

# LE.6400(-OX)

LED source for fluorescence applications



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## 1. INTRODUCTION

LE.6400(-OX) is designed to offer a broad spectrum LED illumination for general use in fluorescence microscopy applications. It fits directly to the microscope as a better and safer alternative to high pressure mercury or metal halide illumination sources. Spectral coverage is from the UV to the red region. It will excite common fluorophores used in hospital and research applications

With a comprehensive range of microscope adapters, the LE.6400(-OX) can be fitted to most current and older microscopes. The result is a safe, convenient illumination system which will last for many years without any additional operating costs

This manual contains all the information required to install and operate your new illumination system. Additional information can be found on our website at [www.euromex.com](http://www.euromex.com)

## 2. SAFETY PRECAUTIONS

While LEDs are a much safer than the mercury and metal halide lamps, precautions should still be taken with this product

This product conforms to the requirements of the Safety Standards as follows:

### EN61010

Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory use

### EN62474

Photo-biological Safety of Lamps and Lamp Systems

When operating or maintaining this product, please observe the following safety precautions at all times. Failure to do so may result in personal injury or damage to other items

1. UV light is emitted from this product. Avoid eye and skin exposure. Never look directly into the light output beam from the LED lamphouse. The emissions could damage the cornea and retina of the eye if the light is observed directly
2. Always ensure that the LED lamphouse is securely attached to the microscope prior to turning on the power. This will minimize the risk of injury and damage
3. If for any reason the light source is to be operated when not attached to a microscope, all personnel should wear eye shielding and clothing to protect the exposed skin
4. Disconnecting the mains supply is achieved by unplugging the power cord from the power supply block. Only plug in the power cable, once the light source is attached to the microscope
5. There are no serviceable parts within the light source. Removing any of the screws and covers will result in the safety of the light source being impaired
6. To clean the exterior of the light source, use a slightly dampened cloth with a simple water/detergent solution only. Avoid the optical surfaces and lenses. Cleaning of optics should only be carried out using optical wipes and fluids

## 3. GETTING STARTED – SYSTEM COMPONENTS

The LE.6400(-OX) Illumination System is supplied with the following components:

- A. Mains cable
- B. Power supply
- C. Lamphouse with LED source
- D. USB Cable
- E. Controller

If any components are missing or appear damaged, please contact Euromex immediately



