

Epoxies, Etc...

UV-CURE 100 Spot Cure

USER'S GUIDE

UV-Cure 100 User's Guide

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UV-Cure 100 Message Reference

Symbol	Message	Description
XXXX.	Lamp Hours	Displays the accumulated hours the lamp has been on
XXX.X	Exposure Time	Displays the time in seconds the shutter will remain open when the START button is pressed
XXX	Iris Opening	Displays the percentage the iris is open
Flashing “XXX.X”	Flashing display	The lamp is warming up. Warm up time is approximately 90 sec.
bulb	Bulb Error	Lamp did not strike or extinguished after striking
cool	Cool Error	Lamp is too hot to strike. The lamp will automatically strike when it has reached optimum striking temperature
old / bulb	Alternating Old and then Bulb	The lamp has accumulated over 2000 hours. Lamp may be near end of life.
end / bulb	Alternating End and then Bulb	The lamp has accumulated over 4000 hours. The lamp will not strike.
LOC	Adjustment Locked	The UP/DOWN adjustment buttons have been locked. No changes can be made to the exposure time or iris setting.
ULOC	Adjustment Unlocked	The UP/DOWN adjustment buttons have been unlocked. Changes can be made to the exposure time and iris setting
SFI	Shutter Failure	The shutter has failed. Unit should be serviced.

See Section 15 for Troubleshooting.

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1 Introduction

The Epoxies, Etc... UV-CURE 100 represents a new standard in UV Curing. It gives you the power, control and reliability never before available in such a cost effective UV curing system. The UV-CURE 100 joins the Epoxies, Etc... family of light systems offering the same high level of innovation, quality and reliability that our customers have come to expect. Since 1982, Epoxies, Etc... has combined next generation optical engineering, state-of-the-art electronics and fiber-optics to produce sophisticated technologies that employ light. Today Epoxies, Etc... is a leading developer of light based systems for sectors ranging from manufacturing to bio-medicine and we are unmatched in our commitment to quality and service.

The heart of the UV-CURE 100 is a proprietary 100-watt mercury short arc lamp with an amazing 2000-hour typical lifetime. This extended lifetime is made possible by the proprietary technology incorporated into the design of the system. The lamp is mounted in an elliptical reflector with a proprietary coating to provide excellent spectral and power output.

Control for the UV-CURE 100 is provided by a new rotary shutter / iris mechanism. The iris is adjustable in 1% increments to provide very precise amounts of light to your application. In order to set your UV-Cure 100 system at specific irradiance levels (mW/cm^2), we suggest adding an Epoxies, Etc... handheld radiometer (P/N P010-00112) to your UV-CURE 100 system. Other standard features incorporated in the UV-CURE 100 include: the pre-aligned Intelli-Lamp™ system, bandpass filter, exposure timer, an accumulative lamp hour meter, "lock out" protection and a light guide status indicator.

We suggest that you read this manual to discover all features of the UV-CURE 100, and how to use them.

2 Getting Started

1. Carefully unpack the unit and accessories.
2. Store the packing material for future use.

2.1 Checking the Contents of the Box

1. The UV-Cure 100
UV/Visible Spot Curing unit



2. The Epoxies, Etc... 100W lamp module



3. UV Safety Glasses
4. Footpedal
5. Lamp Housing Tool
(attaches on clips underneath the system)
6. Grounded power cord
7. UV-Cure 100 Users Guide

If your packaged unit is missing any of the above components,
call Epoxies, Etc... at (401) 946-5564 or TOLL FREE 1-800-376-9437.

Any additional optional items purchased to customize the unit will also be present.

2.2 Front Panel



2.3 Rear Panel



3 Safety Precautions

The UV-Cure 100 is equipped with two safety sensors to protect the user from accidental UV exposure. In addition, please observe the following precautions during use. This series of cautions, warnings and dangers relate to the operation and maintenance of the UV-CURE 100. They are also presented throughout this User's Guide where necessary.



Warning

Eye damage may result from directly viewing the light produced by the lamp used in this product. Always use protective eyewear and turn the lamp off before removing lamp housing cover.



Caution

Never look into the light emitting end of the light guide. The light could severely damage the cornea and retina of the eye if the light is observed directly. Eye shielding must be used at all times as well as clothing to protect exposed skin.



Warning

Always make sure the light guide is properly inserted into the UV-Cure 100 prior to turning on power to the unit. This will minimize the risk of exposure to the UV light.



Warning

To reduce the risk of fire or shock, always replace the fuses with the same type and rating.



Warning

Disconnecting of the main supply source is only possible by unplugging the power cord.



Danger

This unit contains HIGH VOLTAGE components. It is recommended that ONLY QUALIFIED TECHNICAL PERSONNEL perform any testing or repairs.



Monitoring the unit during manual operation

The level of UV energy supplied by the UV-Cure 100 is sufficient to ignite flammable substances. During manual operation, the unit must be attended at all times by a qualified operator. The unit must not be left unattended while turned on. If an operator leaves the work area of the unit, the lamp power switch must be turned off.



Monitoring the unit during Automated operation

The level of UV energy supplied by the UV-Cure 100 is sufficient to ignite flammable substances. Therefore, when the unit is operated unattended in an automated environment, an alarm function must be provided by the user to indicate a malfunction in the associated equipment used.



