

SPOTCURE-G

Ultra High Intensity L.E.D. UV Adhesive Spot Curing Light

The SpotCure-G high intensity LED UV adhesive curing light is designed for bench-top or portable use in various industrial applications. The system consists of a wall transformer, charging and storage base and the curing gun. The standard curing probe is 405nm wavelength with optional probes available in 365nm and 460nm wavelengths. The functionality of SpotCure-G is software driven by an onboard micro-controller. The operating power is derived from a Lithium-Ion battery stack mounted within the gun handle. The charging/storage base provides a constant current - constant voltage charging circuit for precise charging of the battery module. NEVER attempt to charge the batteries with any other charging device to avoid damage or potential explosion of the cells.

Operational Description

The SpotCure-G system employs high intensity, large chip UV light emitting diodes operating at the various available wavelengths to effectively cure a myriad of UV cured industrial adhesives. The optional probes that are available in different wavelengths simply replace the standard 405nm probe and do not affect the operational characteristics or any necessary electronic controls.

The UV probe is generally stored installed in the gun. Each of the available probes incorporate small spring plunger style electrical connectors to make contact to the power source. Care should be taken to prevent damage and/or substance contamination to these connectors which can result in malfunction.

Charging/Storage Base Operation

Insert the wall transformer cable input plug into the jack on the rear of the console. Plug the wall transformer into an appropriate outlet. DO NOT use any other wall transformer than that supplied with the system. The wall transformer supplies low current power to the charging circuit within the base. The charging circuit constantly monitors the battery charging function to prevent possible damage due to fast-charging or over-charging.

The curing gun should be charged for about 8 hours before initial use. Insert the handle of the gun into the charging base. A blinking time cycle indicator light will illuminate on the gun which is designed to confirm that electrical connection has been successful and that the batteries are charging. Since the batteries will remain charging constantly and slowly, charge progress is displayed by the 3 indicators on the charging base. The charging process is more fully explained in the paragraph entitled "Charging the Battery Module".

Curing Gun Operation

The SpotCure-G LED curing gun is equipped with time settings of 1, 10, 20 and 40 seconds to facilitate a variety of different curing procedures. The automatic default setting is 10 seconds. To operate the curing light, momentarily depress and release the trigger switch. The curing probe will illuminate and automatically go off after the time period selected. An audible tone signals time cycle end.

To select a different time setting, remove the curing gun from the charging base, depress the trigger switch and hold it depressed for at least 3 seconds. The 4 time duration indicators will simultaneously flash then begin to illuminate one at a time. From left to right the indicators are 10, 20, 40 and 1 seconds. The first three indicators are green and the last, 1 second indicator, is yellow. When the duration indicator reaches the desired time selection, release the gun trigger switch. The unit will remain in this time setting until reset by repeating the time selection process.

As mentioned previously, when the gun is properly connected in the charging base, a blinking indicator is illuminated. This is usually the first (10 second) indicator. However, if the time cycle has been changed from the 10 second default, then a different indicator will be blinking. This is normal and intended to permit memory retention of the time cycle selected.

Lithium-Ion batteries, as with most rechargeable cells, have a self-discharge characteristic that will slowly discharge the battery over extended periods of storage without charging. To prevent this problem, it is recommended that the curing gun be stored when not in use with the gun in the charging base and the base connected and operating. This will prevent any loss of charge and will not harm or degrade the battery capacity.

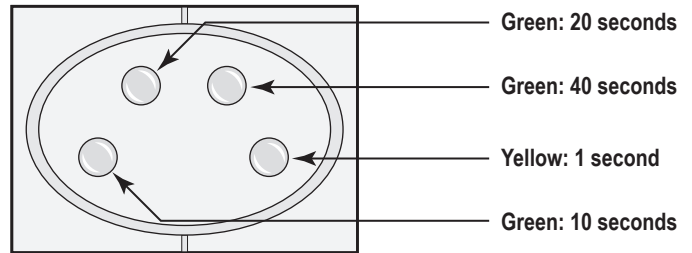
To further prevent non-use battery discharge, the software in the MCU is programmed to turn off the entire electronic circuit if the curing gun is not used and not connected to the charger for 30 minutes. After this 30 minute period, the circuit will go into "sleep" mode with all indicators off. To "wake-up" the circuit, simply momentarily depress the trigger switch or place the gun into the charger. After "wake-up", timing will revert to the default 10 seconds.

Changing Curing Probes

If it is desired, the curing probe may be changed to any other wavelength or optical configuration that is available for use with the SpotCure-G. The curing probes are cylindrical and constructed from aluminum with a stainless steel outer sleeve. Aluminum is necessary due to its high thermal transmission properties. However, aluminum is also a relatively soft material and the threaded end can be damaged easily. Care should be used when handling.

Unscrew the probe installed in the gun. Replace the probe with the desired unit being careful to avoid any cross-threading that could lead to damage. Screw the probe into the gun until a definitive stop is felt. This will insure that the spring loaded electrical contacts are properly seated. Do not over-tighten. Operating the gun should now illuminate the new probe.

Time Cycle Indicators

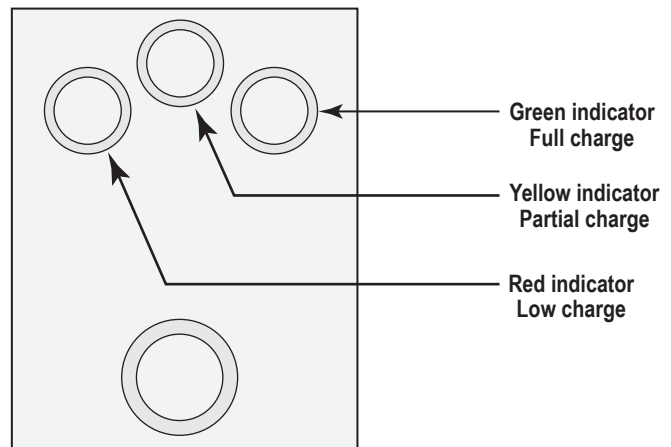



Charging the Battery Module

When the Lithium-Ion battery module reduces in voltage to a level that is low enough to possibly affect light output, one of the time cycle indicators will enter the blinking mode. Which indicator does this depends upon the time cycle that is in effect at that moment. Note that the indicator will only blink when the emitter is being used. When the emitter is off, there is no battery low indication.

If a battery low indication is noticed, return the curing gun to its charging base as soon as convenient. At this time there is still substantial battery energy left to keep the output at maximum for quite some time. When the curing gun is placed in the charging base properly, one of the time cycle indicators will begin blinking and one of the battery indicators on the base will illuminate indicating charging.

Battery Charge Indicators





CAUTION

- The UV LED during operation radiates intense UV light.
- Do not look directly into the UV light during operation of device. This can be harmful to the eyes even for brief periods due to the intense UV light.
- If viewing the UV light is necessary, please use UV filtered glasses to avoid damage by the UV light.
- If the UV LED in this product may be viewed directly, please affix a caution label to that effect.

Avoid direct eye exposure to UV light.
Keep out of reach of children