#### 4. INSTALLATION AND SETUP

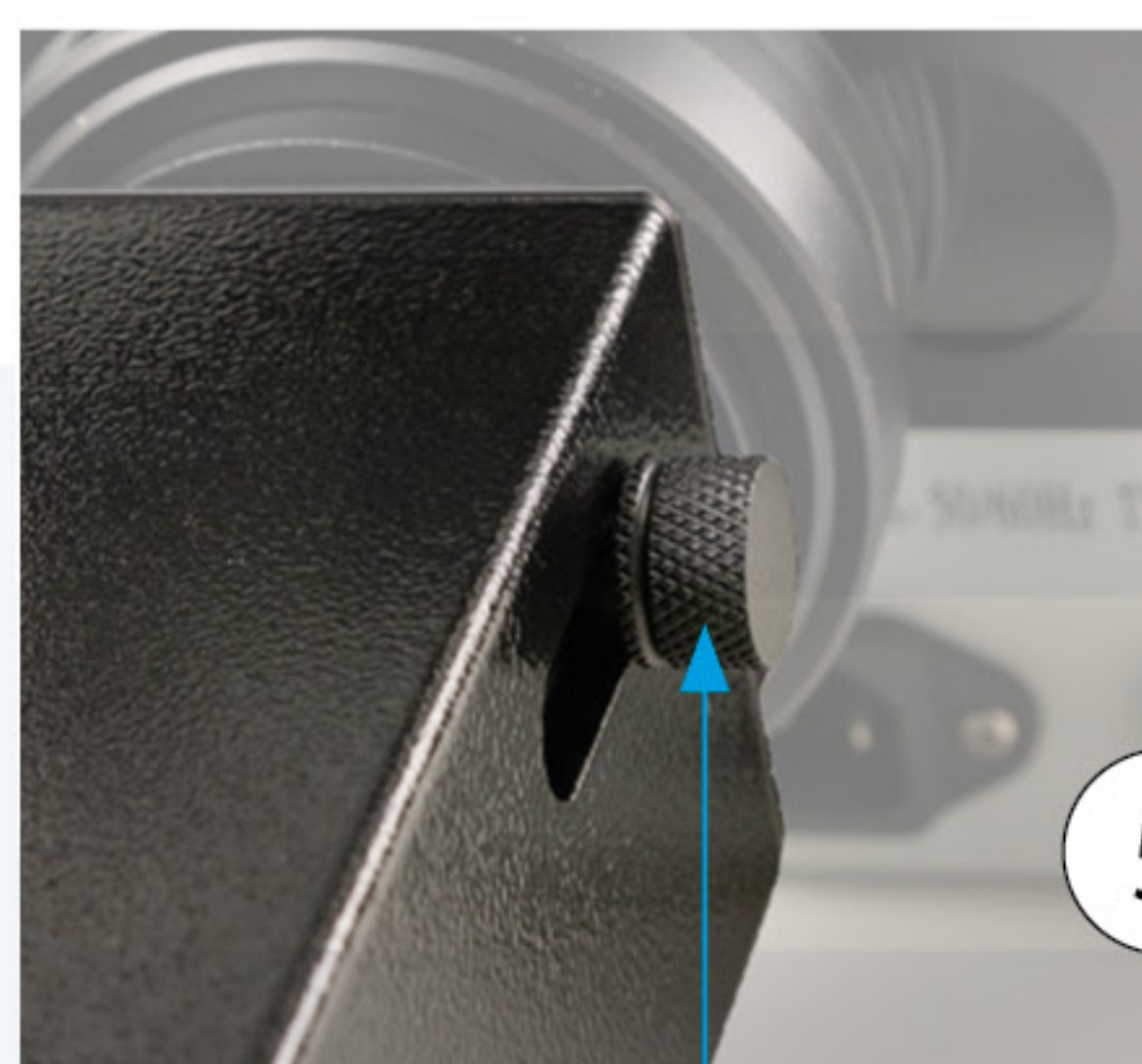
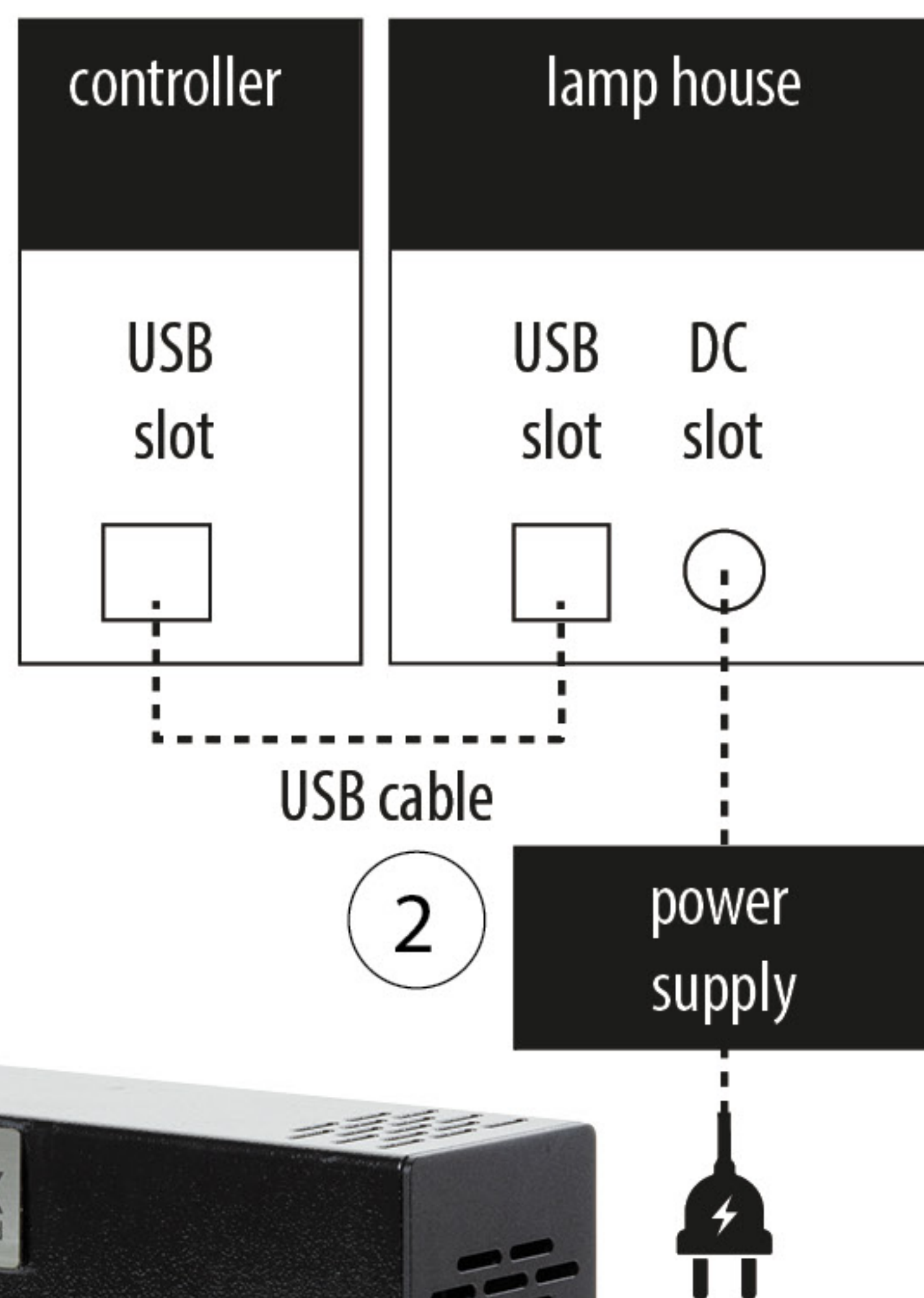
1. Carefully unpack the components from the shipping cartons
2. Connect the USB cable as shown
3. Connect the cables from the power supply as shown. Ensure that the power supply is the one supplied with the product

