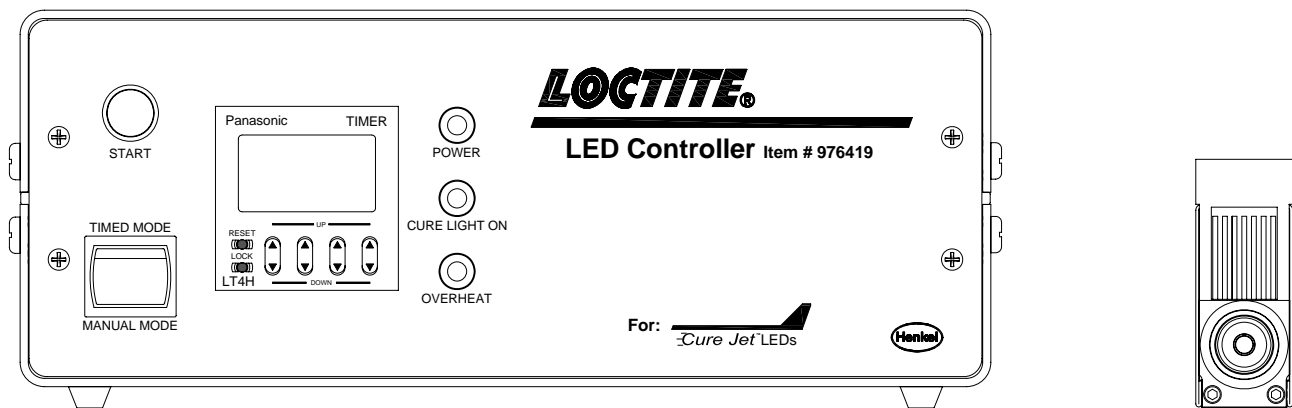




EQUIPMENT Operation Manual



Loctite[®] Cure Jet[™] LED System

For Use With:

Part Number 976419, LED Controller

Part Number 976420, Cure Jet[™] 405

Part Number 976418, Cure Jet[™] Indigo[™]



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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[®] Cure Jet[™] Controller
- 1 AC Power Cord
- 1 Foot Switch
- 1 Operation Manual
- 1 Side Mounting Kit

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[®] Cure Jet[™] LED Light Sources have minimal output in the UV-A range, the use of UV safety glasses that conform to ANSI Z87.1/CSA Z94.3 (Such as Loctite[®] P/N 98452) 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 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 authorized service technician.



Caution!

This unit will heat up under certain operating conditions. Do not obstruct the inlet to the cooling fan or the exhaust vents. Also, do not obstruct the fan inlets on the Cure Jet[™] or its exhaust. The unit has an internal mechanism that shuts it off if a preset internal temperature is reached during operation.

1.4 Field of Application, (Intended Usage)

The Loctite® Cure Jet™ LED System is designed for use with light cure products that cure when exposed to ultraviolet and/or visible light. The system can be operated manually, operated with the integrated timer, or controlled with an external switch. The system is designed for intermittent or constant duty cycle.

2. Description

2.1 Theory of Operation

The Loctite® Cure Jet™ LED System utilizes a focused LED light source (The Cure Jet™) and the LED Controller. The unit is powered by the AC line cord, 985470. 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 light source to the surface of the adhesive and the type of adhesive being used.

The exposure time can be controlled in either the manual mode, the use of the integrated control timer, or an external switch.

The unit has an internal mechanism that shuts it off if the preset internal temperature is reached in the Controller or the Cure Jet™ during operation. Should this occur, the unit would not operate until the unit has cooled below this thermal limit.

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

2.2 Operating Elements and Connections, refers to Figure 1

1. Manual Mode/Time Mode Switch

This switch changes the mode between timed (via the control timer setting) and manual control.

2. Start Button

Depressing the Start Button turns on the light. In Manual Mode, light will stay on until the button is released. In Timed Mode, the light will stay on until the control timer counts down to 0s.

3. Control Timer

The Control Timer may be programmed for any exposure length up to 999.9s. Once the desired exposure time is entered, hit Reset to save the value.

4. Power Indicator Light

When illuminated green, indicates that the power supply is functioning and the fans are on.

5. Cure Light On Indicator Light

When the Cure Jet™ curing light is on and functioning correctly, this light will illuminate blue.

2. Description (continued)

6. Overheat Indicator Light
If the Cure Jet™ LED System is overheating, this light will illuminate red.
7. Power Inlet Module
Connect AC Line Cord to power inlet module.
8. On/Off Switch
The On/Off Switch turns the controller power and the cooling fans on.
9. Fuse Holder
2 5x20mm 4 amp fuses are contained within.
10. External Switch Connection XS 1
The Loctite® Cure Jet™ LED System can also be actuated by an external foot switch, Loctite® P/N 97201.
11. To Cure Jet™ Connection
The Loctite® Cure Jet™ Controller must be connected to a Cure Jet™ LED to operate correctly. Use only Loctite® Cables P/N 1008352 or 1008353 for interconnect.