Warning

Hg – LAMP CONTAINS MERCURY, Manage in Accord with Disposal Laws, see: www.lamprecycle.org or 1-800-668-8752



Danger

When unpacking or installing the lamp, always wear protective clothing and a face mask. Operate lamp only in the UV-Cure 100 lamp housing. This prevents direct viewing of the arc and in the case of lamp bursting, contains the lamp particles. In the rare instance in which a lamp bursting occurs, and the mercury content is released, the following safety precautions are recommended: all personnel should be immediately evacuated from the area to prevent inhalation of the mercury vapor. The area should be well ventilated for a minimum of 30 minutes. After the lamp housing elements have cooled, the mercury residue should be collected with the use of a special absorbing agent available from laboratory equipment suppliers.



Warning

Should this UV-Cure 100 unit be used in a manner not specified by Epoxies, Etc..., the protection provided by the equipment may be impaired.



Warning

The method in which lamps are disposed of must comply with local rules & regulations for disposal of hazardous materials. Lamps may be returned to Epoxies, Etc... providing they are returned in its original packaging. Epoxies, Etc... will dispose of them in the appropriate manner.



Caution

The lamp module's operational life can be significantly shortened if it is handled incorrectly. Do not touch the bulb's glass envelope or the inside surface of the reflector. Skin oils can cause the lamp module to fail prematurely.



Caution

Prior to opening the unit and handling the lamp module, allow the lamp module to cool down completely (approximately 20 min).



Caution

Any electronic equipment connected to the UV-Cure 100 must be IEC950 certified.



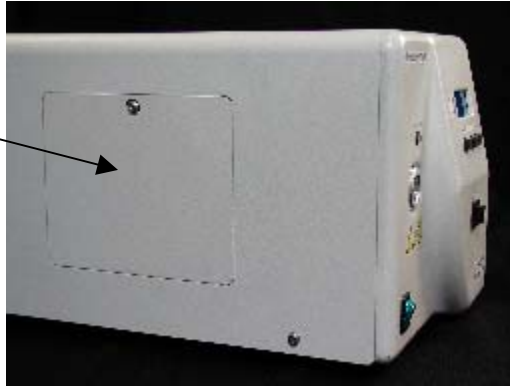
Cleaning:

Clean exterior of the unit with a water dampened cloth and simple detergent only.

4 Installing the Lamp Module

1. Be sure the AC power cord is disconnected from the unit.
2. Remove the screw from the lamp housing side panel using the hex tool provided and remove the panel from the unit cover.

Lamp housing panel



Tip: clips for holding the hex tool on the UV-CURE 100 are conveniently located underneath the system.

3. Carefully remove the lamp module from its container, holding only the ceramic components.

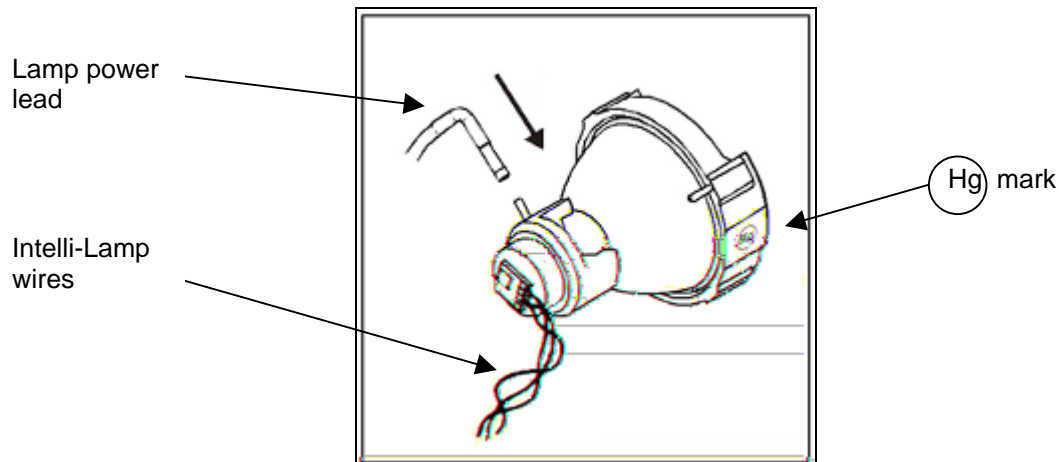


Caution!

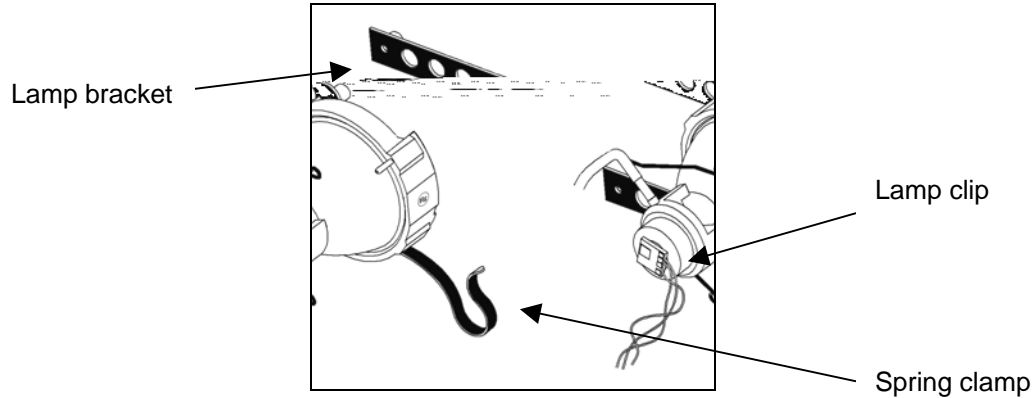
The lamp module's operational life can be significantly shortened if handled incorrectly. Be sure only to handle the ceramic surfaces. Do not touch the bulb's glass envelope or the inside surface of the reflector. Skin oils can cause the lamp module to fail prematurely.

