Loctite® Handheld LED Light Sources

Part Number 1427231 Model 7700 Light Source II
Part Number 98595 Model 7703 Light Source
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1. Please Observe the Following

1.1 Emphasized Sections

⚠️ WARNING!
Refers to safety regulations and required measures that protect the operator or other persons from injury or danger to life.

❗️ Caution!
Emphasizes what must be done or avoided so that the unit or other property is not damaged.

🚀 Notice:
Gives recommendations for better handling of the unit during operation or adjustment, as well as for service activities.

1.2 Items Supplied

- 1 Loctite® Handheld LED Light Source
- 1 AC Adapter/Charger
- 1 User’s manual
- 1 Orange Safety Glasses

1.3 For Your Safety

For safe and successful operation of the unit, read these instructions completely. If the instructions are not observed, the manufacturer can assume no responsibility. Be sure to retain this manual for future reference.

⚠️ WARNING!
While the Loctite® Handheld LED Light Source has minimal output in the UV-A range, the use of UV safety glasses that conform to ANSI Z87.1/CSA Z94.3 is recommended when operating the unit.

⚠️ WARNING!
Never directly expose skin to light source.

⚠️ WARNING!
Never look into the end of the light source.

⚠️ WARNING!
Damage to the AC Adapter/Charger power cord can result in contact with live electrical parts. Check the power cord before each use. If the power cord is damaged, do not operate.

The unit may be repaired only by a Loctite authorized service technician.

❗️ Caution!

This unit will heat up under certain operating conditions. The unit should not be left on continuously. Avoid operating the unit at duty cycles greater than 30% with on times of 15 seconds or greater. Longer exposure times are possible if the unit off time is increased to allow the unit to cool in between exposures. The unit has an internal mechanism that shut it off if a preset internal temperature is reached during operation.
1.4 Field of Application, (Intended Usage)
This Loctite® Handheld LED Light Source is designed for use with light cure products that cure when exposed to ultraviolet and/or visible light. The system can be operated manually or controlled with an external switch. The system is designed for intermittent duty cycle.

2. Description

2.1 Theory of Operation
The Loctite® Handheld LED Light Source utilizes a focused LED light source. The unit can be powered by its internal rechargeable batteries or directly from the AC Adapter/Charger, 989626. When the unit is switched on, the proper electrical power is supplied to the LED resulting in immediate full power. Curing will take place when the light is directed at the liquid adhesive. The time required to complete the curing process depends primarily on the offset distance from the end of the wand to the surface of the adhesive and the type of adhesive being used.

The exposure time can be controlled in either the manual mode or through the use of an external switch. The unit can be run from the rechargeable batteries or directly from AC power via the AC Adapter/Charger.

The unit should not be left on continuously. Avoid operating the unit at duty cycles greater than 30% with on times of 15 seconds or greater. Longer exposure times are possible if the unit off time is increased to allow the unit to cool in between exposures. The unit has an internal mechanism that shuts it off if preset internal temperature is reached during operation. Should this occur, the unit would not operate until the unit has cooled below this thermal limit.

The Loctite® Handheld LED Light Source can also be actuated by a remote foot switch, P/N 98440.
2. Description (continued)

2.2 Operating Elements and Connections, refers to Figure 1

1. Power Inlet Module
   Connect AC Adapter/Charger to power inlet module.

2. On/Off Switch
   Depressing the On/off Switch causes light to be irradiated from the unit.

3. External Switch Connection
   The Loctite® Handheld LED Light Source can also be actuated by an external foot switch, Loctite® P/N 98440.

4. Low Power/Thermal Limit Indicator
   When illuminated a red light will be visible by the on/off switch. This indicates that the battery charge has dropped below the charge needed to maintain acceptable output or that the unit has exceeded a pre-set internal operating temperature. The unit can be used while it is charging, however, it will take longer to reach its full charge. If the unit has exceeded its operating temperature, the unit should be allowed to cool prior to additional use.