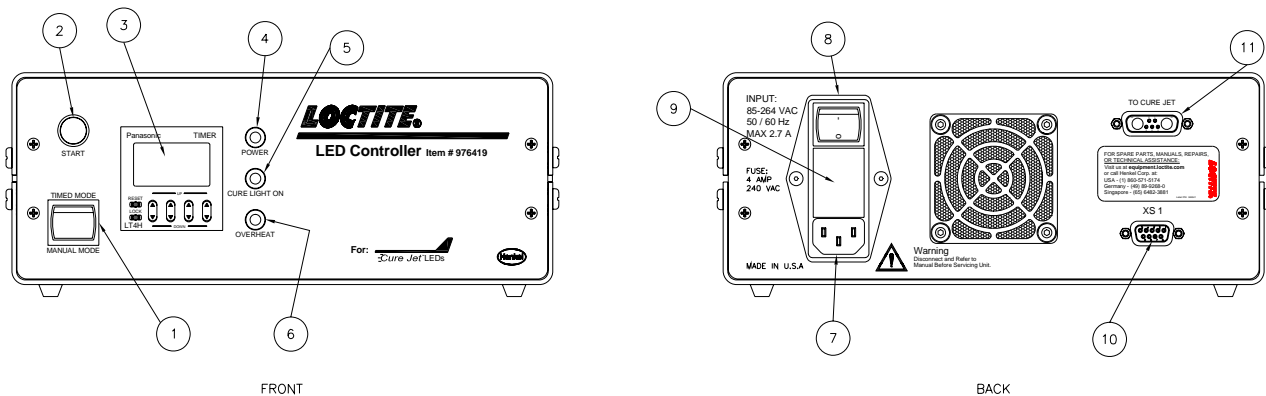


Figure 1

3. Technical Data

3.1 Energy Requirements

Input Power: 85-264 VAC, 50-60 Hz
Power Draw: 150 Watts
Inrush Current: 3 Amps

3.2 Dimensions (LED Controller)

Width: 10 inches
Depth: 9 5/8 inches
Height: 3 7/8 inches
Weight: 8 lbs

3.3 Dimensions (Cure Jet™)

Width: 1 inch
Depth: 10 1/8 inches
Height: 2 1/2 inches
Weight: 1 lb

3.4 UV Output Characteristics	405 Units	Indigo™ Units
Typical Output *:	1 W/cm ²	>4 W/cm ²
Spectral Output Range:	390 – 420 nm	Proprietary
Primary Peak:	405 nm	Proprietary

3.5 Operating Conditions

Max Operating Environment Temperature Approx 90°F (55°C)
Max Operating Environment Humidity 85% RH

(*Exact output measurement is dependent on the brand and calibration method of the meter used. These measurements were made with the Loctite® Zeta® 7011-V Dosimeter, P/N 98089 and the 10:1 Adapter, P/N 1007349 for the Cure Jet™ Indigo™.)

Note: For intensity measurements of LED devices emitting at the 405 nm wavelength, the Zeta 7011-V meter can be used to determine LED degradation. However, because the 405 nm wavelength is just outside the optimal absorbency range of the Zeta 7011-V, the reading could be lower than it actually is. Also, intensity readings from meter to meter may vary. That is to say, if two meters are used to measure the same LED device, the readings could be different. As long as the same meter is always used to measure the same 405 LED device, the Zeta 7011-V can be used to measure intensity degradation.

