

UVP eLITE™ Xe Light Source

Installation and User Instructions



analytikjena
An Endress+Hauser Company

Analytik Jena US
2066 W. 11th Street
Upland, CA 91786
Phone: (909) 946-3197
Fax: (909) 946-3597

Web Site: www.us.analytik-jena.com

Ultra-Violet Products Ltd.
Unit 1, Trinity Hall Farm Estate
Nuffield Road, Cambridge CB4 1TG UK
Phone: +44(0)1223-420022
Fax: +44(0)1223-420561

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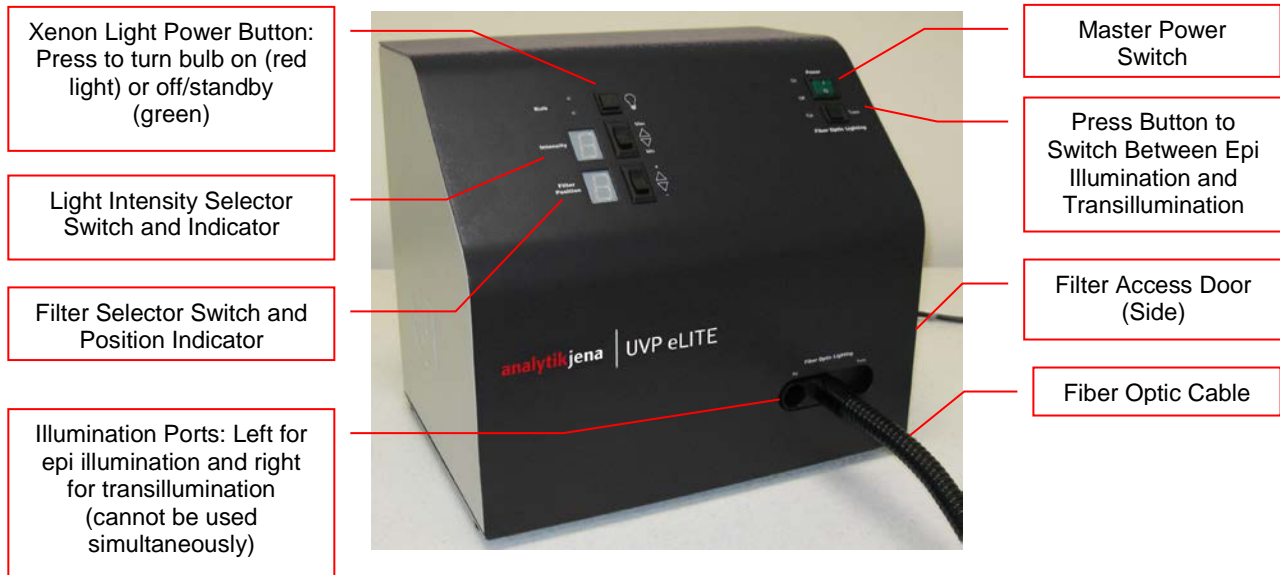
Introduction

The **UVP eLITE Xe Light Source** is a 150 watt xenon light source designed for use with select Analytik Jena Advanced Imaging Systems. The unit features a closed optical path to tightly control the output spectrum, allowing consistent and repeatable measurements with superior signal to noise. The eLITE Xe features a six position dimmer permitting variable intensity, and the integrated filter wheel accommodates up to eight excitation filters. System control is via either the VisionWorks[®] software interface or switches located on the front of the unit.

The unit's fiber optic bundle, designed uniquely for the eLITE, directs lighting to the darkroom. Refer to the components list included with the eLITE and imaging system to determine the appropriate assembly instructions.

System Components

Refer to the packing slip and schematic shown below for specific parts and components included with the eLITE Light Source.

