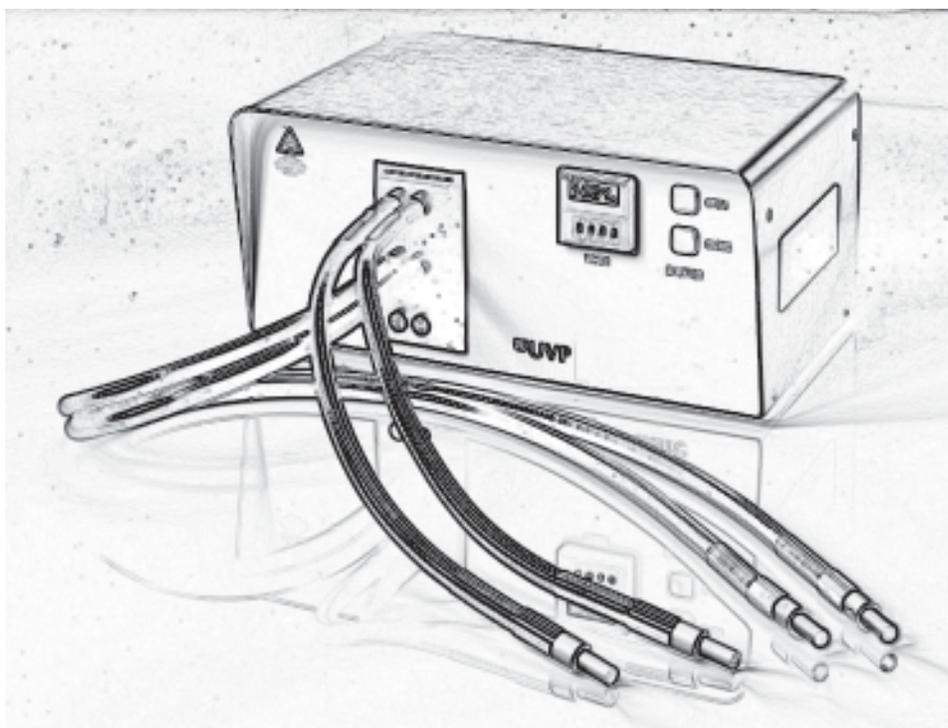


# ***SPOT-LITE CURING SYSTEM***

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## **USER'S GUIDE**



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## **Preface**

### **Copyright**

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## Introduction

### About this Guide

This guide provides complete instructions to set up and run UVP's Spot-Lite system.

The manual fully describes the components of the system, the methods for setting up the system including interconnections and adjustments, and a full description of how it can be used.

If you have any problems installing or operating the equipment, please do not hesitate to call UVP at (800) 452-6788, (909) 946-3197 in the US or +44(0)1223-420022 in the UK.

### Spot-Lite

Spot-Lite is a portable ultra-violet curing system incorporating up to six flexible light guides (or wands) that may be used – either mounted or hand held – to direct UV to a precise point on the work area.

Spot-Lite is completely safe to operate.

Spot-Lite is entirely modular in design. The base unit is available in 2-wand and 6-wand versions and is supplied fitted with a choice of light source. The light assembly unit is designed to accept a range of interchangeable UV lamps. A single unit can therefore provide different wavelength outputs for specific applications – including the curing of UV adhesives, inks, paints and coatings, potting compounds and resins.

An integral filter removes unwanted wavelengths, including the infrared portion of the spectrum, to avoid overheating the work area.

## Components

### Base Unit

The base unit is available with a choice of two lamps – 400w short wave (L1) or long wave (L2). Thanks to a unique light collection system (patent applied for) each Spot-Lite unit supports multiple wands. (Spot-Lite is available in a 2-outlet and 6-outlet version). The unit may be operated with as many wands fitted as required. When not in use, spare outlets are closed with an aluminum plug.

### Wands

The wands, which are supplied separately, are available in a range of 3 diameters (3mm, 5mm and 8mm) and 8 lengths (from 0.5m to 3.0m) to suit both bench-top and production line applications.

Each wand consists of a plastic tube filled with a transparent, non-toxic, light conducting liquid, sealed at both ends with high quality quartz glass. The wand is protected by a flexible, plastic-clad, metal spiral tube. The liquid is more efficient than glass fibre optics and provides a totally uniform output.

(For further information see dimensional data)

**Spot-Lite is also supplied with main lead fitted with plug and a foot switch for hands-free operations.**

## Operation

### Positioning

Position the unit close to the area where the curing is to take place and in a position where any light discharge is away from the line of sight of the user. Ventilation should be allowed at the rear of the unit which should not be closer than 6" to any wall.

### Interconnections

**Mains lead** – this should be attached to the rear of the base unit in the socket located below the ON/OFF switch.

**Foot switch** – the attachment on the end of the foot switch lead should be plugged into the socket provided on the back of the Spot-Lite. To remove the lead push the small release button on top of the attachment and the pull lead from the socket. (NB. This switch allows the Spot-Lite to be activated by the operator's foot thus allowing both hands free for conducting the curing operation itself.)

