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## TECHNICAL INFORMATION

### SIRCHIE UV Portable AC/DC Shortwave Light Sources

Catalog Nos. UVP600S, UVP600ST, UVP120S, UVP120ST

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#### INTRODUCTION

The all-new 6-watt single bulb UVP600S and UVP600ST, as well as the 12-watt dual bulb UVP120S and UVP120ST UV Lights were designed to fill the need for all-purpose, portable, shortwave UV light sources. Both models can be easily used in the field or laboratory. The UVP600ST and UVP120ST versions, however, feature a tripod mount and the UVP600ST is now the standard light source supplied with the *KRIMESITE™ IMAGER*.

Features abound in this unique investigative aid—AC/DC operation; side mounted straps for easy handling; and light-weight, rugged construction.

**NOTE:** *The UVP600ST and UVP120ST models are equipped with a tripod mount for use with the KSS9200 SIRCHPOD® included in the KRIMESITE™ kits or the optional BM6009 Professional Duty Tripod.*

**SPECIAL PRECAUTION:** *Avoid the use of shortwave UV light (254nm) in the presence of visible bloodstains if subsequent DNA analysis is a consideration. Collect blood samples prior to shortwave UV light exposure.*



## **OPERATION**

These UV lights feature a dual power supply: AC Operation—110V/220V AC Power Adapter (included); DC Operation—UVP600S/UVP600ST: 8-AA (non-rechargeable) Alkaline Batteries; UVP120S/UVP120ST: 16-AA (non-rechargeable) Alkaline Batteries.

### **AC Operation**

For AC operation, connect the supplied AC Adapter to the unit through the side panel jack and plug into any convenient 110V or 220V AC outlet accordingly—this disconnects the AA batteries and provides rectified DC voltage to the lamp. Turn the unit ON with the ON/OFF Switch mounted on top of the housing. A green LED (Light Emitting Diode) power indicator will flash intermittently. Be certain to wear proper UV protective eye wear when the light is in use.

*Note: The dual light models have two ON/OFF switches (one for each lamp).*



### **DC Operation**

For DC operation, install the AA Alkaline Batteries provided into the battery magazine located inside the compartment on the back of the unit.

1. Remove the two thumbscrews that secure the protective metal plate.
2. Remove the battery magazine and insert the batteries while observing the correct polarity.
3. Re-install the magazine into the battery compartment and reattach the metal plate.

Using the ON/OFF Switch mounted on top of the housing, turn the unit ON. A green LED (Light Emit-



**Battery Access**



**Battery Magazine and Compartment**

ting Diode) power indicator will flash intermittently. Be certain to wear proper UV protective eye wear when the light is in use.

## PROCEDURE

Position the hand-held lamp to illuminate the surface being examined with shortwave UV light. Best results are often achieved when light is reflected at an angle from the surface. The UVP600ST and UVP120ST models are designed to be hand-held or tripod mounted. This built-in tripod mount easily connects to the KSS9200 SIRCHPOD® (included in the *KRIMESITE*™ kits) or the optional BM6009 Professional Duty Tripod as shown here.

## MAINTENANCE

Lamp replacement is the only field maintenance recommended. **NOTE:** *Wait until the lamp has cooled before proceeding as severe burns may result.*

1. Use a small Phillips-head screwdriver to remove the screws (top and bottom) that hold the metal face shield in place.
2. Squeeze the sides of the metal face shield and lift it from the unit.
3. Grasp lamp with thumb and forefinger and twist 90° to remove the lamp from the socket.
4. Place a new lamp in the upper and lower sockets,



Mounted to optional BM6009 Heavy-Duty Tripod.

Mounted to KSS9200 SIRCHPOD®.



Remove the set screws from the top and bottom of the unit with a Phillips Screwdriver.

twisting 90° to seat the lamp securely.

5. Reattach the metal face shield while squeezing the sides, and re-insert the two screws (do not over-tighten). The unit is now ready for use.

## CLEANING

Remove dirt, dust and fingerprints using a mild soap and water solution applied with a soft cloth or paper towel. Do not use industrial or household cleaners as these may damage the unit's surface.



### UVP600S/UVP600ST SPECS:

**Light Source:** Shortwave (254nm) 6-watt UV bulb

#### Power Supply:

**DC Operation:** 8-AA Alkaline Batteries (included)

**AC Operation:** 110V/220V AC Power Adapter (included)

**Construction:** Brushed steel, aluminum w/black wrinkle finish, and ABS

#### Dimensions:

**UVP600S:** 9.75" x 2.75" x 4" (24.8cm x 7cm x 10.2cm)

**UVP600ST:** 9.75" x 2.75" x 4.5" (24.8cm x 7cm x 11.4cm)

### UVP120S/UVP120ST SPECS:

**Light Source:** Two Shortwave (254nm) 6-watt UV bulbs

#### Power Supply:

**DC Operation:** 16-AA Alkaline Batteries (included)

**AC Operation:** 110V/220V AC Power Adapter (included)

**Construction:** Brushed steel, aluminum w/black wrinkle finish, and ABS

#### Dimensions:

**UVP120S:** 9.75" x 6.5" x 4" (24.8cm x 16.5cm x 10.2cm)

**UVP120ST:** 9.75" x 6.5" x 4.5" (24.8cm x 16.5cm x 11.4cm)

## PRECAUTIONS: UV RADIATION

The three areas of ultraviolet radiation are UV-C at 100 to 280nm, UV-B at 280 to 315nm, and UV-A at 315 to 400nm. UV-C is the shortest wave ultraviolet radiation and UV-A is the longest wave ultraviolet radiation.

The retina of the eye is not very vulnerable in the ultraviolet or the far-infrared portions of the spectrum. It is the cornea and the lens that absorb ultraviolet. High exposure levels can permanently damage these structures of the eye. Intermediate levels in the UV (200-320nm) cause greater injury to the cornea, which is severe but temporary. The injury, photokeratitis, may last for only one or two days but is extremely painful. Near-ultraviolet (long wavelength UV-A) is absorbed heavily in the lens of the eye. Damage to this area of the eye may not be evident for many years and may have lasting effects.

Human skin is also susceptible to radiation injury. This susceptibility occurs in the range of radiant energy present in the ultraviolet spectral region of 200-320nm. This type of radiation can cause severe sunburn. Certain photosensitizing chemicals greatly increase the sensitivity of the skin. Previous exposures to specific wavelength bands that are generally in the long wavelength ultraviolet and visible portion of the spectrum also sensitize the skin. Some orally administered drugs such as tetracyclines and common pain relievers also cause photosensitization.

The factors predisposing individuals to possible harm from ultraviolet radiation are:

- Sensitivity of the individual
- The length of exposure
- Intensity of the ultraviolet light source
- Light source/surface distance

Recommended Personal Protective Equipment:

- UV absorbing face shield or glasses with side shields
- Long sleeved laboratory coat or overalls
- Opaque cotton or garamid fiber gloves

SIRCHIE shortwave UV lamps utilize low-pressure mercury lamps, which emit radiation in the UV-C (254nm) spectrum. Any amount of exposure to these lamps should be considered hazardous and protective equipment for the eyes and exposed skin must be worn. When using any UV lamp, avoid needless exposure to radiation and turn the lamp off when not in use.