![Figure 1](image-url)
3. Technical Data

3.1 Energy Requirements
Input Power: 100-240 VAC, 47-63 Hz

3.2 Dimensions
Width 1.0 inch
Depth: 0.75 inches
Height: 9.0 inches
Weight: 0.44 pounds

3.3 UV Output Characteristics

<table>
<thead>
<tr>
<th></th>
<th>7700 Units</th>
<th>7703 Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical Output *</td>
<td>2.5-3 W/cm²</td>
<td>2.5-3 W/cm²</td>
</tr>
<tr>
<td>Spectral Output Range</td>
<td>390 – 420 nm</td>
<td>Proprietary</td>
</tr>
<tr>
<td>Primary Peak</td>
<td>395 nm</td>
<td>Proprietary</td>
</tr>
</tbody>
</table>

* Values denote typical expected intensities at 4mm distance and are not a fixed specification. Exact output measurement is dependant on the brand and calibration method of the meter used, and normal variation of the Light Emitting Diodes. These measurements were made with a NIST traceable radiometer suitable for the target spectral range. As with all applications, testing with your specific part and adhesive is recommended.

4. Operating the Unit

4.1 Charging the Unit

**Caution!**
Be sure to charge the batteries for 12 hours prior to using the unit. Failure to completely charge the batteries may result in limited operation time before charging is required. Use only Loctite® Charger P/N 989626, to charge the unit. No other chargers will work and will damage the unit.
4. Operating the Unit (continued)

4.2 Recommended Installation and Operation
When operating in a hand held mode or permanently mounted, the following orientation should be observed.

Correct Orientation
To Mount and Operate

Horizontal Line

Do Not Mount More Than
5° Below Horizontal

4.3 Powering Up
1. Depressing the on/off switch on the unit causes the unit to emit light from the wand tip.

2. When the batteries are completely charged, the unit should operate for approximately 45 minutes at a 30% duty cycle.

Notice:
The unit should not be left on continuously. Avoid operating the unit at duty cycles greater than 30% with on times of 15 seconds or greater. Longer exposure times are possible if the unit off time between exposures is increased to allow the unit to cool. The unit has an internal mechanism that shuts it off if a preset internal temperature is reached during operation. Should this occur, the unit would not operate until the unit has cooled.
4. Operating the Unit (continued)

4.4 ON/Off Switch Warning – Low battery, High Temperature

A red indicator light will come on next to the on/off switch if the battery voltage gets too low or if the unit gets too hot for optimum operation. To determine which condition the warning is due to, connect the charger to the unit. The red light should shut off if the batteries are low when you actuate the on/off switch and you can continue to operate with the charger connected or allow the unit to charge for 12 hrs before using the unit without the charger connected.

If the red indicator light continues to illuminate once the charger has been connected and you depress the on/off switch, then the indicator light has come on because the optimum operating temperature of the unit has been exceeded. The unit will operate once it has sufficiently cooled below a pre-set limit.

Tips for cool operation:

1) Avoid operating the unit in a high heat area or near heat sources.

2) Place the unit on a cool surface in between cure cycles.

3) Place the unit in front of a fan in between cure cycles.

4) Mount the unit to a stand and direct air from a fan toward the unit.

5) Alternate using two units. When one reaches the temperature limit, place on a cooling surface and begin curing with the second unit. Alternate as needed during operation.

6) For mounted applications, a heat sink can be clamped to the unit to help dissipate heat.

4.5 Checking the Unit’s Output

To check the unit’s output, insert the LED tip directly into the 7700 LED/HD Tip Adapter 1403405 attached to the UV-V Radiometer Dosimeter 1265282. Hold the LED unit perpendicular and flush against the adapter plate. Irradiate the sensor for 5 seconds to check the system output.
4. Operating the Unit (continued)

4.6 Using Foot Switch

The Loctite® Handheld LED Light Source can also be actuated using a foot switch, P/N 98440. By depressing the foot switch, the light will turn on. Once the foot switch is released the light will turn off.

4.7 Replacing Batteries

After extended use, the rechargeable batteries may experience a diminished capacity for holding a charge. If the batteries need to be replaced, please contact Henkel Equipment Service Group at (800) 562-8483.

5. Care and Maintenance

Notice:
It is recommended that the light output from the light source be monitored regularly using a Loctite® UV-V Radiometer Dosimeter P/N 1265282 and 7700 LED/HD Tip Adapter P/N 1403405.

Caution!
It is recommended that the end of the light source be positioned no closer than 4mm (0.157 inch) from the Loctite® product being cured to minimize adhesive contamination on the light source tip. If adhesive should contaminate the light source tip, be sure to clean the light source tip to maximize the unit’s effective output.

