

Operation Manual

CA3100 Cure Chamber



Clearstone Technologies Inc.
625 St. Louis St., Unit 35, Hopkins, MN 55343, USA
Email: info@clearstonetech.com
Web: www.clearstonetech.com
Phone: (612) 824-4846

Introduction

This is the Operation Manual of the CA3100 UV LED Cure Chamber.

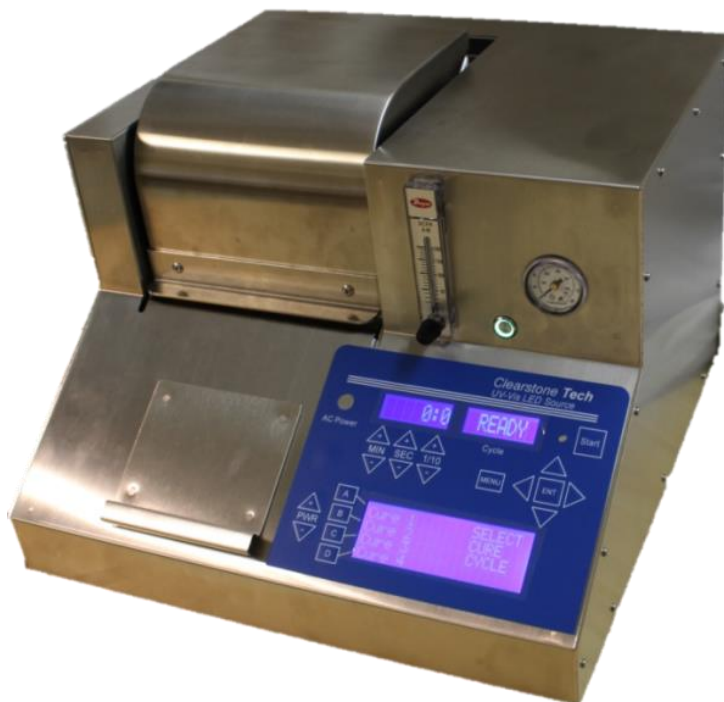
CA3100 Setup and Operation

Set Up the CA3100

- Place CA3100 on clean level surface. Avoid obstructing air vents on side or rear.
- Connect nitrogen hose to inlet on right side of the unit.
- Attach footswitch (optional) into 1/4" stereo jack on the right side of the unit.
Note: The footswitch duplicates the function of the Start button.
- Set pressure to desired level using the adjustment knob on the front of the unit.
- Plug one end of the AC power cord to the Back Panel of the controller and the other end to the wall plug energy source.

