

INSTRUCTIONS

BX3M-PSLED

Power supply for LED

This instruction manual is for the power supply for LED BX3M-PSLED.

To ensure the safety, obtain optimum performance and to familiarize yourself fully with the use of this product, we recommend that you study this manual thoroughly before operating this product, and always keep this manual at hand when operating this product.

Retain this instruction manual in an easily accessible place near the work desk for future reference.

Optical Microscope Accessory

This product is a part of the system product which complies with the CE marking.

Please refer to the instruction manual of your system product for the safety instructions related to the CE marking.



In accordance with European Directive on Waste Electrical and Electronic Equipment, this symbol indicates that the product must not be disposed of as unsorted municipal waste, but should be collected separately.

Refer to your local Olympus distributor in EU for return and/or collection systems available in your country.

NOTE: This product has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the product is operated in a commercial environment. This product generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this product in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC WARNING: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the product.

For Korea only

이 기기는 업무용 환경에서 사용할 목적으로 적합성평가를 받은 기기로서 가정용 환경에서 사용하는 경우 전파간섭의 우려가 있습니다.

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Introduction

The power supply for LED BX3M-PSLED is a control box which is used to control LED light source installed on the microscope.


Contents of instruction manuals


This instruction manual is for power supply for LED BX3M-PSLED. For usage in combination with microscope, refer to the instruction manual for your microscope.

Safety precautions

If the product is used in a manner not specified by this manual, the safety of the user may be imperiled. In addition, the product may also be damaged. Always use the product according to this instruction manual.

The following symbols are used in this instruction manual.

 **CAUTION** : Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.


 **NOTE** : Indicates a potentially hazardous situation which, if not avoided, may result in damage to the product or other property.

 **TIP** : Indicates the useful knowledge or information for use.

CAUTION - Installation of the product -

Install the product on a sturdy, level table or bench.

If you install the product on an unstable table or a tilted table, the product may drop and you may get injured.

 **CAUTION - Electric safety -****Always use the power cord provided by Olympus.**

If the proper AC adapter and the power cord is not used, the electric safety and the EMC (Electro-Magnetic Compatibility) performance of the product cannot be assured.

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.

Always connect the ground terminal.

Connect the ground terminal of the power cord and that of the power outlet. If the product is not grounded, our intended electric safety and EMC performance of the product can not be assured.

Do not use the product in close proximity to the sources of strong electromagnetic radiation.

Proper operation may be interfered. The electromagnetic environment should be evaluated prior to operation of the product.

Remove the power cord in case of emergency.

In case of emergency, be sure to unplug the power cord from the power cord connector on the product or from the wall power outlet. Install the product at the location where you can reach the power cord connector or the wall power outlet at hand to remove the power cord quickly.



CAUTION - Protection of electric shock -

Keep the power cord and cables sufficiently away from the lamp housing.

If the power cord and cables contact a hot area of the lamp housing, they could melt and cause electric shock.



CAUTION - LED (light emitting diode) -

Do not look directly at the light from the LED light source for a long time.

The LED built in the LED lamp house (separately available) is basically eye-safe. However, do not look directly at the light from the LED lamp house for a long time, since it may cause damage to your eyes.


If the laws or regulations for workers health and safety have been established, follow them when using the microscope.

Do not look directly at the light coming out from the objective or the specular reflection light from the specimen.




Do not look directly at the light coming out from the objective for a long time, since it may cause damage to your eyes.

Do not expose your skin to the light coming out from the objective for a long time.

If your skin is exposed to the light coming out from the objective for a long time, you may get burned.

 **CAUTION - Safety symbols -**

The following symbols are placed on the product.
 Study the meaning of the symbols and always use the product in the safest possible manner.

Symbol	Meaning
	Indicates a non-specific general hazard. Follow the cautions given after this symbol or in the instruction manual.
	Indicates that the main switch is ON.
	Indicates that the main switch is OFF.

When caution labels are dirty or peeled off, contact Olympus for replacement or inquiries.

Handling precautions

NOTE

- This product is a precision instrument. Handle it with care and avoid subjecting it to a sudden or severe impact.
- Never disassemble any part of the product. Otherwise, failure could be caused.
- Do not use this product in areas where it may be subjected to direct sunlight, high temperature and/or humidity, dust or vibrations.
(For the conditions of operating environments, see “3 Specifications” on page 9.)
- Before attaching or detaching the LED lamp house (separately available), set the main switch to **○(OFF)**.