 **At this stage do not connect the power cable to the power outlet**

4. Attach the LED lamphouse to the epi-fluorescence port of your microscope. The LE.6400(-OX) is supplied with a mounting adapter compatible with the microscope model you specified in your order
5. Ensure that there is free airflow around the LED lamphouse so that the cooling system is not impaired. A gap of 200 mm on either side is sufficient
6. With the LED lamphouse now attached to the microscope it is safe to connect the mains power

#### 5. OPERATION

1. This product provides four wavelengths: 2 individual channels and the red channels are combined in one channel (see ill. 4)
2. Press the "power" button to switch on the unit (see ill. 3)
3. Press one of the small "shutter" buttons on the controller to pass/block light of the desired wavelength (see ill. 4)
4. Press one of the large "shutter" button on the controller to pass/block light of all wavelengths at once (see ill. 4)
5. By pressing the small + and - buttons you control the light intensity per channel
6. By pressing the large + and - buttons you control the light intensity for all channels at once
7. By sliding the focusing adjustment you control the collimation of the light beam (see ill. 5)



focusing adjustment



## 6. ROUTINE CARE AND MAINTENANCE

1. The LE.6400(-OX) requires little or no maintenance throughout its life span. There are no field serviceable parts, so there is no need to remove the covers
2. Cleaning of the external surfaces can be carried out with a mild soap, water and a lint-free cloth. Ensure that no liquid enters the product through vents and panel edges. Avoid optical surfaces
3. Cleaning of optical surfaces can be necessary if dust or fingerprints are present on the external optics. In the first instance remove any dust with an air duster
4. Finger prints or dust should be removed using standard lens cleaning procedures. Do not flood the lens surfaces with fluid as liquid could enter the product and cause damage

