



EQUIPMENT Operation Manual



Loctite® LED Light Sources

Part Number 1427232 Model 7700-HD, LED Light Source II, 395 nm Peak
Part Number 98665 Model 7703-HD, >400 nm Pure Visible Light Source

TABLE OF CONTENTS

| | |
|---|-----------|
| 1. PLEASE OBSERVE THE FOLLOWING | 3 |
| 1.1 EMPHASIZED SECTIONS..... | 3 |
| 1.2 ITEMS SUPPLIED..... | 3 |
| 1.3 FOR YOUR SAFETY | 3 |
| 1.4 FIELD OF APPLICATION, (INTENDED USAGE)..... | 3 |
| 2. DESCRIPTION..... | 4 |
| 2.1 THEORY OF OPERATION..... | 4 |
| 2.2 OPERATING ELEMENTS AND CONNECTIONS | 4 |
| 3. TECHNICAL DATA..... | 5 |
| 3.1 ENERGY REQUIREMENTS | 5 |
| 3.2 DIMENSIONS..... | 5 |
| 3.3 UV OUTPUT CHARACTERISTICS..... | 5 |
| 4. OPERATING THE UNIT..... | 6 |
| 4.1 RECOMMENDED INSTALLATION AND OPERATION | 6 |
| 4.2 POWERING UP..... | 6 |
| 4.3 POWER ON- HIGH TEMPERATURE | 6 |
| 4.4 CHECKING THE UNIT'S OUTPUT..... | 6 |
| 4.5 USING FOOT SWITCH | 7 |
| 5. CARE AND MAINTENANCE | 7 |
| 6. TROUBLESHOOTING..... | 8 |
| 7. DOCUMENTATION..... | 8 |
| 7.1 REPLACEMENT PARTS AND ACCESSORIES..... | 8 |
| 7.2 INTERFACE AND CONTROL CONNECTIONS..... | 9 |
| 8. DECLARATION OF CONFORMITY..... | 10 |
| 8.1 RoHS For 883979 (98665) Indigo™ 7703-HD LED LIGHT SOURCE..... | 10 |
| 8.2 RoHS For 1427232 7700-HD Hand-held LED LIGHT SOURCE..... | 11 |
| 9. EQUIPMENT WARRANTY..... | 12 |

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® LED Light Source
- 1 AC Adapter/Charger
- 1 User's manual
- 1 Mounting Bracket
- 1 Tip Guard
- 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® 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 Henkel Corporation authorized service technician.

1.4 Field of Application, (Intended Usage)

This Loctite® 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 controlled with an external switch. The system is design for continuous duty.

2. Description

2.1 Theory of Operation

The Loctite® LED Light Source utilizes a focused LED light source. The unit can be operated from the AC Adapter/Charger, Item # 989929. When the unit is plugged in, the proper electrical power is supplied to the LED. Using an external footswitch or Interface, the switch is closed turning the LED on. 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 through the use of an external switch. The unit can be run from AC power via the AC Adapter/Charger.

The unit will run continuously if the external switch is closed. The unit has an internal mechanism that shuts it off if preset internal temperature is reached during operation. This should not normally occur, as the unit is equipped with an internal cooling fan. Should this occur, the unit would not operate until the unit has cooled below the thermal limit. Check to see if the fan is blocked or not running.

The Loctite® LED Light Source can be actuated by a remote foot switch, P/N 97201.

2.2 Operating Elements and Connections

1. Power Inlet Module

Connect AC Adapter/Charger to LED Curing Light.

Power On

Plugging in the AC adapter causes a Green Indicator to be irradiated at the rear of the unit. The Loctite® Handheld LED Light Source now can be turned on through the 9-Pin D connector located on the underside of the unit.

! Caution! Pins 3 and 4 maximum allowable current: 1A@30VDC

2. External Switch Connection and Remote LED On sensing

The Loctite® Handheld LED Light Source can be actuated by an external foot switch, Loctite® P/N 97201. The Loctite® Handheld LED Light Source also can be actuated by the wiring shown in section 7.2 Interface and Control Connections. When using the wired connector Interface, Pins 3 & 4 provide a contact closure that is normally closed, and open when power is applied. (see section 7.2) When the current through the LED is proper, the Blue indicator lights at the rear of the unit, as well as the contact closure on pins 3 & 4 occurs.