Maintenance and storage

1. Wipe the portions with a dry soft cloth.

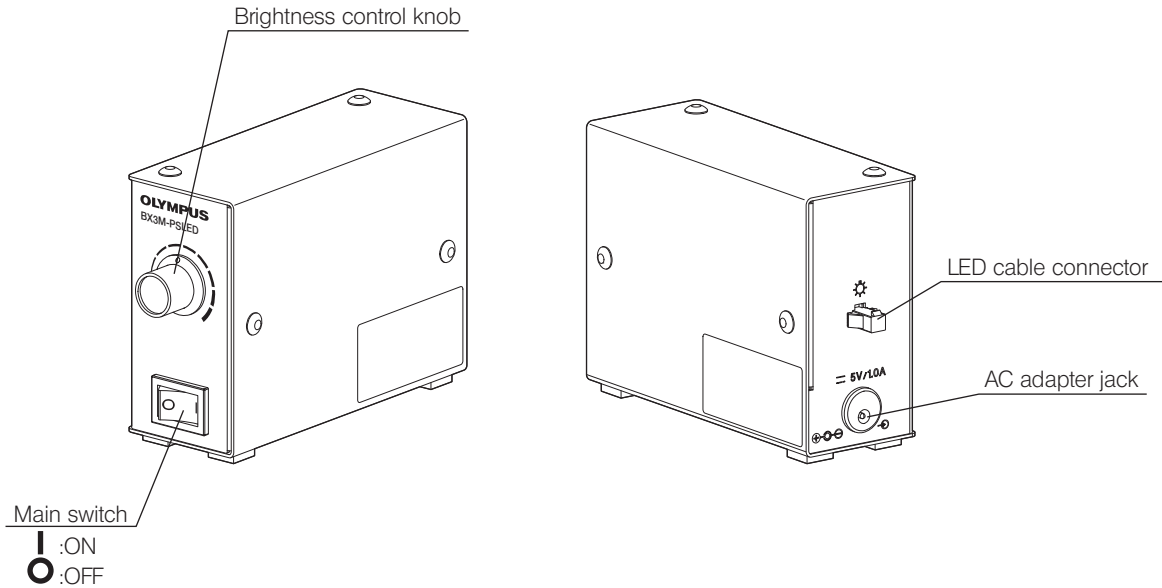
If the dirt cannot be removed by dry-wiping, moisten a soft cloth with diluted neutral detergent and wipe the dirty surface with it.

NOTE

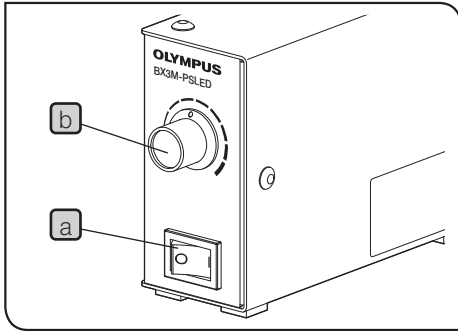
- Do not use the organic solvents because they may deteriorate the coated surface or plastic parts.**
2. Before disposing of this product, be sure to follow the regulations and rules of your local government.

1 Nomenclature of respective portions

As to attaching procedures to the microscope and other units, refer to the instruction manual of dedicated system.



2 Operation procedures






1 Turning ON the main switch

Set the main switch **a** to **I** (ON).

2 Adjusting the brightness

Turn the brightness control knob **b** clockwise to increase the brightness of the illumination.

3 Specifications

Item	Specification
Rating	Main unit: input: 5 V / 2.5 A  AC adapter: input: 100-240 V  50-60 Hz 0.4 A output: 5 V  2.5 A
Power consumption	5.3 W, 172 VA
Cooling system	Natural circulation air cooling
The number of controllable LED system	1 system
Brightness adjustment	Adjustment by the knob Current value of maximum brightness: 700 mA
Dimensions and weight	43(W) x 111(D) x 85(H) mm 360g

Operating environment
<ul style="list-style-type: none"> • Indoor use • Altitude: Max. 2,000 meters • Ambient temperature: 5 to 40 °C (41 to 104 °F) • Maximum relative humidity: 80% for temperatures up to 31 °C (88 °F) (without condensation) In case of over 31 °C (88 °F), the relative humidity is decreased linearly through 70% at 34 °C (93 °F), 60% at 37 °C (99 °F), and to 50% at 40 °C (104 °F). • Supply voltage fluctuations: Not to exceed ±10% of the normal voltage. • Pollution degree 2 (in accordance with IEC60664-1) • Installation/Overvoltage category : II (in accordance with IEC60664-1)

4 Troubleshooting

Depending on how you use, the performance of this power supply for LED may not be exhibited, though they are not failure. If problems occur, please review the following list and take remedial action as needed.