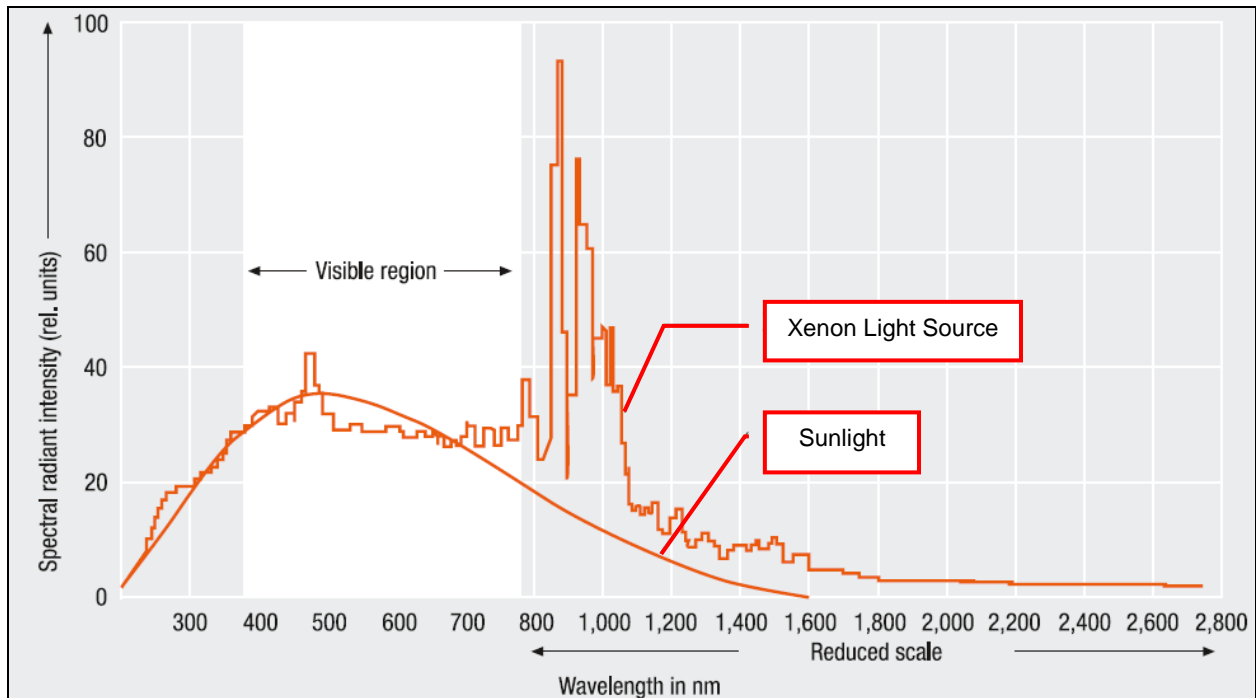


Specifications

Bulb Type:	150 Watt Xenon
Ferrule Dimension:	0.718 inch (18.2 mm)
Physical Dimensions:	
Height	12.5 Inches
Width	13.5 Inches
Depth	10 Inches
Weight	13.75 pounds (4 kg)
Power Requirements:	
115V	1.8 Amps max, 50/60 Hz
230V	0.9 Amps max. 50/60 Hz
100V	2.1 Amps max, 50/60 Hz

Output Spectrum

The graph below displays the spectral emission curve for the xenon arc light source within the eLITE, without filtering:



Safety Information

WARNING: The device will overheat if the fan outlet on the back of the eLITE is blocked.

WARNING: The xenon bulb becomes very hot with use. Do not open the bottom access panel while the eLITE is running or without allowing it to cool down.

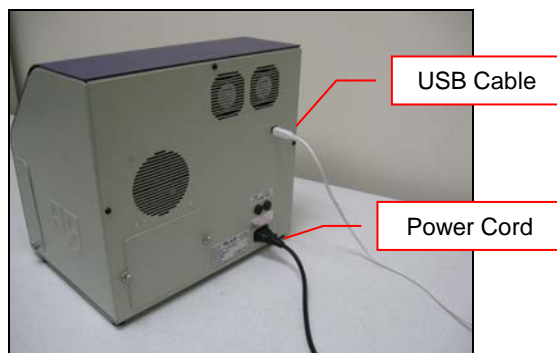
CAUTION: Never touch the inner portion of the xenon bulb. If it accidentally comes in contact with skin, carefully clean the glass with rubbing alcohol and a clean, lint free cloth.

CAUTION: Never look into the output port or fiber optic bundle of the eLITE when it is on, as the intense light may hurt your eyes.