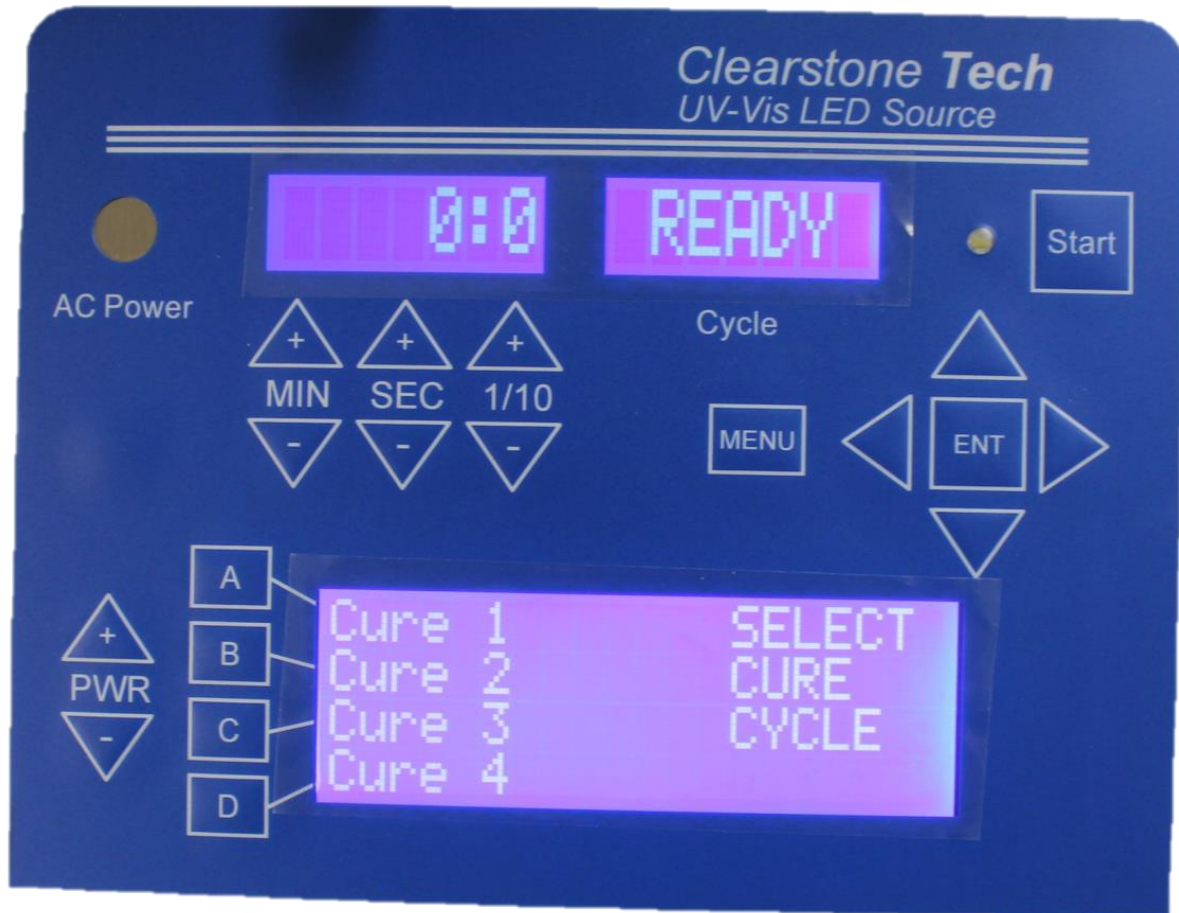
Turning on CA3100

- Plug one end of the AC power cord to the Back Panel of the controller and the other end to the wall plug energy source.
- If a Footswitch is being used, plug Footswitch Cable into the Footswitch Port. Footswitch duplicates the function of the Trig. Button on Front Panel.
- Turn on AC power using the On/Off Switch on the right side of the unit. This turns on the main power supply.
- Turn on the controller using the power switch on the front of the unit.



Front Panel Functions

Photograph of CA3100 front panel overlay.



Start Button & Cure Cycle Indicator (Start)

- The Start is pushed to start a cure cycle. It is also used to stop a cure cycle that is in progress. The light to the left of the Start button will be lit when a cure cycle is in progress.
- When the Start button is pushed while a cure cycle is in progress, the LEDs are turned off and the gas valve will be closed. The timers will be reset and the system will be ready to start a new cure cycle.
- When a cure cycle is complete, the LED emission will stop and the purge valve will be closed.

Power Up/Down Buttons (+/-)

- A pair of triangular buttons on the left are used to increase or decrease the output power level of the LEDs while the menu system is in the modify cure cycle mode.
- The LED power level can be adjusted from 0 to 100% of maximum.
- The control is “wrap around”, i.e.,
 - If power level is 100% and Up Button is pushed, power level goes to 0%
 - If power level is 0% and Down Button is pushed, power level goes to 100%

Minute, Second and 1/10 sec Up/Down Buttons (+/-)

The Up/Down buttons are used to modify the Purge Time, Cure Time and Purge/Cure Time while the menu system is in the modify cure cycle mode.

Menu Button (MENU)

- The Menu button is used to enter and exit the Menu system.
- If the Menu button is pushed while the Menu system is active, any changes made will not be saved. To save any changes, the Enter button must be used.