4. With the lamp facing towards the front of the unit and the (Hg) mark on the lamp facing toward you, attach the lamp power lead to the back connector post.

Tip: the two terminals are sized differently making it impossible to inadvertently connect the lamp module power leads incorrectly



5. With the lamp clip open, position the lamp so that the two leading edges of the lamp ceramic mount slide into the groove of the lamp bracket. The back lamp connector post will be pointing in to the unit. The middle of the lamp should be in position to fit into the spring clamp.

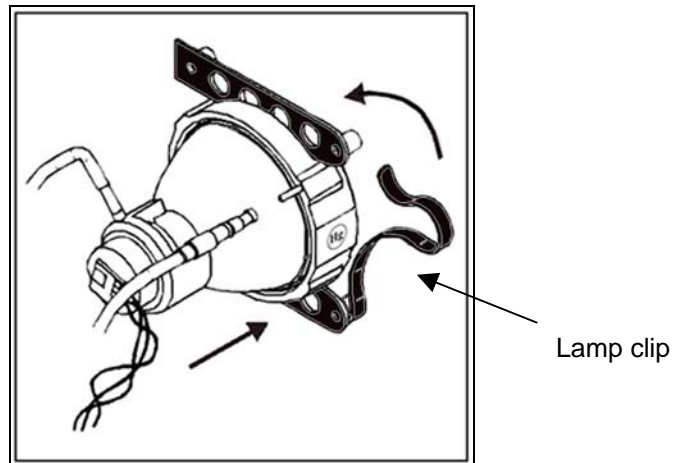


Tip: Make sure that the **Hg** mark on the lamp is facing outwards before trying to insert the lamp.

6. Slide the lamp all the way in so that both leading edges of the lamp ceramic mount are in the groove of the lamp bracket. The middle of the lamp will snap into the spring clamp.

Note: make sure that the lamp power lead does not slide in between the spring clamp and the lamp. The power lead should be outside of the spring clamp.

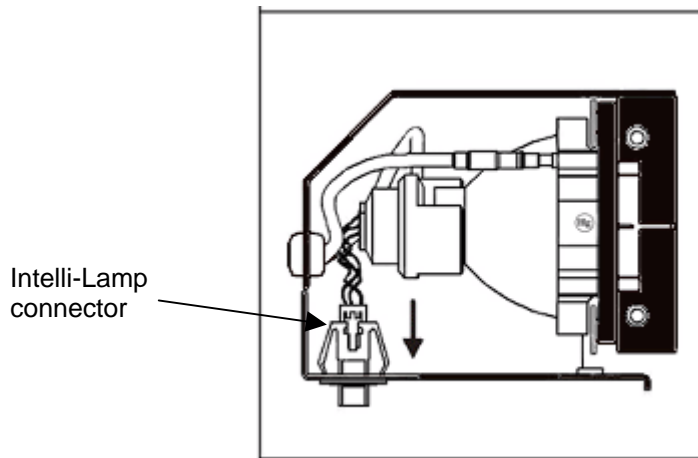
7. Attach the 2nd lamp power lead to the front connector post. Push the lamp clip closed to secure the lamp in place and insure proper alignment.



Tip: the two terminals are sized differently making it impossible to inadvertently connect the lamp module power leads incorrectly.

8. Locate the 3-pin Intelli-Lamp sensor connector at the rear of the lamp module and connect it to its mate located on the lamp-housing wall.

Tip: the Intelli-lamp connector will only attach in the correct orientation. If you are having difficulty attaching the connector, try rotating it by 180°.



Note: if the Intelli- lamp connector is not installed correctly, the lamp will not strike and the “**bulb**” message will display when power is turned on to the unit.

9. Replace the lamp housing side panel and tighten the fastening screw.

Note: if the lamp housing panel is not secured completely the lamp will not strike and the “**bulb**” message will display when power is turned on to the unit.

10. Replace the hex tool in the clips underneath the system.

5 Inserting and Removing the Light Guide

1. Ensure that the protective end caps are removed from both the input and output ends of the light guide prior to installation.
2. Insert the light guide into the light guide port located on the front panel of the unit. Push the light guide in until it seats with a second positive "click".

Tip: When the light guide is fully inserted, the LED above the light guide port will illuminate green when power is on to the unit. If the light guide is not fully inserted the LED will illuminate red.

Note: the shutter will not open if the light guide is not inserted properly.

3. During installation or removal, grasp the light guide on the strain-relief nearest the input end of the light guide.

Note: never grip the light guide during installation or removal in a place other than the strain relief portion of the light guide.

4. To remove the light guide, firmly grip the strain relief near the light guide retainer and pull out firmly.

Note: the UV-Cure 100 is designed for use with Epoxies, Etc... light guides. Epoxies, Etc... can not guarantee the performance of the UV-CURE 100 if using light guides other than those supplied by Epoxies, Etc....

6 Powering Up and Powering Down

1. Plug the UV-Cure 100 unit into a properly grounded AC outlet.
2. Ensure that the lamp and light guide have been properly installed and that the lamp housing panel is securely fastened.
3. Turn on the mains power switch, located on the front panel and check the fan for airflow.
4. The lamp will automatically turn on within 20 seconds and the LAMP indicator will illuminate. The display will flash during the warm up period of 90 seconds. The display will stop flashing when the warm up period has finished. Wait until the warm up period has completed before using the UV-CURE 100 to perform an exposure.