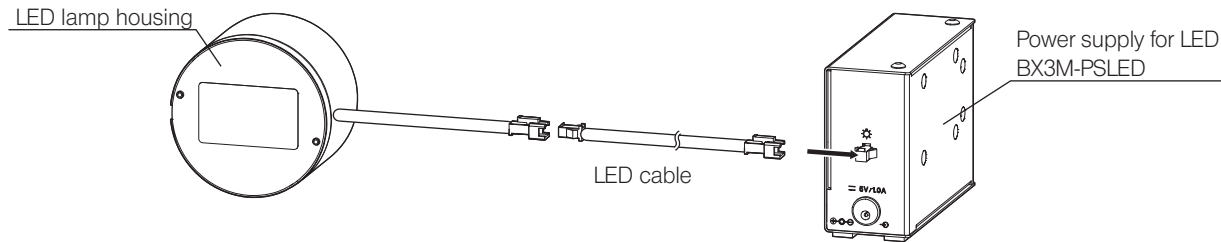
If you cannot improve the phenomena after checking the entire list, please contact Olympus for assistance.

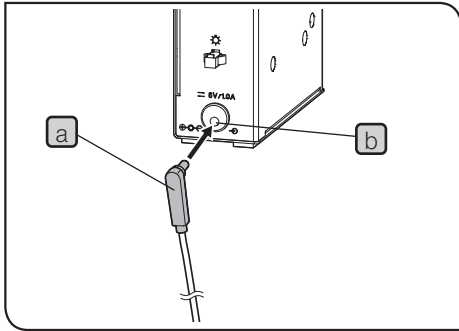
Phenomena	Cause	Remedy	Page
a) The illumination does not light.	Cables are not connected firmly.	Connect them firmly.	11
b) The illumination flashes on and off.			
c) Though the brightness control knob is rotated, the illumination does not become brighter.			

5 Assembly

NOTE

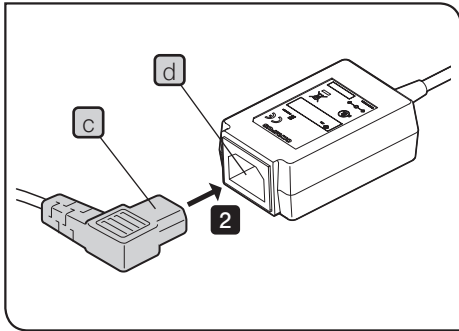
- Before connecting or disconnecting cables, set the main switch to **○(OFF)** and unplug the power cord from the outlet.
- Cables are vulnerable when bent or twisted. Never subject them to excessive force.
- Connect the connectors in the correct orientation paying attention to the shape of the connector.



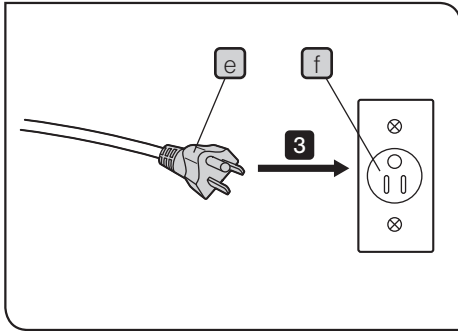


- 1 Insert the AC adapter plug **a** firmly in the AC adapter jack **b** of the power supply for LED.

NOTE When inserting or removing the AC adapter plug, hold the plug and insert straightly.



- 2 Insert the power cord connector **c** in the connector **d** of the AC adapter.



3 Connect the power cord plug **e** to the power outlet **f**.

NOTE

For the safety purpose, connect the power cord plug last.

6 Proper selection of the power supply cord

If no power supply cord is provided, please select the proper power supply cord for the product by referring to “Specifications” and “Certified Cord” below:

Caution : In case you use a non-approved power supply cord for Olympus products, Olympus can no longer warrant the electrical safety of the product.

