

Manual BioLite™ MultiSpectral Light Source

Installation and User Instructions



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Introduction

The **Manual BioLite MultiSpectral Light Source** is a 150 watt quartz halogen light source designed for use with select UVP Advanced Imaging Systems. The unit features a six position mechanical dimmer permitting variable intensity, as well as easily exchangeable excitation filters for monochromatic light output. A closed optical path tightly controls the output spectrum, allowing for consistent repeatable measurements with superior signal to noise.

System Components

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

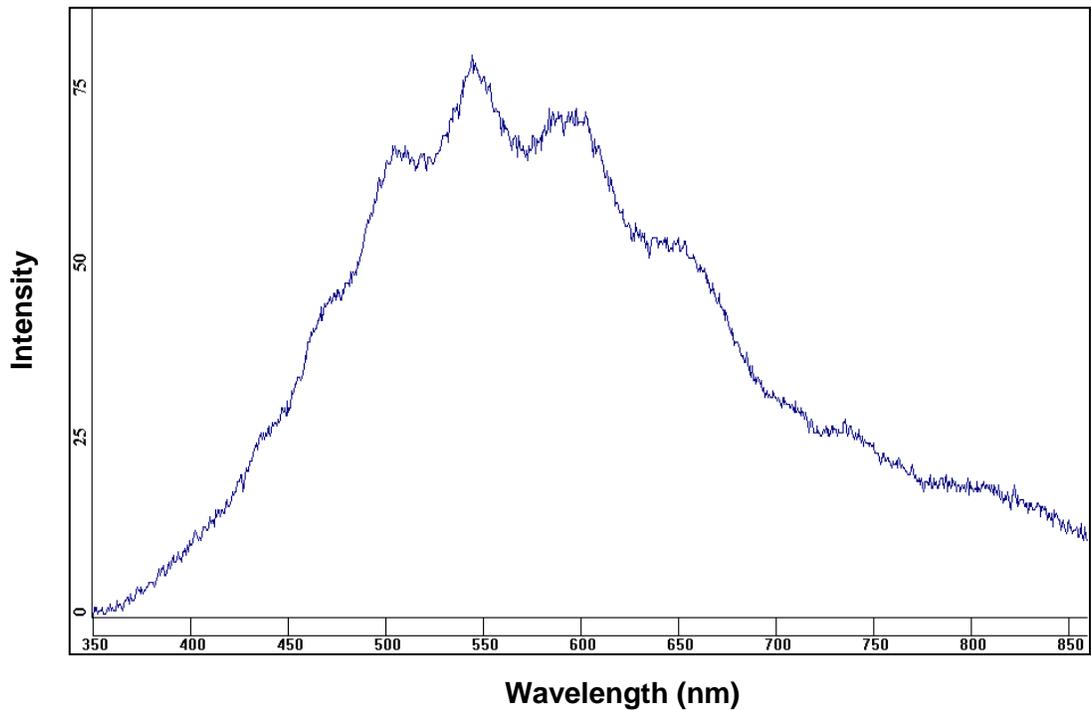


Specifications

Color Temperature:	3250°K
Bulb Type:	150 Watt Halogen Type EKE
Ferrule Dimension:	0.718 inch (18.2 mm)
Physical Dimensions:	
Height	8.75 Inches (22 cm)
Width	7 Inches (18 cm)
Depth	10 Inches (25 cm)
Weight	9 pounds (4 kg)
Power Requirements:	
115V	3 Amps max, 50/60 Hz
230V	1.5 Amps max, 50/60 Hz
100V	3 Amps max, 50/60 Hz

Output Spectrum

The graph below displays the spectral emission curve for the halogen light source within the BioLite (shown without filtering):



Safety Information

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

WARNING: The quartz halogen bulb becomes very hot with use. Do not open the bottom access panel while the BioLite is running or without allowing it to fully cool.

CAUTION: Never touch the inner portion of the quartz halogen 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 BioLite when it is on, as the intense light may hurt your eyes.

Setup Instructions

BioLite MultiSpectral 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.