Note: *If the lamp is turned off, and an attempt is made to turn it back on before it has fully cooled, the “cool” message will appear on the display. The lamp will automatically re-strike when the lamp has cooled.*

5. To power down the unit, turn off the mains power switch, located on the front panel.

7 Adjusting the Light Output

Your UV-CURE 100 system includes an iris adjustment to control the amount of light output from the unit. Adjustments to the output can only be made when the UV-Cure 100 unit is in Intensity Mode.

1. Set your UV-Cure 100 to Intensity Mode by pressing the Mode button until the LED display shows only three (3) digits (XXX). The three digit number shown will indicate the percent iris opening.
2. Press the START /STOP button to open the shutter. The OPEN indicator will illuminate.



Warning

UV light will be emitted from the light guide. The light could severely damage the cornea and retina of the eye if the light is observed directly. Eye shielding must be used at all times as well as clothing to protect exposed skin.

Note: *the shutter will not open if the light guide is not inserted properly.*

3. Press the UP button to increase the light output or press the DOWN button to decrease the light output. The % iris opening displayed will increase or decrease by 1 for each time the UP or DOWN button is pressed.
4. For coarse adjustments, press and hold the UP or DOWN button to rapidly increase or decrease the light output.
5. Press the START /STOP BUTTON to close the shutter. The OPEN indicator will dim.

Note: *While in Intensity Mode, pressing the START/STOP button will manually open the shutter until the START/STOP button is pressed again to close the shutter.*

8 Locking and Unlocking the UP/DOWN Adjustment Buttons

Your UV-CURE 100 system allows you to disable the UP/DOWN buttons. When the system is locked, no modifications to the set time or the set iris level can be made. This can help to ensure process control when multiple operators are using the same equipment.

To Lock the UP/DOWN buttons:

1. Push and hold the MODE button
2. While pressing the MODE button, press the following sequence of buttons:
DOWN - UP – UP – UP.
3. After 2 seconds the message “**LOC**” will appear for 2 seconds. While the system is locked, only the MODE button and the START/STOP button will function. If the UP or DOWN button is pressed, the ”LOC” message will appear for 2 seconds.

To Unlock the UP/DOWN buttons:

1. Push and hold the MODE button
2. While pressing the MODE button, press the following sequence of buttons:
DOWN - UP – UP – UP.
3. After 2 seconds the message “**ULOC**” will appear for 2 seconds. When the system is unlocked, all of the front panel buttons will perform their respective functions.

9 Timed Exposures

Your UV-CURE 100 system includes a timer to automatically close the shutter after a user selected amount of time. Adjustments to the exposure time can only be made when the UV-CURE 100 unit is in Timer Mode.

9.1 Adjusting the Exposure Time:

1. Set the system to Timer Mode by pressing the Mode button until the four digits are displayed with the "." (decimal) located to the left of the furthest right digit. The number shown will indicate the exposure time in seconds and tenth of seconds (XXX.X).
2. Press the UP button to increase the exposure time by 1/10 sec, or press the DOWN button to decrease the exposure time by 1/10 sec.
3. For coarse adjustments, press and hold the UP or DOWN button to rapidly increase or decrease the exposure time.

9.2 Running a Timed Exposure:

1. Set the system to Timer Mode by pressing the Mode button until the four digits are displayed with the "." (decimal) located to the left of the furthest right digit. The number shown will indicate the exposure time in seconds and tenth of seconds (XXX.X).
2. Press the START /STOP button. The shutter will open and the exposure time will begin to count down. When the exposure time has elapsed to zero, the shutter will close.

Note: *The OPEN indicator will illuminate when the shutter is open.
The shutter will not open if the light guide is not inserted properly.*

To stop a timed exposure from running, press the START /STOP button. The shutter will close and the exposure time will reset. The OPEN indicator will dim.

10 Using the Footpedal / Remote Device

To use a footpedal or other compatible remote device to control the shutter on your UV-CURE 100 system, insert a 3.5mm audio style plug into the jack located on the rear panel.

Note: any connections to the remote jack must use a shielded cable

Depressing the footpedal, or providing a momentary contact closure, will provide the same function as pressing the START/STOP button. The shutter will open as per the current mode (Intensity, Timer or Lamp Hour) of the unit.

The footpedal connector, a 3.5mm audio style jack, has the following pin-out:

Connection Point	Signal Name
Outer rim	Common (GND)
Center pin	Positive input, active low

11 Viewing the Accumulated Lamp Hours

Your UV-CURE 100 system automatically accumulates the number of hours that the lamp is on and shows this information on the LED display. The lamp hours are shown when the unit is in Lamp Hour mode.

1. Set your UV-Cure 100 to Lamp Hour Mode by pressing the Mode button until the four digits are displayed with the flashing "." (decimal) located to the right of the furthest right digit. This shows the accumulated number of hours the lamp has been on. (XXXX.)

Note: Pressing the START/STOP button while in Lamp Hour mode will open the shutter for the set Exposure Time

12 Messages / Indicators

The UV-Cure 100 display and LED indicators provide information to the user to aid in unit operation and to advise when certain conditions exist. The following is a collective listing of messages and their meanings.

1. "XXXX."

A flashing decimal point to the right of the four numbers on the display advises the user that the unit is in Lamp Hour Mode. See Section 10, Viewing the Accumulated Lamp Hours.