Setup Instructions

eLITE Light Source Setup

1. Plug the power cord into the receptacle on the back of the unit and the other end to a power outlet. Connect the USB cable to the eLITE and the other end to an available port on the computer.

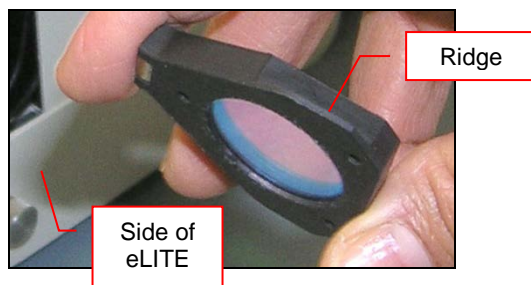


2. Position the eLITE to the left of the darkroom.

Excitation Filter Installation

Filters are installed in a metal black casing from the Analytik Jena factory. To install the filters into the eLITE filter wheel:

1. Hold the filter assembly so that it is positioned vertically with the filter holder's ridge facing toward the front of the eLITE as shown below.



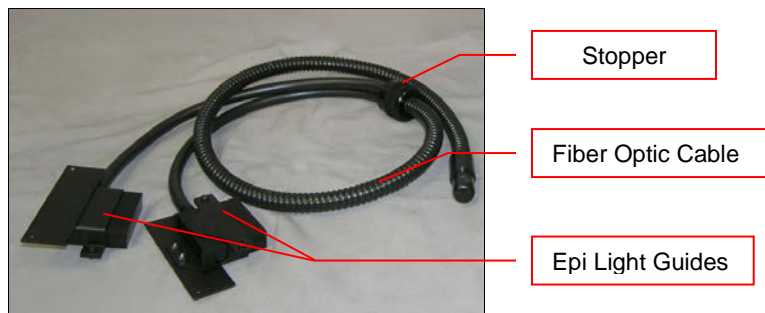
2. Slide the filter into the filter wheel as shown below. The small metal tab on the filter holder will magnetically hold the filter in place within the eLITE. **Note:** Do not force the filter into the eLITE wheel slot. If the filter is not fitting smoothly, ensure that the orientation of the filter assembly is correct.



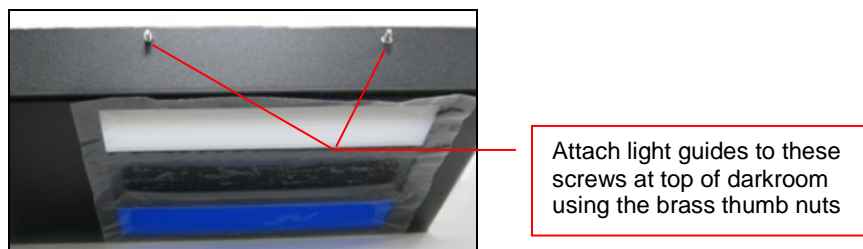
3. To access the other filter positions, manually rotate the filter wheel with the eLITE powered off.

Epi Light Guide Installation (BioSpectrum®)

1. Remove the epi light covers at the top of the darkroom.



2. Remove one stopper at the left side of the darkroom.
3. Thread the knurled (non-smooth side) of the fiber optic cable from the inside of the darkroom through the hole created by removing the stopper until the large bulb separating the smooth and rough side of the fiber optic cable can no longer be pushed through the opening.
4. The light guides should be on the inside of the darkroom. Make sure the fiber optic cables extend from the light guide toward the front of the darkroom (toward you). Match the drilled holes in the light guide holders to the protruding screws on the epi light structure. Use the brass thumb nuts to secure the light guides to the darkroom.

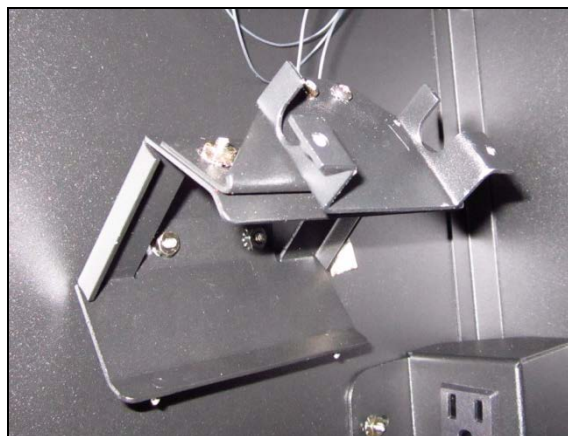


5. Remove the rubber cap from the input side of the fiber optic trunk and plug the cable into the left port on the eLITE unit.