3. Technical Data

3.1 Energy Requirements

Input Power: 100-240 VAC, 47-63 Hz

Note: Only use the 989929 Power Supply, 7.5 volt Center Positive

3.2 Dimensions

Width 1.38 inches

Height: 2.00 inches

Length: 8.88 inches

Weight: 0.75 pounds

3.3 Output Characteristics

7700-HD Units

7703-HD Units

Typical Output *:

2.5-3 W/cm²

2.5-3.5 W/cm²

Spectral Output Range:

390 – 420 nm

>400 nm

Primary Peak:

395 nm

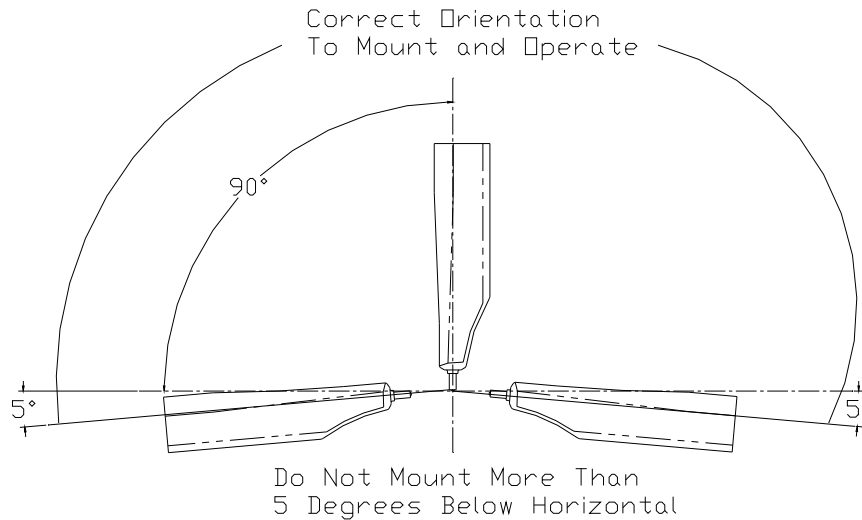
(proprietary)

* 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 Recommended Installation and Operation

1. When operating in a hand held mode or permanently mounted, the following orientation should be observed.



2. When using in a hand-held application, it is highly recommended to install provided Tip Guard over the light emitting tip.

4. Operating the Unit (continued)

4.2 Powering Up

1. Plug in the AC Power Adapter to the Wall Power and to the Loctite® LED Light Source. The Green Indicator at the rear of the unit should be illuminated.
2. Depress the footswitch. The LED should turn on and the Blue indicator at the rear of the Loctite® LED Light Source. The LED will emit light. When the Foot Switch is released the LED will stop emitting and the Blue indicator will go off.

4.3 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 by depressing the footswitch, to check the system output.

4.4 Using Foot Switch

The Loctite® Handheld LED Light Source can be actuated using a foot switch, P/N 97201. By depressing the foot switch, the light will turn on. Once the foot switch is released the light will turn off.

5. Care and Maintenance



Notice:

It is recommended that the light output from the light source be monitored regularly using a radiometer.



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. It is highly recommended that for hand-held applications, the provided Tip Guard be installed over the light emitting 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.



TIP GUARD
(REMOVE WHEN TAKING
INTENSITY MEASUREMENTS)

6. Troubleshooting

| Type of Malfunction | Possible Cause | Correction |
|---|---|--|
| No light is irradiated from unit when The foot switch is depressed. | - Unit may not Powered - Defective Foot Switch. | <ul style="list-style-type: none"> • Allow unit to cool • Call 800-562-8483. |
| No light is irradiated from unit when foot switch is depressed. Fan is not running. | - Unit has exceeded thermal operating limit | Call 800-562-8483 For unit Repair <ul style="list-style-type: none"> • Allow unit to cool |
| All system functions appear to be operating, but the product does not cure completely, or if a radiometer is used to monitor the UV output, the power is low. | - End of light guide has an accumulation of product or other contaminants | <ul style="list-style-type: none"> • Clean light guide with soft cloth and isopropyl alcohol. • For hand-held applications, use provided Tip Guard |