2. "XXX.X"

A decimal point to the left of the furthest right digit of the four digits on the display indicates the unit is in Timer Mode. The number shown will indicate the exposure time in seconds and tenth of seconds. See Section 9, Timed Exposures.

3. " XXX "

Three digits on the display indicates unit is in Intensity Mode. The three digit number shown will indicate the percent iris opening. See Section 8, Adjusting the Light Output.

4. "bulb"

The "bulb" message advises the user that the bulb has failed to ignite or extinguished after striking.

If the bulb message appears immediately and is accompanied by an audible beeping, this indicates that the lamp has not been installed correctly or that the wrong bulb type has been installed. See Section 5, Installing the Lamp Module.

If the bulb message appears after about 25 seconds and is accompanied by an audible beeping, this indicates that the lamp has failed to strike. It may be a result of the lamp reaching end of life, that the lamp-housing panel is not secured properly in place or that the lamp temperature has exceeded its limit. Press the START/STOP button to clear the audible alarm. Turn power off to the unit. Check that the lamp-housing panel is secured properly in place and check to see if the external air filter needs replacing. Wait a few minutes and turn power on to the unit. If it still does not strike, replace the lamp.

5. " old / bulb"

The "old" and then "bulb" message appear in alternating sequence for about 10 seconds when power is first turned on to the unit if the accumulated lamp hours have reached 2000 hours. When this message occurs, it is recommended that the lamp be replaced soon.

6. " end / bulb"

The "end" and then "bulb" message appear in alternating sequence when power is first turned on to the unit if the accumulated lamp hours have reached 4000 hours. This indicates that the lamp has reached the end of safe life. If the lamp hours reach 4000 hours, safety measures will prevent the lamp from striking or extinguish the lamp if it is running. The lamp must be replaced at this point.

7. "cool"

The "cool" message advises the user that the lamp must cool down before re-ignition. It appears on the display when power is turned on to the unit and the lamp is too hot to strike. Striking the lamp when it is too hot will significantly reduce lamp life. The lamp will automatically strike once it has reached optimum temperature.

8. "LOC"

The LOC message appears for about 2 seconds when the UP/DOWN adjustments are initially locked. It also appears if the up or down button is pressed while they are locked, advising the user that these functions are locked out. See Section 11 – Locking and Unlocking the UP/DOWN Adjustment Buttons.

9. "ULOC"

The ULOC message appears for about 2 seconds after unlocking the UP/DOWN adjustment buttons to advise the user they have been unlocked. See Section 11 – Locking and Unlocking the UP/DOWN Adjustment Buttons.

10. "SFI"

The "SFI" message appears if there is a shutter failure. The lamp will shut down when a shutter error occurs. Power down the unit, wait a few minutes and turn power on to the unit. If the unit displays a shutter failure again, contact your local Epoxies, Etc... Service Center to have your unit serviced.

11. LAMP

The LAMP indicator is the top of two green LED's located to the left of the display. The LAMP LED illuminates when the lamp is on. The LAMP LED will flash when the lamp is warming up.

12. OPEN

The OPEN indicator is the bottom of two green LED's located to the left of the display. The OPEN LED illuminates when the shutter is open.

13. LIGHT GUIDE

The LIGHT GUIDE indicator is located above the light guide port. The LIGHT GUIDE indicator will illuminate green when the light guide is properly installed and will illuminate red when there is no light guide installed or the light guide is not fully inserted.

13 Clearing an Audible Alarm




The UV-Cure 100 provides an audible alarm to alert the user of various error conditions.

To clear the audible alarm:

1. Press the START/STOP button

Note: *Depressing the footpedal, or providing a momentary contact closure, will clear an audible alarm, same as pressing the START/STOP button.*

14 Routine Care and Maintenance

-  1. Operate the unit in a well ventilated area with at least six inches clearance at the rear of the unit for proper air flow. Do not place any objects below the unit, between the feet as this will restrict airflow through the bottom of the front face plate.
-  2. For safe operation, use only a grounded outlet.
3. Avoid physical shocks or jarring to the unit especially while the unit is operating. Such sudden movements reduce the lamp module life.
4. The lamp module must be operated for a minimum of 20 minutes each time it is turned on to prevent damaging the lamp. Increasing the time between turning the lamp module on and off will maximize lamp life.
-  5. Replace the air filter, found under the front face plate, frequently to ensure unrestricted air flow.
Note: *restricted airflow can cause the lamp temperature to increase above optimum temperature, significantly reducing lamp life.*
6. When necessary, clean the light emitting end of the light guide using an optical cleaning solution.
7. Cleaning of unit is not required for proper operation of the unit. If cleaning is desired, disconnect the AC power cord from the unit and use only a water and simple detergent solution. Ensure that cleaning solution does not come in contact with any optical, moving mechanical or electrical parts.

14.1 Replacing the External Fuses



The external (mains) fuses are located in the fuse drawer which is located in the AC inlet module on the rear panel.

1. Turn off the main power switch and remove the AC power cord from the unit.
2. Gently pull out the drawer with the aid of a flat-head screwdriver.
3. Gently lever one end of the blown fuse up from its retaining clip with a small flat-head screwdriver and lift it out.
4. Replace the damaged fuse(s) with the same type and rating (F4A, 250V). The rear compartment must contain two active fuses.
5. Close the fuse drawer.
6. Reconnect the AC power cord.



14.2 Replacing the Air Filter



The external air filter is located under the front face plate of the UV-Cure 100.