4. Operating the Unit

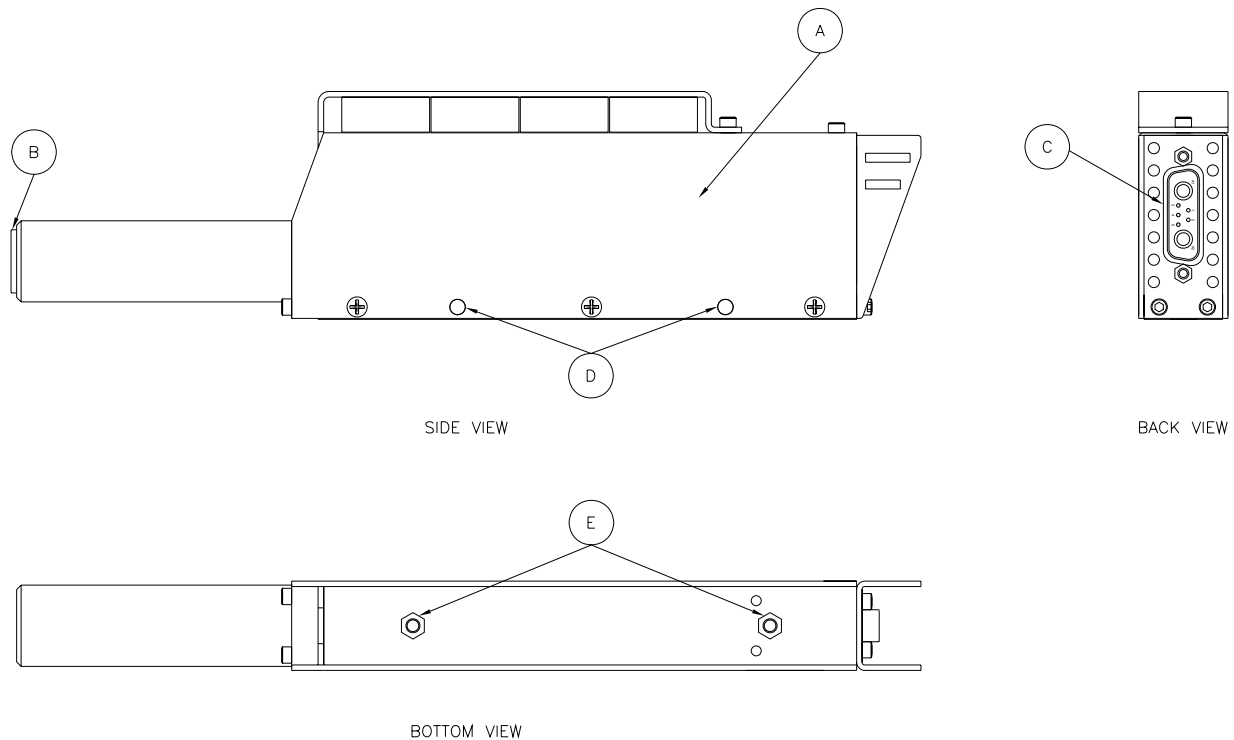


Figure 2

4.1 Installation, refers to Figures 1 and 2

1. Place the LED Controller on a flat sturdy surface.
2. If the Cure Jet™ will be operated from a fixed position, it may be mounted in the following manners:
 - A. Holes (D) on the sides of the Cure Jet™ are properly sized for M4 screws. If you wish to mount the Cure Jet™ to the side of the LED Controller, kit is included.
 - B. Tapped inserts (E) on the bottom of the Cure Jet™ are for M4 screws. Do not thread screws deeper than .25 inches (6.35mm).
3. Using either Loctite® Cables P/N 1008352 or 1008353, connect the Cure Jet™ to the LED Controller (Figure 2 Item C to Figure 1 Item 11).
4. If it will be used, plug in Foot Switch to LED Controller (Figure 1 Item 10).
5. Plug in AC Line Cord to LED Controller (Figure 1 Item 7).

4.2 Operation

1. Turn on the On/Off Switch on the back of the LED Controller unit (Figure 1 “8”).
2. Fans on both the Cure Jet™ and LED Controller unit should be on. The Power indicator light should be on.
3. If Timed Mode is desired, set Mode Switch (Figure 1 “1”) to Timed Mode and program the control timer (Figure 1 “3”) to the desired exposure time.
4. Depress Start Button (Figure 1 “2”) or Foot Switch to activate light.

4.3 Cure Light On Indicator

The LED Controller monitors the power delivered to the Cure Jet® light source to ensure proper operation. Whenever the Cure Jet™ is emitting light, the LED Controller will indicate that the system is operating properly by lighting this indicator blue.

4.4 Overheat Indicator

Both the LED Controller and the Cure Jet™ come equipped with temperature monitoring chips to ensure the system will not suffer damage from overheating. While the system is made for continuous operation, improper installation (either in an environment too hot, or obstructing the airflows) can cause either the LED Controller or the Cure Jet™ to overheat. Should this happen, the system will no longer turn the curing light on, and the Overheat Indicator will turn red.

4.5 Checking the Unit's Output

To check the unit's output, insert the LED tip directly into the 7011-V Dosimeter P/N 98089 (Cure Jet™ 405 units), or the 10:1 Adapter P/N 1007349 (Cure Jet™ Indigo™ units). Hold the LED unit perpendicular and flush against the adapter plate. Irradiate the sensor for 5 seconds to check the system output.



Notice:

The 10:1 Adapter reduces the light measurement by a factor of 10. Value read on the 7011-V should be multiplied by 10 for true value of intensity. 10:1 Adapter must be used in conjunction with the 7011-V for testing of Cure Jet™ Indigo™ units. Cure Jet™ 405 units may be tested with the 7011-V Dosimeter alone.