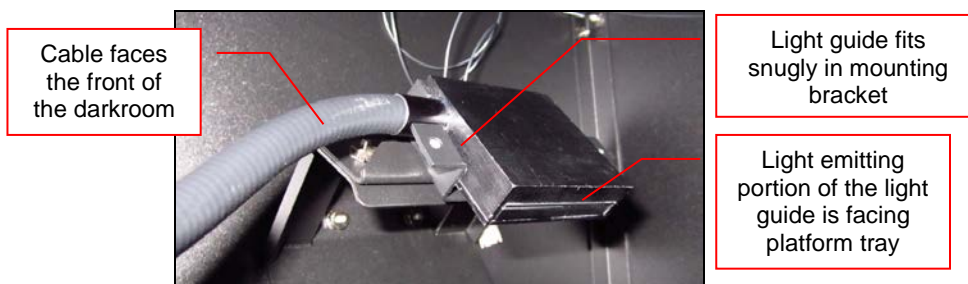


Epi Light Guide Installation (GelDoc-It^{®2} / GelStudio[™] SA² and ChemiDoc-It^{®2} / ChemStudio[™] SA²)

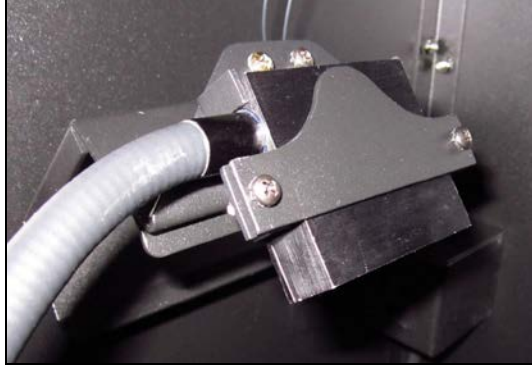
1. Remove one stopper at the left side of the darkroom.
2. Remove any existing plates or screws from the mounting bracket so that the epi light guide bracket appears as follows:



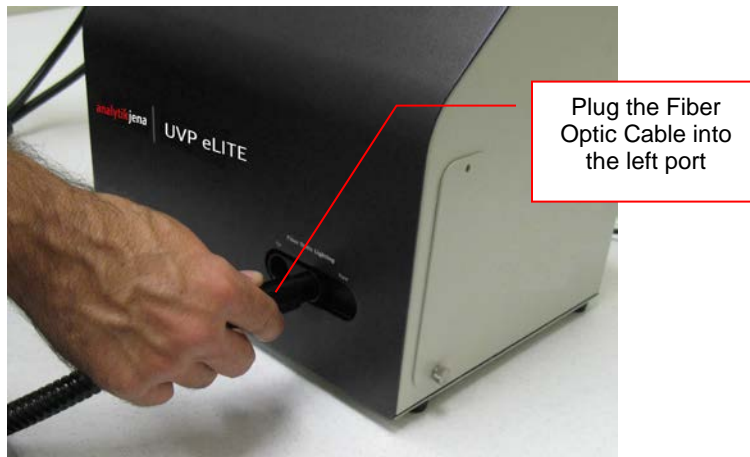
3. Thread the knurled (non-smooth side) of the fiber optic cable from the inside of the darkroom through the hole created by removing the stopper until the large bulb separating the smooth and rough side of the fiber optic cable can no longer be pushed through the opening.
4. Position the light guide in the mounting bracket as shown below. Make sure the cable protruding from the light guide faces toward the front of the darkroom (toward the darkroom door) and that the light emitting portion of the light guide is facing toward the platform tray.



5. Attach the mounting bracket plate to the mounting bracket using two of the screws provided, as shown below. Make sure the tab on the plate faces up.



6. Repeat the process for the other light guide within the darkroom.
7. Remove the rubber cap from the input side of the fiber optic trunk and plug the cable into the left port on the eLITE unit.