1. Turn off the main power switch and remove the AC power cord from the unit.
2. Gently slide and pull out the filter.
3. Push in the replacement filter so that it sits flat in place

14.3 Replacing the Bandpass Filters

The UV-Cure 100 includes a bandpass filter to limit the wavelengths of light for your application. There are 5 bandpass filters available, which are selected at the time of purchase:

<u>Part #</u>	<u>Description</u>
P019-01036	Filter 365 nm
P019-01037	Filter 250-450 nm
P019-01038	Filter 400-500 nm
P019-01039	Filter 320-390 nm
P019-01040	Filter 320-500 nm

The bandpass filter currently installed on your UV-Cure 100 system will be identified on a label located on the back panel of the system. To change the bandpass filter, the system must be returned to your local Epoxies, Etc... Service Center. See section 16.1 – Contact Information to find the nearest service center.

15 Troubleshooting



Service to be completed by qualified repair personnel only!

If the unit fails to power up or function properly, use the following checklist to eliminate the most common causes of problems. Check that:



1. The AC power cord is securely plugged into a functional AC wall plug.



2. The AC power cord is securely plugged into the AC inlet on the rear of the unit.

3. The mains AC power switch is in the ON position.

If the LED display lights and the fan starts, but the lamp will not turn on, check that:

1. The LED display indicates the “**bulb**” message and the system begins to beep. This indicates that no lamp is detected. Check if the lamp has been installed correctly. Refer to Section 5 – Installing the Lamp Module.
2. The LED display indicates the “**bulb**” message after a 20 or 30 sec. delay and the system begins to beep. This indicates that the lamp has failed to strike. It may be a result of the lamp reaching end of life, that the lamp housing panel is not secured properly in place or that the lamp temperature has exceeded its limit. Press the START/STOP button to clear the audible alarm. Turn power off to the unit. Check that the lamp housing panel is secured properly in place and check to see if the external air filter needs replacing. Wait a few minutes and turn power on to the unit. If it still does not strike, replace the lamp.
3. The LED display indicates the “**cool**” message. This indicates the lamp is too hot to strike. The lamp will automatically strike when it has cooled.

If the shutter does not open, check that:

1. The light guide is fully inserted; the LED above the light guide port will be illuminated green.
2. The LED displays “**SFI**”, indicating a shutter failure. Power down the unit, wait a few minutes and turn power on to the unit. If the unit displays a shutter failure again, contact your local Epoxies, Etc... Service Center to have your unit serviced.

If the light intensity is too low, check that:

1. The percent iris opening is set high enough. Put the unit into Intensity Mode and press the UP button to increase the iris opening. See Section 8 – Adjusting the Light Output.
2. There are no foreign substances on the emitting end of the light guide.
3. There are no bends, kinks, or other physical damage to the guide. Replace the guide if there is any physical damage.
4. The lamp has been installed correctly. See section 5 – Installing the Lamp Module.

It may be necessary to replace the lamp or to replace the light guide. Contact your sales representative for information on purchasing a new lamp or light guide.

If the LED display does not light:

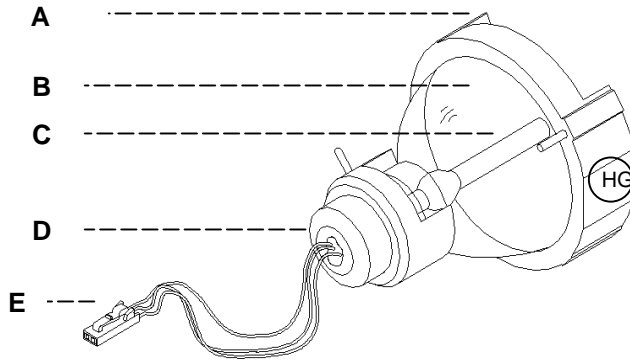
1. If the fan is functional, power down the unit, wait approximately 20 seconds then power it up again
2. If the problem persists, contact your local Epoxies, Etc... Service Center.

If the fan does not work:

1. If the LED display is functional, power down the unit, wait approximately 20 seconds then power it up again
2. If the problem persists, contact your local Epoxies, Etc... Service Center.

16 Technical Specifications

16.1 Lamp Module



A: Leading Edge of Ceramic Mount. **B:** Reflector. **C:** Bulb. **D:** Back Ceramic Mount
E: Intelli-Lamp Connector