Notice:
Vapors from some products may gradually accumulate on the end of the light source, reducing the light output. It should be inspected regularly and cleaned as necessary using isopropyl alcohol and a soft, clean cloth.
6. Troubleshooting

<table>
<thead>
<tr>
<th>Type of Malfunction</th>
<th>Possible Cause</th>
<th>Correction</th>
</tr>
</thead>
<tbody>
<tr>
<td>No light is irradiated from unit when on/off switch is depressed.</td>
<td>- Batteries are not charged.</td>
<td>• Plug unit into AC Adapter/Charger. Charge Batteries.</td>
</tr>
<tr>
<td>- Unit has exceeded thermal operating limit.</td>
<td>• Allow unit to cool</td>
<td>• Call 800-562-8483.</td>
</tr>
<tr>
<td>- Defective Switch.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No light is irradiated from unit when on/off switch is depressed. Red light is seen</td>
<td>- Batteries have too little charge to power unit.</td>
<td>• Plug unit into AC Adapter/Charger. Charge batteries.</td>
</tr>
<tr>
<td>around circumference of on/off switch.</td>
<td>- Unit has exceeded thermal operating limit</td>
<td>• Allow unit to cool</td>
</tr>
<tr>
<td>All system functions appear to be operating, but the product does not cure completely,</td>
<td>- End of light guide has an accumulation of product or other contaminants</td>
<td>• Clean light guide with soft cloth and isopropyl alcohol.</td>
</tr>
<tr>
<td>or if a radiometer is used to monitor the UV output, the power is low.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7. Documentation

7.1 Replacement Parts and Accessories

<table>
<thead>
<tr>
<th>Loctite Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>98452</td>
<td>Safety Glasses</td>
</tr>
<tr>
<td>1265282 1403405</td>
<td>Loctite® UV-V Radiometer Dosimeter 7700 LED/HD Tip Adapter</td>
</tr>
<tr>
<td>98440</td>
<td>Foot Switch</td>
</tr>
<tr>
<td>98592</td>
<td>Remote mount heat sink and continuous duty power supply</td>
</tr>
<tr>
<td>960356</td>
<td>Timer</td>
</tr>
<tr>
<td>988774</td>
<td>Constant on plug</td>
</tr>
<tr>
<td>989626</td>
<td>Universal AC Adapter/Charger</td>
</tr>
<tr>
<td>8900494</td>
<td>LED Replacement Battery Kit</td>
</tr>
</tbody>
</table>
EQUIPMENT WARRANTY
For Loctite® Handheld LED Light Source

Henkel Corporation warrants, to the original purchaser for a period of 1 year from date of delivery, that the Loctite® Handheld LED Light Source sold by it is free from defects in material and workmanship. Henkel will, at its option, replace or repair said defective parts.

This warranty is subject to the following exceptions and limitations.

1. Purchaser Responsibilities – The Purchaser shall be responsible for:
   - Normal maintenance and minor adjustments of the equipment as outlined in the Equipment Manual.
   - Notification to Henkel of the need for warranty service.
   - Any cost of travel or transportation connected with warranty repair.
   - All cost associated with investigating or correcting any failure caused by the purchaser’s misuse, neglect or unauthorized alteration or repair.
   - All costs attributed to accident or other factors beyond Henkel’s control.

2. No warranty is extended to perishable items, such as:
   - Fuses
   - Switches
   - Batteries

3. The purchaser must provide proof of purchase (original sales receipt, includes price paid, date of purchase).

No warranty is extended to any equipment, which had been altered, misused, neglected or damaged by accident.

Henkel reserves the right to make changes in design and/or improvements to its equipment without obligation to include these changes in any equipment previously manufactured. Correction of defects by repair or replacement shall constitute fulfillment of all warranty obligations on the part of Henkel Corporation.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND IS THE SOLE AND EXCLUSIVE REMEDY FOR ANY CLAIM OF DAMAGES ARISING FROM ANY DEFECT IN THE LOCTITE EQUIPMENT. HENKEL SHALL HAVE NO LIABILITY FOR CONSEQUENTIAL DAMAGES OR PERSONAL INJURY, OR FOR LOSS, DAMAGE, OR EXPENSE, DIRECTLY OR INDIRECTLY ARISING FROM THE USE OF ITS PRODUCTS. NO AGENT, DISTRIBUTOR OR OTHER PARTY IS AUTHORIZED TO MAKE ANY WARRANTY ON BEHALF OF HENKEL, OR TO ASSUME FOR THE HENKEL CORPORATION ANY OTHER LIABILITY WITH RESPECT TO ITS PRODUCTS.