Enter Button (ENT)

- The Enter button is used to exit the Menu system and save any changes that have been made.

Menu Arrow Buttons

- The Arrow buttons around the Enter button are used to navigate through the menu system and to modify parameters.
- The right and left menu arrow buttons are used to modify the parameter currently selected (i.e. Audio Indicator On/Off).
- The up and down arrow buttons are used to move between the Audio Indicator selection and the Cure Cycle Modification selection.

A, B, C and D Buttons

- The A, B, C and D buttons are used to either select a cure cycle or to select a parameter to be modified while in the Modify Cure Cycle menu mode.

Basic Operation

The CA3100 has three separate timers, Purge, Cure and Purge/Cure.

- Purge: During the Purge time of the cycle, only the gas is on, no LEDs are turned on.
- Cure : Cure time is the total time that the LEDs are on during the cure cycle.
- Purge/Cure: This is the overlap time when the gas is flowing and the LEDs are on.

The total time that it takes to execute a cure cycle is equal to the sum of the Purge time and the Cure time. If any of these timers are set to 0, the corresponding stage is not executed. For example, if Purge time is set to 0, the LEDs will be turned on at the start of a cure cycle. If Purge/Cure time is set to 0, the gas flow will be turned off at the end of the Purge cycle and the LEDs will then operate for the remainder of the cure cycle.

Power Up

1. When On/Off Switch on the Front Panel is turned on, the following will appear in the top display:
 - If the cure chamber lid is open "LID OPEN" will appear.
 - If the cure chamber lid is closed "0:0" along with "READY" will appear.

Starting and Stopping a Cure Cycle

1. Place the item to be cured inside the cure chamber.
2. Close the lid.
3. Turn on the gas supply if it is being used.
4. Push the A, B, C or D button corresponding to the cure cycle for the item to be cured.
5. The CA3100 will now start a cure cycle.
6. When the cure cycle is complete, the timer will show "0:0" along with "READY".
7. Remove the cured item.
8. If another item will be cured, return to step 1. A different cure cycle can be selected for the new item.
9. If the Start button is pushed to start a cure, the most recent cure cycle executed will be used.
10. If the lid is opened or the Start button is pressed while a cure cycle is in progress, the current cycle will be stopped. Starting a new cure cycle will re-start the timer from the beginning.
11. Note: The footswitch performs the same functions as the Start button.

Menu System

Modifying Audio Indicator setting

1. To enter the Menu System, press MENU.
2. The arrow on the left side of the bottom display which menu item is currently active. Push the up and down buttons, if necessary, until the audio indicator item is active.
3. The Audio indicator can be enable and disabled by pushing the right and left arrow buttons.
4. To save the new setting, push the ENT button.
5. To exit the menu system without saving the change, push the MENU button.

Modifying Cure Cycle Settings

1. To enter the Menu System, press MENU.
2. The arrow on the left side of the bottom display which menu item is currently active. Push the up and down buttons, if necessary, until the Modify Cure Cycle item is active.
3. Press the button A, B, C or D corresponding to the cure cycle to be modified.
4. The current settings for the selected cure cycle will now be shown on the bottom display.
5. Press the PWR + or - buttons to set the desired LED power level. Note: The A button does not need to be pushed to allow the power level to be modified.
6. To change a timer value, push the B, C or D button corresponding to the timer to be modified.
7. Use the MIN, SEC and 1/10 + and - buttons to change the duration for the timer.
8. To modify another timer value, repeat steps 6 and 7.
9. To save the new settings, push the ENT button.
10. To exit the menu system without saving the changes, push the MENU button.

Menu System

Modifying Audio Indicator setting

1. To enter the Menu System, press MENU.
2. The arrow on the left side of the bottom display which menu item is currently active. Push the up and down buttons, if necessary, until the audio indicator item is active.
3. The Audio indicator can be enable and disabled by pushing the right and left arrow buttons.
4. To save the new setting, push the ENT button.
5. To exit the menu system without saving the change, push the MENU button.