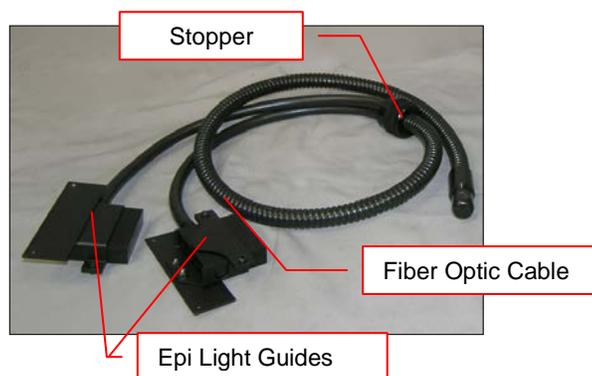
2. Position the BioLite to the left of the darkroom.
3. Insert the filter cartridge into the filter port.

NOTE: Filters and their cartridges are directional. Make sure that the label is facing forward. Because of the intense light of the BioLite, only UVP-supplied, tempered interference filters should be used.

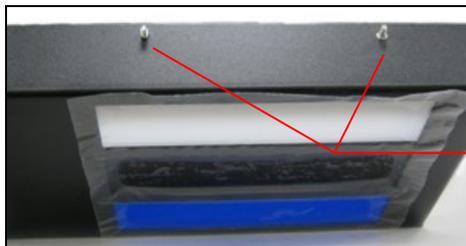


Epi Light Guide Installation (BioSpectrum®)

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.



- 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 in the epi light structure. Use the brass thumb nuts to secure the light guides to the darkroom.



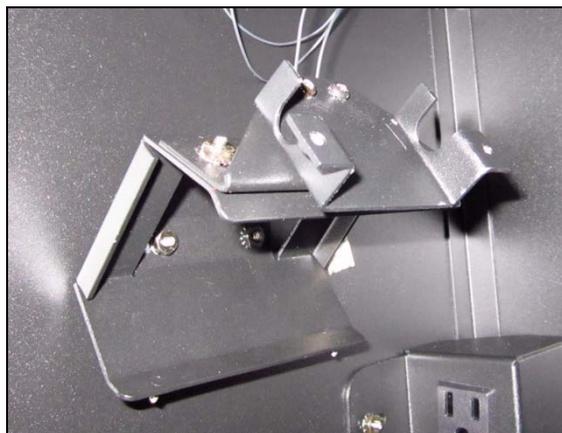
Attach light guides to these screws at top of darkroom using the brass thumb nuts

- Remove the rubber cap from the input side of the fiber optic trunk and insert the fiber optic receptacle into the round silver connector on the front of the BioLite.
- Secure the fiber optic receptacle to the silver connector with the set screw on the BioLite.



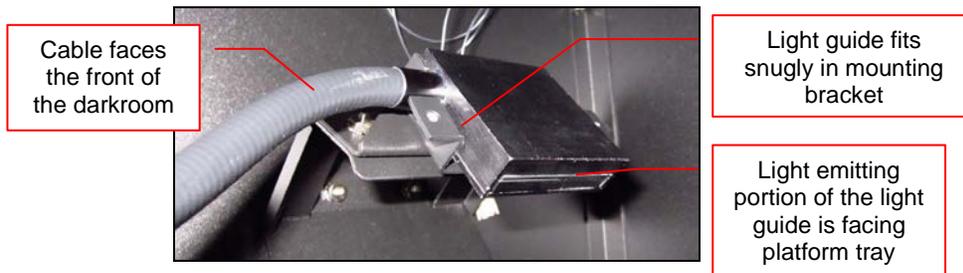
Epi Light Guide Installation (GelDoc-It^{®2/TS2} and ChemiDoc-It^{®2/TS2})

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

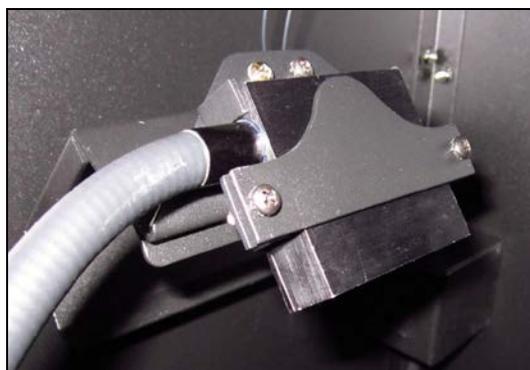


- Thread the knurled (non-smooth side) of the fiber optic cable from the inside of the darkroom through the hole created by removing the stopper until the large bulb separating the smooth and rough side of the fiber optic cable can no longer be pushed through the opening.