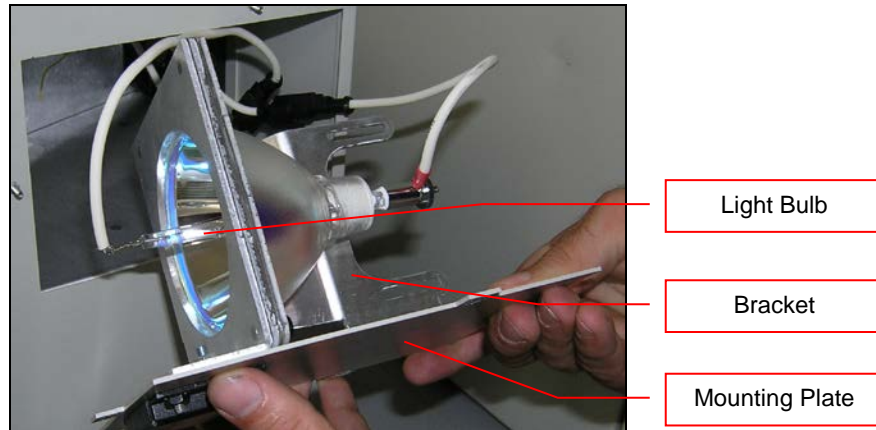
Fiber Optic Light Table (Transilluminator) Installation

1. Remove one stopper at the left side of the darkroom.
2. If the imaging system already contains a transilluminator, unplug and remove the transilluminator.
3. Insert the fiber optic light table transilluminator in the imaging system.
4. Thread the knurled (non-smooth side) of the fiber optic cable from the inside of the darkroom through the hole created by removing the stopper until the large bulb separating the smooth and rough side of the fiber optic cable can no longer be pushed through the opening.
5. Remove the rubber cap from the input side of the fiber optic trunk and plug the cable into the left port on the eLITE unit.

Lamp Assembly Installation

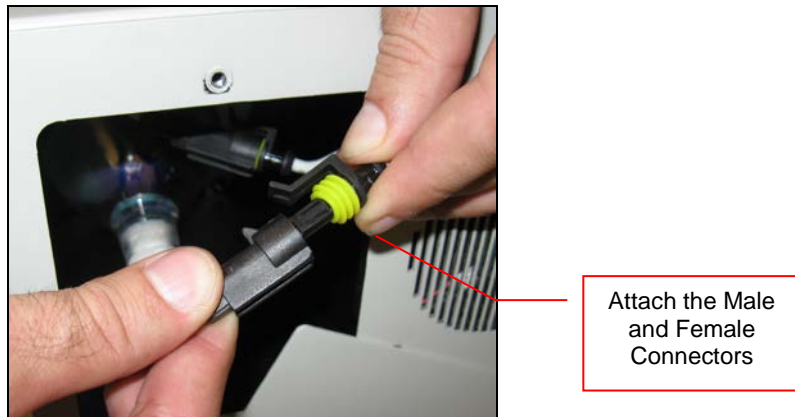
The eLITE Xe is shipped from the factory with the xenon lamp assembly uninstalled. Prior to initial use, the lamp assembly must be installed in the eLITE Xe as described below.

The eLITE Xe xenon light bulb is a lamp assembly which includes a mounting plate and bracket. The assembly is installed through the bottom of the unit as shown:

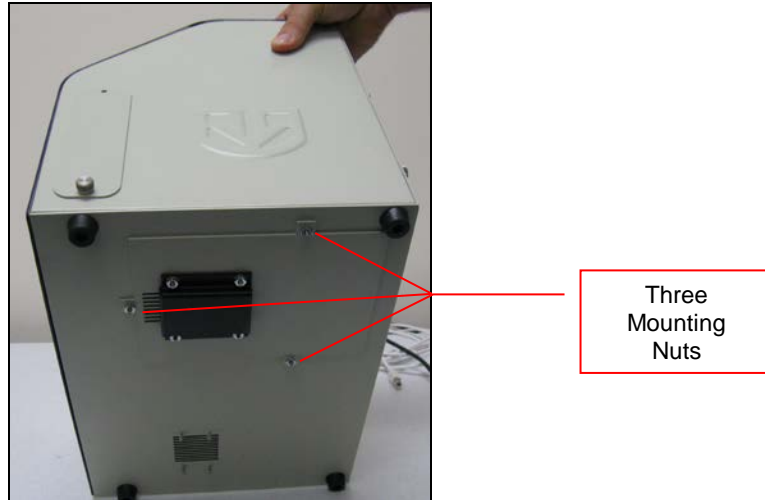


1. Unplug the power cable and USB cable from the back of the eLITE Xe.
2. The lamp assembly will have a wire coming from each end of the xenon bulb. One wire has a male connector on the end and the other wire has a female connector. Attach the male connector from the lamp to the female connector from the eLITE Xe unit, and vice versa.

CAUTION: DO NOT TOUCH THE GLASS OF THE BULB!



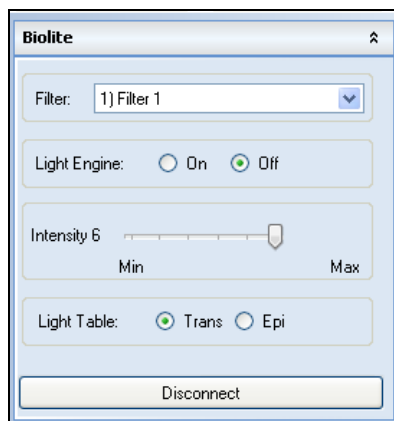
3. Insert the lamp assembly into the bottom of the eLITE Xe, aligning the three all-thread screws on the bottom of the eLITE Xe with the three holes in the lamp assembly mounting plate.
4. Reconnect the plate to the bottom of the unit using the three supplied nuts.



5. Plug the power cable into the receptacle on the back of the eLITE Xe and the other end into a power outlet.
6. Plug the USB cable into the back of the eLITE Xe and the other end into the computer.

Using the Light Source

1. Set the power switch on the front of the system to the **ON (I)** position.
2. Use the VisionWorks “eLITE” module (shown below) to adjust the various eLITE settings:



- a. **Filter:** Select the desired excitation filter position from the dropdown menu.
- b. **Light Engine:** Turn the eLITE bulb on or off using the radio buttons (note that the eLITE’s green power switch must be in the ON position to use the lighting controls). When the bulb is on, the lower indicator light to the left of the switch on the front of the eLITE will glow red.

NOTE: For optimal eLITE Xe performance and operation, each time the xenon light is turned off it is important to wait at least 30 seconds before turning it back on again.

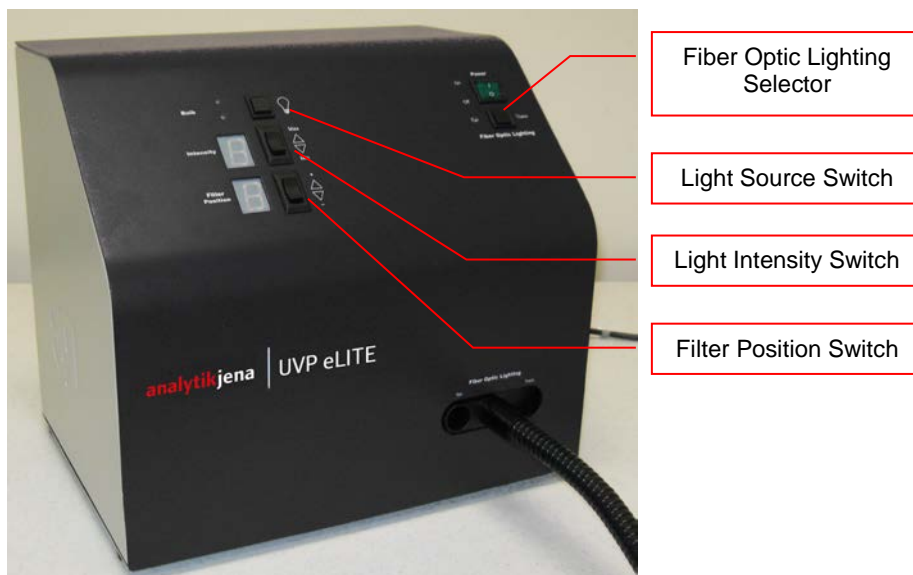
- c. **Intensity:** This setting regulates the amount of illumination in six increments. The relative output levels are specified in the chart below:

Intensity Setting	Relative Intensity
6	100%
5	50%
4	40%
3	25%
2	12%
1	0%

Light Table: Select between either **Epi** (overhead) or **Trans** (base lighting) depending on the application. Note that both the epi and transillumination cannot be used simultaneously.