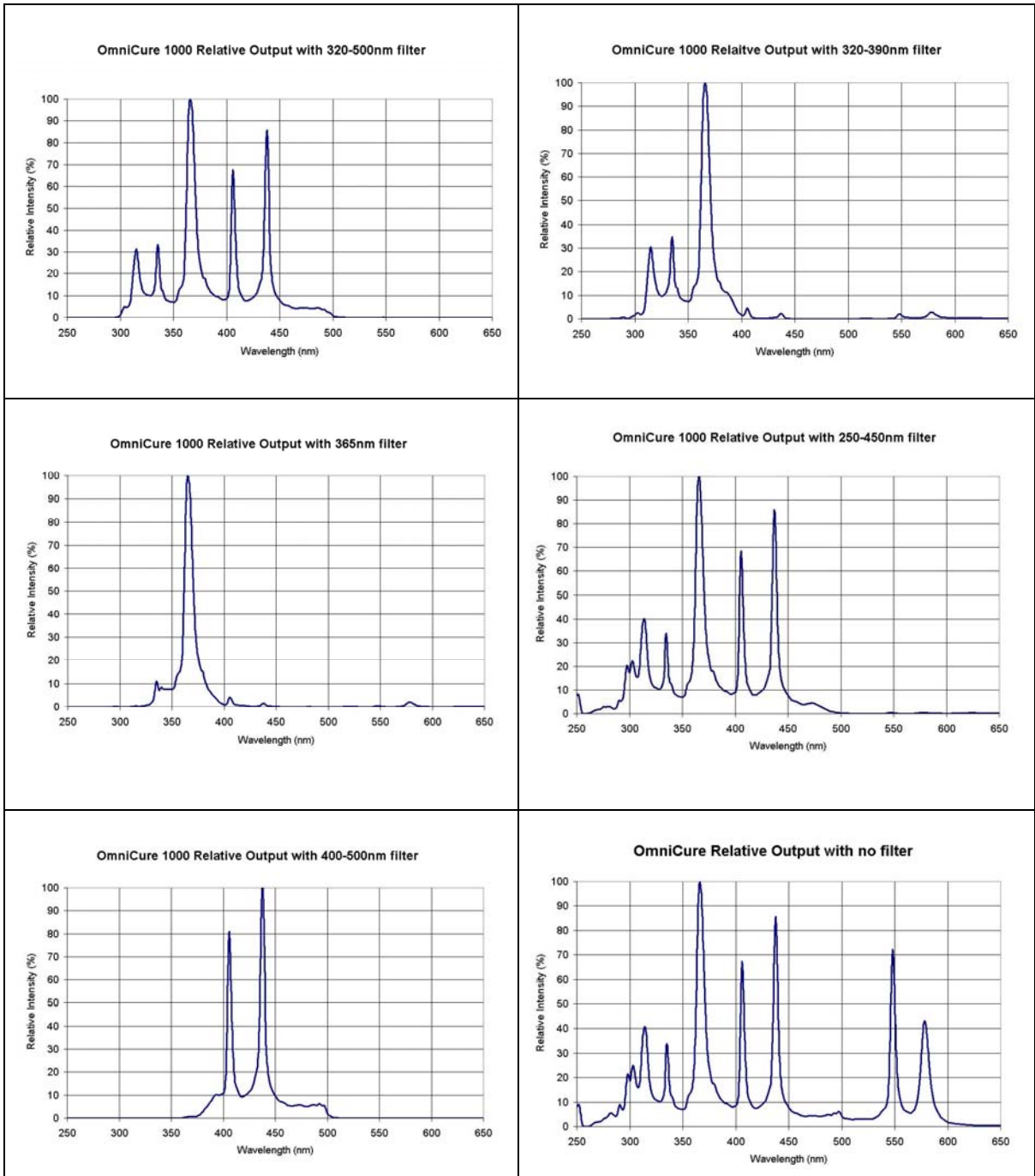
Lamp Module	High Pressure 100 Watt mercury short arc
Lamp Module Life	2000 hours (typical)
Warm Up	90 seconds (typical)
Lamp Voltage (new bulb)	24VDC +/- 4VDC
Lamp Voltage (range)	20VDC to 55VDC
Lamp Current	4A typical



Warning

The method in which lamps are disposed of must comply with local rules & regulations for disposal of hazardous materials. Lamps may be returned to Epoxies, Etc... providing they are returned in its original packaging. Epoxies, Etc... will dispose of them in the appropriate manner.

16.2 Optical Specifications

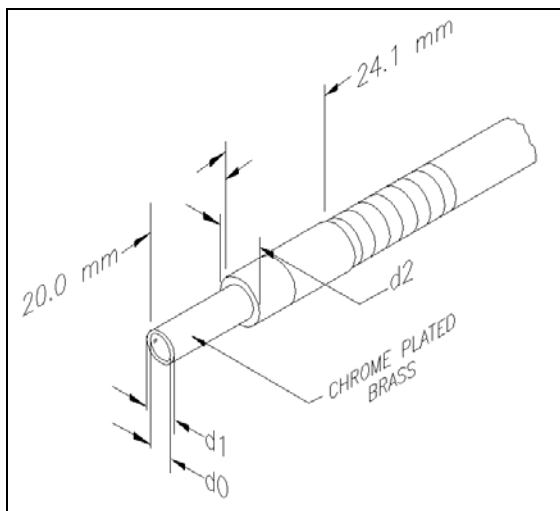


16.3 Light guide

Light Delivery

Flexible liquid filled or quartz fiber light guides are available in a variety of lengths with a variety of core diameters. Custom light guides configurations are also available.

Liquid Light Guide End Fitting



Typical Light Guide Dimensions in mm

Core	End Fitting	End Fitting	Minimum Bend Radius(mm)
d_0	d_1	d_2	
3	5	9	40
5	7	10	60
8	10	15	100

16.4 Power Input

Power Supply:	High efficiency, switch mode, constant power output
Input Voltage:	100-120VAC / 200-240VAC, 50/60Hz
Current:	2.4 – 1.0 (100/240VAC)
Input Surge:	50A max. (cold start)
Protection:	Short circuit auto-recovery Overvoltage (up to 135%, +/- 5% of nominal) EMI filtering integrated into the power supply Power supply has integrated thermal cutoff
Fuse Rating:	Dual fuse system: each fuse rated at F4A 250V (Fast acting type)

16.5 Environmental Conditions

Operating Temperature:	0°C to 40°C
Altitude:	2000m max.
Relative Humidity:	30% to 95% (non-condensing)
Overvoltage Category:	II
Pollution Degree:	2

16.6 Noise and the UV-CURE 100

Using the UV-CURE 100 in a Noisy Environment

What is Noise?