- 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.



- 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.



- Repeat the process for the other light guide within the darkroom.
- Remove the rubber cap from the input side of the fiber optic trunk and Insert the fiber optic receptacle into the round silver connector on the front of the BioLite.
- Secure the fiber optic receptacle to the silver connector with the set screw on the BioLite.



Fiber Optic Light Table (Transilluminator) Installation

- Remove one stopper at the left side of the darkroom.
- If the imaging system already contains a transilluminator, unplug and remove the transilluminator.
- 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 insert the fiber optic receptacle into the round silver connector on the front of the BioLite.
6. Secure the fiber optic receptacle to the silver connector with the set screw on the BioLite.



Using the Light Source

1. Set the power switch on the front of the system to the **ON (I)** position.
2. Rotate the black rotary knob on the front of the BioLite to adjust light intensity as desired. The intensity control knob controls the amount of illumination in six relative amounts as specified in the chart below:

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

NOTE: Use the black rubber cap to cover the end of the fiber optic cable if using the darkroom to perform light-tight experiments such as capturing a chemiluminescence sample for more than two minutes. 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 on the BioLite. 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.

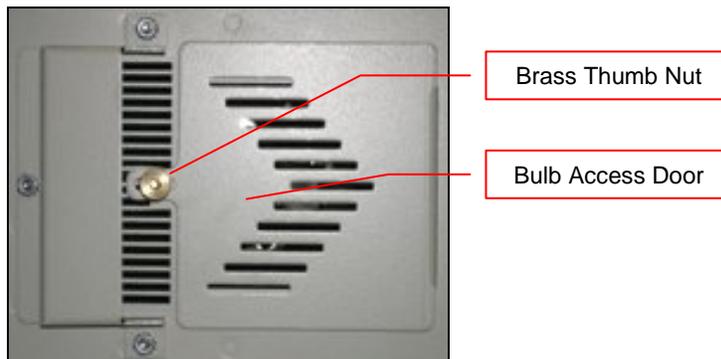
Service Procedures

Bulb Replacement

The BioLite's Type EKE 150 watt halogen bulb has a standard life of 200 hours. It must be replaced with the same bulb type only. The UVP part number is **34-0088-01**.

The BioLite bulb replacement procedure is as follows:

1. After allowing the unit sufficient time to cool after last use (at least 1/2 hour), unplug the BioLite from its power source.
2. From the bottom of the unit, remove the brass thumb nut and remove the bulb access door.



3. Remove the bulb using the mechanism built into the bulb holder. Grasp the chrome wire to the left of the bulb and push it in the direction of the base of the bulb. The bulb will pop out of the connector.



4. Return the bulb removal mechanism to its original, downward position.



5. Insert the replacement EKE halogen 150 watt bulb, ensuring that it is fully seated.



6. Replace the cover and secure with the brass nut before plugging unit back in or turning it on.

Return Procedure

A **Returned Goods Authorization (RGA)** number must be obtained from UVP 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 BioLite MultiSpectral Light Source, contact UVP’s offices.

Part Description	Part Number
Type EKE 150 Watt Halogen Bulb	34-0088-01
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 UVP or visit www.uvp.com for further information.

Troubleshooting

Bulb Does Not Illuminate

1. Recheck the main power cord connection to the BioLite 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 UVP Technical Support for additional troubleshooting.
3. The bulb may be out of position. Reseat the bulb to reestablish the electrical connection by following the “Bulb Replacement” instruction earlier in this manual.
4. The bulb may be burned out. Follow the “Bulb Replacement” instruction 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

UVP 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 UVP's offices at the locations below, or visit www.uvp.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 (800) 452-6788 or (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@uvp.com	E-mail your message to: uvp@uvp.co.uk
Fax Customer Service, and send it to (909) 946-3597	Fax Customer Service, and send it to: +44(0) 1223-420561
Write to: UVP, LLC 2066 W. 11 th Street, Upland, CA 91786 USA	Write to: Ultra-Violet Products Ltd Unit 1, Trinity Hall Farm Estate, Nuffield Road, Cambridge CB4 1TG UK

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