NOTE: If using the darkroom to perform light-tight experiments such as capturing a chemiluminescence sample for more than two minutes, use the black rubber cap to cover the end of the fiber optic cable. Exposing an image for less than two minutes with the rubber cap removed will not impact the resultant image, so long as the fiber optic cable is installed in the eLITE. Without capping the fiber optic cable, light may enter the darkroom through the end of the fiber optic cable, thus affecting the results of an extended resolution image.

3. It is possible to adjust the eLITE's settings using the switches located on the front of the eLITE. Note, however, that any settings modified using the switches will NOT be reflected in VisionWorks' eLITE software interface.



- a. **Fiber Optic Lighting:** Press this button to select either Epi or Transillumination lighting. Note that both epi and transillumination cannot be used simultaneously.
- b. **Light Source:** Press this button to turn the xenon light bulb on or off. When the bulb is on, the lower indicator light to the left of the switch will glow red.

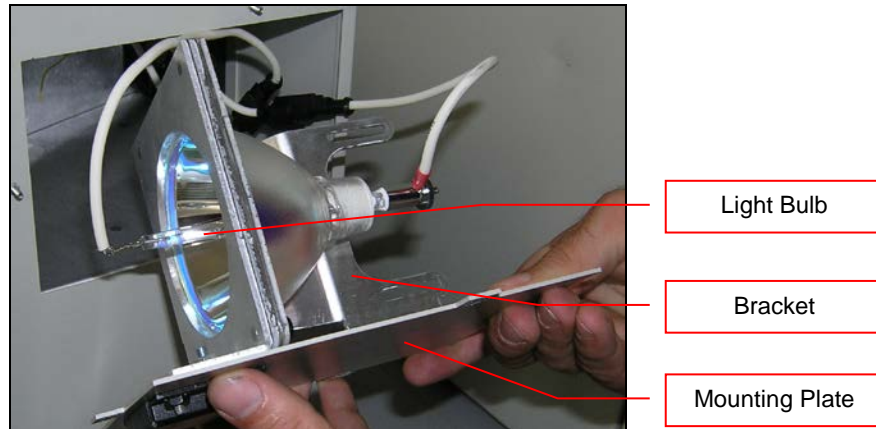
NOTE: For optimal eLITE Xe performance and operation, each time the xenon light is turned off it is important to wait at least 30 seconds before turning it back on again.

- c. **Light Intensity:** Press the rocker switch toward **Max** to increase the relative intensity of the lighting. Inversely, press the rocker switch toward **Min** to decrease the relative intensity of the lighting. Lighting is provided in six increments, indicated on the LCD display to the left of the rocker switch.
- d. **Filter Position:** Press the rocker switch toward **+** to move to the next excitation filter position. Inversely, press the rocker switch toward **-** to move to the previous excitation filter position. There are a total of eight filter positions; the current position will be indicated on the LCD display to the left of the rocker switch.

Service Procedures

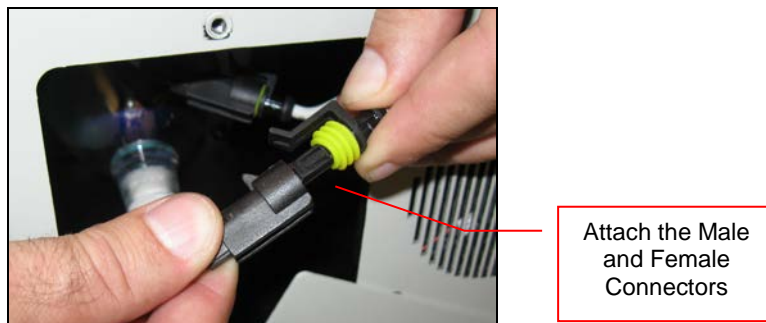
Bulb Replacement

The eLITE Xe xenon light bulb is a lamp assembly which includes a mounting plate and bracket. The assembly is installed through the bottom of the unit as shown:

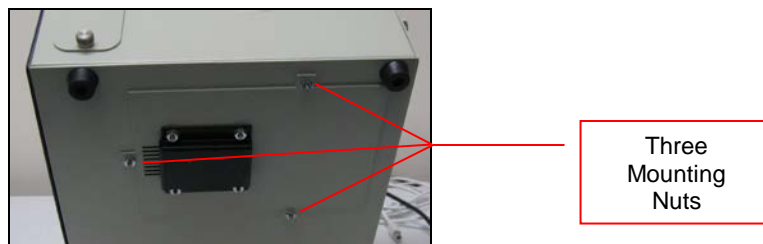


1. Unplug the power cable and USB cable from the back of the eLITE Xe and allow the bulb at least ½ hour to cool.
2. The lamp assembly will have a wire coming from each end of the xenon bulb. One wire has a male connector on the end and the other wire has a female connector. Attach the male connector from the lamp to the female connector from the eLITE Xe unit, and vice versa.

CAUTION: DO NOT TOUCH THE GLASS OF THE BULB!



3. Insert the lamp assembly into the bottom of the eLITE Xe, aligning the three all-thread screws on the bottom of the eLITE Xe with the three holes in the lamp assembly mounting plate.
4. Reconnect the plate to the bottom of the unit using the three supplied nuts.



5. Plug the power cable into the receptacle on the back of the eLITE Xe and the other end into a power outlet.

Return Procedure

A **Returned Goods Authorization (RGA)** number must be obtained from Analytik Jena Customer Service before returning any product. See "Technical Support" below for contact information.

Replacement Parts and Accessories

To order accessories or replacement parts for the eLITE Light Source, contact Analytik Jena's offices.

Part Description	Part Number
Xenon Lamp Replacement Kit	98-0111-01
Fuses	56-0002-05 (Qty. 2 Required)
370 – 430 nm Filter (for BFP, CFP, Etc.)	38-0319-01
422 – 478 nm Filter (for GFP, Cy2, Etc.)	38-0319-02
500 – 680 nm Filter (for Cy 5.5)	38-0319-07
Blue Filter (to enhance red and yellow objects)	38-0319-03
Red Filter (darkens green and blue objects)	38-0319-04
Green Filter (increases for red or blue objects)	38-0319-05
Yellow Filter (safelight for photo resist materials)	38-0319-06

Other standard and custom filters are available for a variety of imaging applications. Contact Analytik Jena or visit www.us.analytik-jena.com for further information.

Troubleshooting

Bulb Does Not Illuminate

1. Recheck the main power cord connection to the eLITE unit.
2. Check the fuses located at the back of the unit next to the power port. A small flat-head screwdriver or similar tool will be required. Turn the fuseholder cap counterclockwise and the fuse holder will pop out. Inspect the thin wire within the glass fuse to see if there is a break in the wire. If so, replace the fuse(s). If fuses are blowing repeatedly, contact Analytik Jena Technical Support for additional troubleshooting.
3. The bulb's wires may have come loose. Recheck the bulb electrical connections by following the "Bulb Replacement" instructions earlier in this manual.
4. The bulb may be burned out. Follow the "Bulb Replacement" instructions earlier in this manual.

Care and Cleaning

Use only mild soap or detergent solution for cleaning. Do NOT use oil- or petroleum-based cleaners for the cabinet. Ensure that the system is turned **OFF** and unplugged during cleaning.

Technical Support

Analytik Jena offers free lifetime technical support on all of its products and software. Should you have any questions regarding the product's use, operation or repair, contact Analytik Jena's offices at the locations below, or visit www.us.analytik-jena.com.

If you are in North America, South America, East Asia or Australia:	If you are in Europe, Africa, the Middle East or Western Asia:
Call (909) 946-3197 , and ask for Technical Support during regular business days, between 7:00 am and 5:00 pm, PST.	Call +44(0) 1223-420022 , and ask for Customer Service during regular business days between 9:00 am and 5:30 pm.
E-mail your message to: info@us.analytik-jena.com	E-mail your message to: uvp@uvp.co.uk
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