"Electrical noise" is a term used to describe unwanted electronic emissions. Noise is actually comprised of RFI (Radio Frequency Interference) EMI (Electro Magnetic Interference) and other similar sources of energy. Electronic equipment may behave in a non-standard manner (exhibit erratic operation) with the presence of high levels of noise. They will continue to behave erratically as long as the noise is present, unless protected with noise suppressors.

What are Sources of Noise?

Sources of noise are any electronic equipment which utilize or generate a high frequency AC current and voltage. Specifically, equipment such as metal halide arc lamps, mercury short arc lamps, xenon arc lamps, switch mode power supplies, pulsed lasers, x-ray equipment, welding equipment and RFI generators are a few classic examples of large noise producing equipment.

Determining the Noise Level in Your Environment

If the UV-CURE 100, along with other pieces of equipment, operate abnormally, in an intermittent or continuous manner, it is quite possible that large levels of noise are present. It is recommended that prior to installing the UV-CURE 100, the user examine any equipment nearby. If any of the equipment falls into the category of equipment listed above it is further advised that the user examine the ratings and description labels on each piece of equipment. Any equipment that does not have a label indicating that it meets either FCC, VDE or IEC EMI and EMC regulatory requirements is a possible noise source. If any equipment is deemed a noise source, or even suspected to be a noise source, then additional noise protection should be incorporated during the installation of the UV-CURE 100.

Shielding

Any wire or cable assembly entering or exiting the UV-CURE 100 may act like an antenna which will pick up noise and transmit it to the internal electronics. This may cause the UV-CURE 100 to operate erratically.

There are several ways in which the UV-CURE 100 can be shielded (protected). Epoxies, Etc... recommends the use of shielded cables for all cable assemblies: the AC line cord, the I/O cables and the foot switch. Furthermore, it is advised that clamp-on ferrite shield beads be added to every cable assembly. Suitable ferrite shield beads are: P/N: 0443164251 by Fair-Rite Products Corp. (or) P/N: 28A2025-0A0 by Steward.

Noise suppression products are also available in the form of power bars that incorporate surge suppression or noise suppression circuitry. Either type will help in protecting the UV-CURE 100 from noise. Providing the UV-CURE 100 with an AC line that is separate from any other noise producing equipment will also be beneficial.

Depending on the noise level in the environment, any combination or all of the above shielding recommendations may be necessary to protect the UV-CURE 100 from noise and ensure smooth operation. We can help you to shield the UV-CURE 100 from electrical noise. Please contact Epoxies, Etc... for further assistance.

16.7 Regulatory Compliance



Complies to the following directives/standards

Council Directive 73/23/EEC	Low Voltage Directive
Council Directive 89/336/EEC	EMC Directive
IEC 1010-1	1990-Safety Requirements for electrical Equipment for Measurement, Control and Laboratory Use Part 1.
IEC 1010-1-1992	Amendment 1
IEC 1010-1-1995	Amendment 2
EN 61010-1-1993	Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use.
CAN / CSA 1010.1-1992	Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use Part 1; General Requirements.
ANSI/UL 3101-1-1994	Electrical Equipment for Laboratory Use Part 1: General Requirements

FCC Class A Digital Device or Peripheral - Information to User

NOTE

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

WARNING

Changes or modifications not expressly approved by Epoxies, Etc... could void the user's authority to operate the equipment.

16.8 Mechanical Specifications

Dimensions

Height:	7.9"
Depth:	13.3"
Width:	7.1"
Unit Weight:	9.9lbs

16.9 Miscellaneous

Display:	1 line x 4 digit, LED, blue
Keypad:	3 button, tactile

Specifications may vary slightly and are subject to change without notice.

17 Warranty

Epoxies, Etc... warrants the original purchaser for a period of one (1) full year, calculated from the date of purchase, that the equipment sold is free from defects in material and workmanship.

In the event of a claim under this guarantee, the equipment is to be sent postage and carriage paid, including a description of the fault, to the Epoxies, Etc... Service Center. Returned equipment will not be received without a Return Authorization (RA) Number, issued by the appropriate Service Center.

In the case of damage caused by wear and tear, careless handling, neglect, by the use of force or in the case of interventions and repairs not carried out by an Epoxies, Etc... Service Center, the guarantee ceases to be valid. This guarantee may not form the basis for any claims for damages, in particular not for compensation of consequential damages.

The warranty is not transferable. No warranty is extended to perishable items, such as lamp modules, fuses, air filters and light guides.

17.1 Contact Information

In USA

Epoxies, Etc...
21 Starline Way
Cranston, RI 02921

Tel: (401) 946-5564
Fax: (401) 946-5526
Toll Free: 1-800-376-9437
e-mail: info@epoxies.com
www: www.epoxies.com

17.2 Returning your System to Epoxies, Etc...

1. Please make a note of the problem encountered, the steps followed to isolate the problem and the result of any trouble shooting steps taken.
2. Telephone the nearest Epoxies, Etc... Service Center to obtain a Return Goods Authorization (RGA) Number so that repairs may be completed quickly and efficiently.
3. Enclose details of the problem with the unit and return both to the Epoxies, Etc... Service Center. The unit should be returned in its original packaging if possible. Please do not ship the unit with the lamp installed.
4. Include a phone number and contact person who may be reached for any additional service-related questions.