## 7. MOUNTING LE.6400(-OX) ONTO A DIFFERENT MICROSCOPE

The LE.6400(-OX) can easily be mounted onto most fluorescence microscopes, both new and old. Euromex has designed a comprehensive range of adapters to match most microscopes (see ill. below). When upgrading an Oxion inverted microscope, additional steps are required, please contact euromex

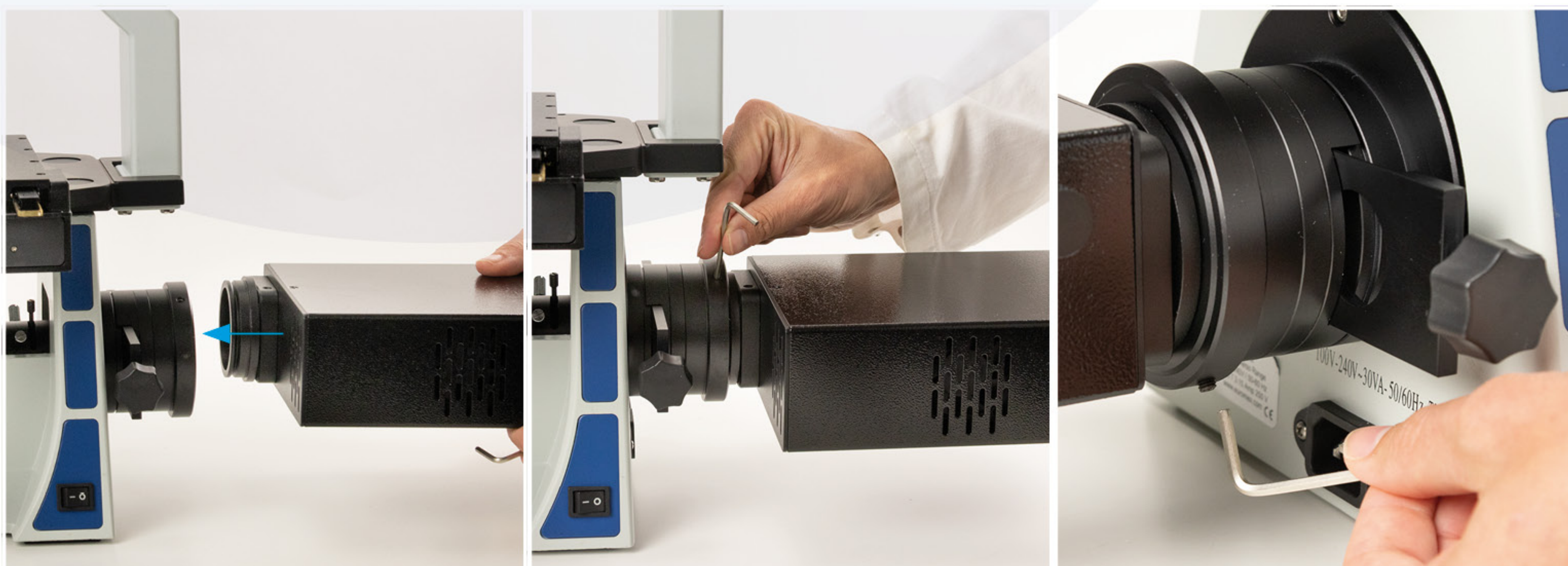
## 8. PRODUCT SPECIFICATIONS

1. Power requirements: 110-240 Vac - 50/60Hz - 1A
2. Power consumption: max 38W
3. Operating conditions 5-35 degrees Celcius

	W x D x H (mm)	Weight	Operating conditions
Lamphouse	95 x 142 x 85	1.15 kg	5 – 35 °C
Controller	126 x 130 x 20	0.15 kg	5 – 35 °C

## 9. WARRANTY AND REPAIRS

1. The warranty of this product is 2 years and covers defects in materials and workmanship
2. The warranty does not cover poor handling or any fault caused by operating the product outside the advice of this manual
3. In the event a repair is required, contact your dealer before returning the unit for a RMA number. The unit should be carefully packed - preferably in the original packaging - before shipping



Illustrations 7.0

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