 kg)

**About the equipment:** The BX61 is specially designed to work with laser based autofocus unit. With precise focus and active tracking, users can speed up routine inspections.

Additional settings such as illumination level, lens selection and aperture setting can be set using push buttons on the microscope frame, a keypad or via the PC. A variety of motorized modules including nosepieces and illuminators are available with full flexibility in configuring system.

**Type of analysis possible:** The user can identify the existence of even a minute scratch or flaw down to the 8 nm level--smaller than the resolving power limit of an optical microscope. It is also suitable for live cell imaging, high resolution microscopy, immuno-fluorescence, phenotypic assays and histology.

### **User Instructions:**

1. After the equipment has been used in an observation of a specimen that is accompanied with a potential of infection, clean the parts coming in contact with the specimen to prevent infection. Moving this product is accompanied with the risk of dropping the specimen. Be sure to remove the specimen before moving this product. In case the specimen is damaged by erroneous operation, promptly take the infection prevention measures. The product becomes unstable if its height is increased by an accessory mounted on it. In this case, take anti-toppling measures to prevent the specimen from being dropped when the product topples down.
2. Install the microscope on a sturdy, level table or bench so as not to block the air vents on the underside of the base. Do not place the microscope on a flexible surface, as this could result in blocking the air vents and cause overheating or a fire.
3. If a foreign object is caught during motorized focusing operation, there will be an error in the focusing block and the motorized focusing operation will be suspended.

**Recovery procedure** If there is no error in motorized operation, the caught object can be removed by turning the focusing knob. If there is an error in motorized operation, the focusing knob becomes inoperable. Disassemble the relevant modules to remove the caught object. Replace the relevant modules afterward. Turn off the power and then on again. The system will restart unless there is a malfunction in the motor.

4. To activate temporary stop during focusing operation, turn the focusing knob (or dial) on the microscope frame (in either direction) or press any of the FOCUS control buttons ( , , F/C and ESC) (except during PC communication). When the main switch of the BX-UCB control box is set to “ I ” (ON), the focusing operation starts automatically as part of initialization (this operation consists of temporary lowering and then returning to the original position of the stage). If any of the operations mentioned above is performed, an emergency stop will also occur. In this case, set the main switch to “ ” (OFF) and then “ I ” (ON) again. 2 Designated halogen bulbs: 12V100WHAL (PHILIPS 7724) 12V50WHAL-L (LIFE JC) #The microscope also incorporate a fuse (this should be replaced by the manufacturer or an authorized agent).

5. When lowering the stage by pressing the stage DOWN button @, be careful not to have your hand caught between the bottom of the condenser and the base.
6. The surfaces of the lamp housing on the rear of the microscope will become extremely hot during operation. When installing the microscope, make sure to allow ample free space (10 cm or more) around and in particular above the lamp housing.
7. When installing the microscope, route the power cord away from the lamp housing. Should the power cord come in contact with the hot lamp housing, the power cord could melt and cause electric shock.
8. To avoid potential shock hazards and burns when replacing the light bulb, set the main switch to “ ” (OFF) then disconnect the power cord from the wall outlet in advance. Whenever you replace the bulb during use or right after use, allow the lamp housing and bulb to cool before touching.
9. Always use the power cord provided by Olympus. If no power cord is provided, please select the proper power cord by referring to the section “PROPER SELECTION OF THE POWER SUPPLY CORD” at the end of this instruction manual. If the proper power cord is not used, product safety performance cannot be warranted.
10. Always ensure that the grounding terminal of the microscope and that of the wall outlet are properly connected. If the equipment is not grounded, Olympus can no longer warrant the electrical safety performance of the equipment.
11. Never insert metallic objects into the air vents of the microscope frame as this could result in electrical shock, personal injury and equipment damage.
12. When using the U-FWR motorized filter wheel for reflected light observation, remove the push ring driver from the position where it is attached by magnetism in advance to prevent it from dropping. If the driver drops in a certain place, an electric shock and/or burns may result.