4.6 Using the Foot Switch

The Loctite® Cure Jet™ LED System can also be actuated using a Foot Switch, P/N 97201. By depressing the Foot Switch, the light will turn on. If the LED Controller is set to Manual Mode, the light will turn off when the foot switch is released. If the LED Controller is set to Timed Mode, the light will turn off when the control timer reaches 0s.

4.7 Using an External Controller

The LED Controller can communicate with an external controller (such as a PLC) via the XS 1 port (Figure 1 “10”). This port offers 2-way communication for actuation of the Cure Jet™ and relaying of pertinent information back to the PLC. There are 3 signals on the port: Start (NO), Overheat (NC), and Cure Light On (NO). See Figure 3 for wiring schematic.



Notice:

The current draw for the start signal is 2.5 mA. The max current rating on the Overheat and Cure Light On signal contacts is 200 mA.

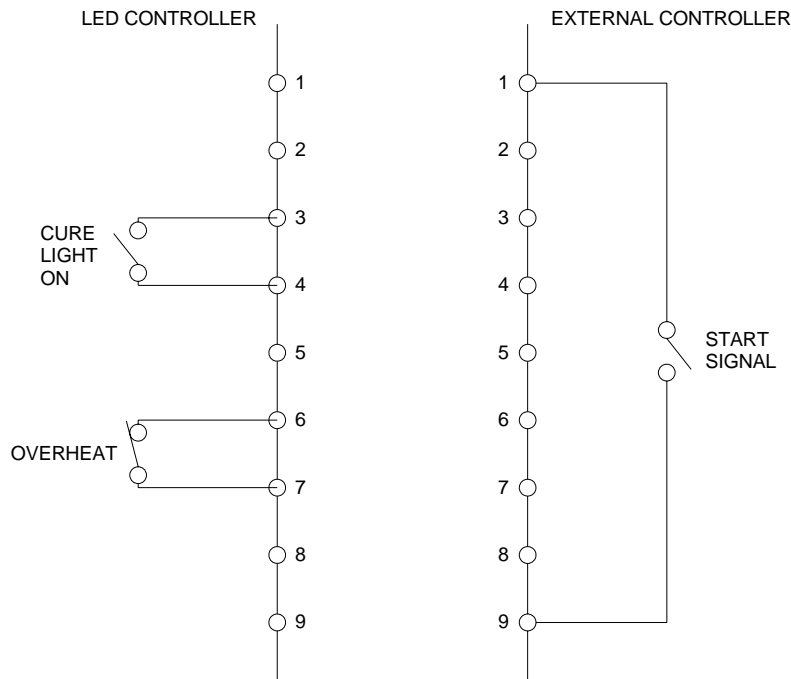


Figure 3. XS 1 Wiring Diagram

5. Care and Maintenance



Notice:

It is recommended that the light output from the light source be monitored regularly using a Loctite[®] Zeta[®] 7011-V Dosimeter, P/N 98089 and the 10:1 Adapter P/N 1007349 (Indigo[™] units only).



Caution!

It is recommended that the end of the light source be positioned no closer than 0.25" 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

Type of Malfunction	Possible Cause	Correction
No light is irradiated from unit when Start button is depressed.	<ul style="list-style-type: none">- Cure Jet™ not plugged in.- Unit has exceeded thermal operating limit (Red indicator light should be on).- Defective Pushbutton.	<ul style="list-style-type: none">• Plug Cure Jet™ into LED Controller.• Allow unit to cool.• Call 800-562-8483.
Light is irradiated from unit when Start button is depressed, but blue indicator light does not illuminate.	<ul style="list-style-type: none">- Cure Jet™ is not operating properly.- Defective indicator light.	<ul style="list-style-type: none">• Call 800-562-8483.
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.	<ul style="list-style-type: none">- 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.
Power Switch does not turn unit on.	<ul style="list-style-type: none">- LED Controller not plugged in.- Fuse is blown.- Defective Switch.	<ul style="list-style-type: none">• Plug AC line cord into LED Controller.• Replace fuses with 5x20mm 4 Amp fast blow fuses.• Call 800-562-8483.

7. Documentation

7.1 Replacement Parts and Accessories

Loctite Part Number	Description
98452	Safety Glasses, Orange
98089 1007349	Loctite® Zeta® 7011-V Dosimeter-Radiometer Dosimeter 10:1 Adapter Kit
97201	Foot Switch
985470	Shielded AC Line Cord
1025264	Loctite® Fiber Optic Light Guide Adapter

EQUIPMENT WARRANTY **For Loctite® CureJet™ System**

Henkel Corporation warrants, to the original purchaser for a period of 12 months from date of delivery, that the Loctite® CureJet™ System 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

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.

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