Specifications

Voltage rating	125 V AC (for 100-120 V AC area) or, 250 V AC (for 220-240 V AC area)
Current rating	6 A minimum
Temperature rating	60 °C minimum
Length	3.05 m maximum
Fittings configuration	Grounding type attachment plug cap. Opposite terminates in molded-on IEC configuration appliance coupling.

Table 1 Certified cord

A power supply cord should be certified by one of the agencies listed in Table 1 , or comprised of cordage marked with an agency marking per Table 1 or marked per Table 2. The fittings are to be marked with at least one of the agencies listed in Table 1. In case you are unable to buy locally the power supply cord which is approved by one of the agencies mentioned in Table 1, please use replacements approved by any other equivalent and authorized agencies in your country.




















Country	Agency	Certification mark	Country	Agency	Certification mark
Argentina	IRAM		Italy	IMQ	
Australia	SAA		Japan	JET, JQA,	
Austria	ÖVE		Netherlands	KEMA	
Belgium	CEBEC		Norway	NEMKO	
Canada	CSA		Spain	AEE	
Denmark	DEMKO		Sweden	SEMKO	
Finland	FEI		Switzerland	SEV	
France	UTE		United Kingdom	ASTA BSI	
Germany	VDE		USA.	UL	
Ireland	NSAI				

Table 2 HAR flexible cord

Approval organization	Printed or embossed harmonization marking (May be located on jacket or insulation of internal wiring)		Alternative marking utilizing black-red-yellow thread (Length of color section in mm)		
			Black	Red	Yellow
Comite Electrotechnique Belge (CEBEC)	CEBEC	<HAR>	10	30	10
Verband Deutscher Elektrotechniker (VDE) e.V. Prüfstelle	<VDE>	<HAR>	30	10	10
Union Technique de l'Electricite' (UTE)	USE	<HAR>	30	10	30
Instituto Italiano del Marchio di Qualita' (IMQ)	IEMMEQU	<HAR>	10	30	50
British Approvals Service for Electric Cables (BASEC)	BASEC	<HAR>	10	10	30
N.V. KEMA	KEMA-KEUR	<HAR>	10	30	30
SEMKO AB Svenska Elektriska Materielkontrollanstalter	SEMKO	<HAR>	10	10	50
Österreichischer Verband für Elektrotechnik (ÖVE)	<ÖVE>	<HAR>	30	10	50
Danmarks Elektriske Materialkontroll (DEMKO)	<DEMKO>	<HAR>	30	10	30

Approval organization	Printed or embossed harmonization marking (May be located on jacket or insulation of internal wiring)		Alternative marking utilizing black-red-yellow thread (Length of color section in mm)		
			Black	Red	Yellow
National Standards Authority of Ireland (NSAI)	⟨NSAI⟩	⟨HAR⟩	30	30	50
Norges Elektriske Materiekkontroll (NEMKO)	NEMKO	⟨HAR⟩	10	10	70
Asociacion Electrotecnica Y Electronica Espanola (AEE)	⟨UNED⟩	⟨HAR⟩	30	10	70
Hellenic Organization for Standardization (ELOT)	ELOT	⟨HAR⟩	30	30	70
Instituto Portages da Qualidade (IPQ)	np	⟨HAR⟩	10	10	90
Schweizerischer Elektro Technischer Verein (SEV)	SEV	⟨HAR⟩	10	30	90
Elektriska Inspektoratet	SETI	⟨HAR⟩	10	30	90

Underwriters Laboratories Inc. (UL)

SV, SVT, SJ or SJT, 3 X 18AWG

Canadian Standards Association (CSA)

SV, SVT, SJ or SJT, 3 X 18AWG

MEMO

This product is manufactured by **EVIDENT CORPORATION** effective as of Apr. 1, 2022.
Please contact our "Service Center" through the following website for any inquiries or issues related to this product.

EVIDENT CORPORATION

6666 Inatomi, Tatsuno-machi, Kamiina-gun, Nagano 399-0495, Japan

(Life science solutions)

Service Center

<https://www.olympus-lifescience.com/support/service/>



(Life science solutions)

Our Website

<https://www.olympus-lifescience.com>



(Industrial solutions)

Service Center

<https://www.olympus-ims.com/service-and-support/service-centers/>



(Industrial solutions)

Our Website

<https://www.olympus-ims.com>



AX9454 02

Issued in March, 2022