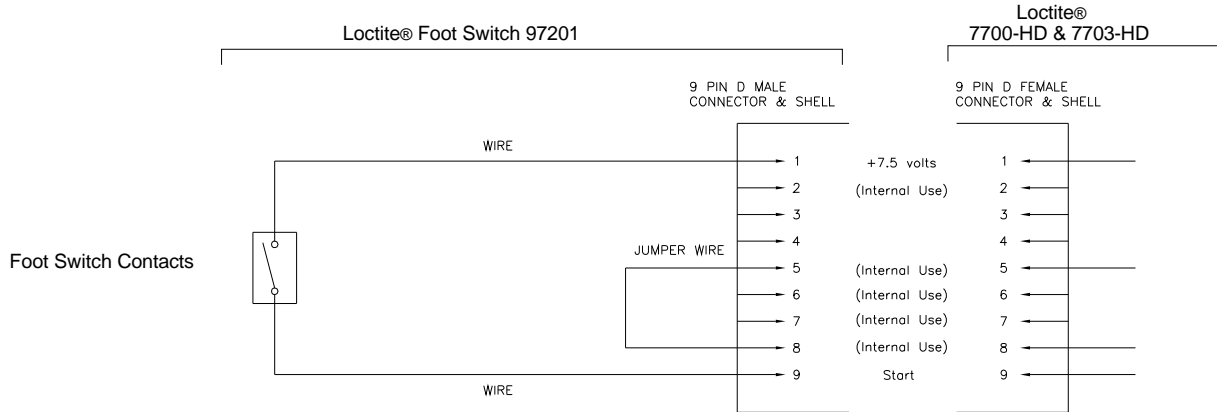
7. Documentation

7.1 Replacement Parts and Accessories

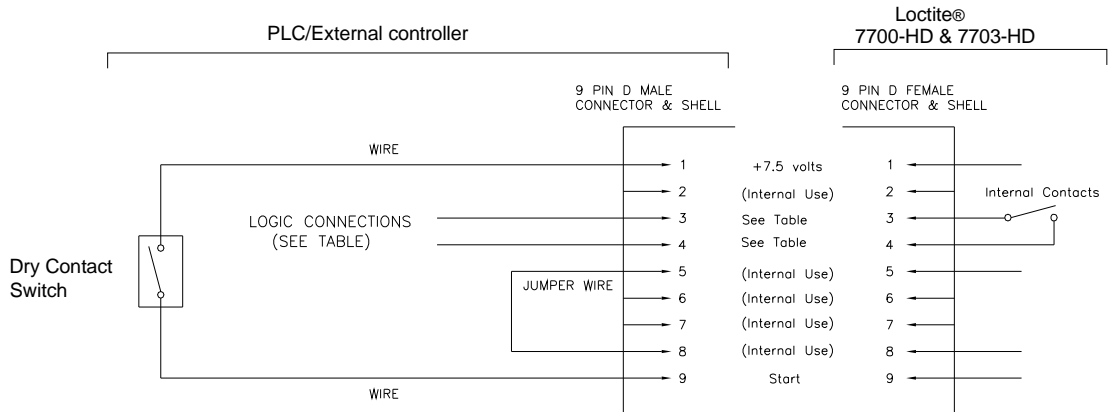
| Henkel Part Number | Description |
|--------------------|---|
| 717763 | 98452 Safety Glasses (Orange Color) |
| 1265282 1403405 | Loctite® UV-V Radiometer Dosimeter 7700 LED/HD Tip Adapter |
| 88653 | 97201 Replacement Foot Switch |
| 960356 | LED Cure Timer |
| 967055 | Tip Guard, 5 Pack |
| 989929 | Replacement Universal AC Adapter/Charger |
| 884024 | 8900550 D-Sub 9 Pin Male Interface Cable |

7. Documentation (continued)

Foot Switch Connections



Wired Interface Connections



Logic Table

| External Power Supply | External Switch | Curing Light | Contacts 3 & 4 | Indication |
|-----------------------|-----------------|--------------|----------------|------------|
| Off | Open | Off | Closed | Fault |
| Off | Closed | Off | Closed | Fault |
| On | Open | Off | Closed | Ready |
| On | Closed | On | Open | * In-Cycle |