**Light Guides** – these should be inserted into the front bulkhead as follows:

- Remove the blanking plug from the first socket required by first loosening and removing the clamping screw
- Inset the light guide into the socket and tighten the clamping screw

**Note.** Beware not to overtighten the clamping screw as this may damage the quartz plug located in the end of the light guide

**WARNING:** DO NOT REMOVE ANY OF THE PLUGS FROM THE FRONT BULKHEAD IF YOU DO NOT INTEND TO REPLACE IT WITH A LIGHT GUIDE SINCE UNPROTECTED SOCKETS WILL EMIT HIGH INTENSITY UV AND WHITE LIGHT WHEN THE UNIT IS SWITCHED ON.

### Set Up Procedure

Once the Spot-Lite unit has been assembled as described above, the mains lead can be plugged into the mains supply (220/240V 50Hz or 115V/60Hz 3 amp) and switched on at the ON/OFF switch located at the back of the unit. A RED indicator lamp should not be illuminated. 3 – 4 minutes should be allowed for the unit to warm-up before curing can commence. During this time the timer can be set as outlined below.

## Timer

Timer settings are as follows:

99.99S	999.9S
9999S	99 min 59S
99.99 min	999.9 min
9999 min	99h 59 min
99.99h	999.9h
9999h	

The curing time required can be set by adjusting the setting from 0 to 999 e.g. 999.1S = 99.9 seconds or 1.1m = 1/10 minute = 6 seconds

To change the time on the timer, press any of 4 keys 'A' corresponding to each digit.

If the time rang needs to be altered e.g. from seconds to minutes.

First press the valid and mode keys together, then press any key 'A', this will change the time rang. Once the appropriate range has been selected press the valid key, and this will return the timer to its normal display.

The timer mode is pre-set. If for any reason the mode has been changed, the following procedure needs to be taken.

- i) Press valid and mode keys together  
(Puts timer into time range)
- ii) Press the mode key  
(Puts timer into count up or down mode)
- iii) Press any 'A' until 'd' is shown on display for count down.
- iv) Press mode key  
(Puts timer into operating mode)
- v) Press any key 'A' until 'H out mode' is shown on the display.
- vi) Press valid key to return timer to the normal display.

### **Curing**

Once the unit is warmed up the timer has been set curing can commence. The end(s) of the wand(s) should be held or fixed close to the working area.

For maximum cure speed, the tip of the wand should be within 5mm of the material to be cured.

The Spot-Lite can now be activated by either pressing down the GREEN button located on the front panel or by depressing (and then releasing) the foot switch. The shutter will open and the time will commence its cycle. You will note that the timer counts down to zero at which point the shutter is closed, the GREEN indicator light goes off and the RED Indicator light is reilluminated. (Note: if necessary the shutter can be closed by pressing the 'shutter close' button on the front panel of the machine).

**Note. The temperature on the top surface of the Spot-Lite unit may exceed 55 degrees Centigrade.**

## Lamp Replacement

If a lamp has ceased functioning, it should be replaced as follows:

NB. Always ensure that the Spot-Lite has been isolated from the main voltage and that the unit is cool before proceeding with the replacement.

Remove the outer casing by undoing the 8 counter sunk screws located adjacent to the handles. The lamp is housed within the aluminum shroud to the left of the unit.

To gain access to the lamp:

- Remove all the screws from the forward aluminum cover.
- Remove cover and slide out the baffle panel.

It should now be possible to access the lamp.

To remove the lamp:

- Push the lamp into the spring-loaded connector and pull back. The lamp should now be released from the connectors.

**Note:** When inserting the new lamp, ensure that the lamp is correctly located on the large connector locating pins.

## Specifications

Lamp: 400w short wave (L1) or long wave (L2)

Light intensity	L1	at 254nm 15mw/cm <sup>2</sup>
		at 310nm 15mw/cm <sup>2</sup>
		at 365nm 15mw/cm <sup>2</sup>
	L2	at 254nm 1mw/cm <sup>2</sup>
		at 310nm 4mw/cm <sup>2</sup>
		at 365nm 15mw/cm <sup>2</sup>

measured at 50mm from tip of wand using UVP's UVX radiometer. Minimum spot size at 50mm is 50mm diameter

Note: Closer to the tip of the wand all these intensities are significantly higher. Typically, at 365nm the intensity is in the order of 800-1000mw/cm<sup>2</sup>.

Warm up time 3-4 minutes

Dimensions 300mm wide x 160mm high x 200mm deep

Operating temperature 0 degrees Centigrade to 40 degrees Centigrade at 35-80% humidity

## Ordering Information

### Spot-Lite Base Units (supplied without wands)

Spot-Lite L1/2 base unit with L1 lamp and 2 wand sockets

Spot-Lite L1/6 base unit with L1 lamp and 6 wand sockets

Spot-Lite L2/2 base unit with L2 lamp and 2 wand sockets

Spot-Lite L2/6 base unit with L2 lamp and 6 wand sockets

### Wands

Available in 3 diameters: 3mm, 5mm, 8mm

And 8 lengths: 0.5m 1.0m 1.2m 1.5m 1.8m 2.0m 2.5m 3.0m

(24 options overall)

### Spare Lamps

L1 assembly

L2 assembly

### Other Spare Parts

Lamp holder

part no. 30602

Timer

part no. 179-355

Fuse holder

part no. L2002

Fuse 5A

part no. 151-506