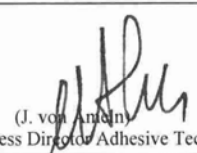
* Indicates Curing Light On, and at the proper Intensity, See Section 2.2 Item 3

7.2 Interface and Control Connections

Caution! Pins 3 and 4 maximum allowable current: 1A@30VDC

8. Declaration of Conformity

8.1 RoHS For 883979 (98665) Indigo™ 7703-HD LED LIGHT SOURCE

| Declaration of Conformity | |
|---|---|
| The Manufacturer according to the EC regulations | Henkel AG & Co. KGaA Standort München Gutenbergstr. 3 D-85748 Garching bei München |
| declares that the unit designated in the following is, as a result of its design and construction, in accordance with the European regulations, harmonized standards and national standards listed below. | |
| Designation of the unit | Loctite® Indigo 7703-HD LED Light Source |
| Unit number | 883979 |
| Applicable EC Regulations | EC Directive of RoHS 2002/95/EG |
| Authorized person for technical files | Henkel AG & Co. KGaA Standort München Gutenbergstr. 3 D-85748 Garching bei München |
| Garching, <u>07.04.11</u> |  (J. von Arnim) Business Director Adhesive Technologies |

| Konformitätserklärung | |
|---|--|
| Der Hersteller gemäß der EU-Richtlinien | Henkel AG & Co. KGaA Standort München Gutenbergstr. 3 D-85748 Garching bei München |
| erklärt, dass das nachfolgend bezeichnete Gerät auf Grund seiner Konzipierung und Bauart den unten aufgeführten europäischen Richtlinien, harmonisierten Normen und nationalen Normen entspricht. | |
| Bezeichnung des Gerätes | Loctite® Indigo 7703-HD LED Lichtgriffel |
| Gerätenummer | 883979 |
| Einschlägige EU-Richtlinien | U-Richtlinie RoHS 2002/95/EG |
| Bevollmächtigter für die technischen Unterlagen | Henkel AG & Co. KGaA Standort München Gutenbergstr. 3 D-85748 Garching bei München |
| Garching, <u>07.04.11</u> |  (J. von Arnim) Business Director Adhesive Technologies |

8. Declaration of Conformity

8.2 RoHS For 1427232 7700-HD Hand-held LED LIGHT SOURCE

| Declaration of Conformity | |
|---|--|
| The Manufacturer according to the EC regulations | Henkel AG & Co. KGaA Standort München Gutenbergstr. 3 D-85748 Garching bei München |
| declares that the unit designated in the following is, as a result of its design and construction, in accordance with the European regulations, harmonized standards and national standards listed below. | |
| Designation of the unit | LED Light Source 7700-HD, 390-420 nm, Type 98601 |
| Unit number | 1427232 |
| Applicable EC Regulations | EC Directive of RoHS 2002/95/EG |
| Authorized person for technical files | Henkel AG & Co. KGaA Standort München Gutenbergstr. 3 D-85748 Garching bei München |
| Garching, 04.04.14 |  (J. von Arnim) Business Director Adhesive Technologies |

| Konformitätserklärung | |
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| Der Hersteller gemäß der EU-Richtlinien | Henkel AG & Co. KGaA Standort München Gutenbergstr. 3 D-85748 Garching bei München |
| erklärt, dass das nachfolgend bezeichnete Gerät auf Grund seiner Konzipierung und Bauart den unten aufgeführten europäischen Richtlinien, harmonisierten Normen und nationalen Normen entspricht. | |
| Bezeichnung des Gerätes | LED Aushärtesystem 7700-HD, 390-420-nm, Typ 98601 |
| Gerätenummer | 1427232 |
| Einschlägige EU-Richtlinien | EU-Richtlinie RoHS 2002/95/EG |
| Bevollmächtigter für die technischen Unterlagen | Henkel AG & Co. KGaA Standort München Gutenbergstr. 3 D-85748 Garching bei München |
| Garching, 04.04.14 |  (J. von Arnim) Business Director Adhesive Technologies |

9. 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 or provide a credit of the purchased cost.

This warranty is subject to the following exceptions and limitations.

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

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