

# DENTRATEC

ULTRAVIOLET LED CURING SYSTEM

UV 1000





# ***INNOVATION***

**SAVE TIME, SAVE COST,  
MULTIPLE FUNCTIONS**

Dear Customer,

Thank you for selecting the Dentrtec UV 1000.

Countless hours of research and development have been dedicated to crafting this product. We genuinely trust it will provide you with many years of dependable service.

Prior to using this equipment, we urge you to thoroughly read and comprehend all instructions provided.

Keep this instruction manual for future reference. Please note that the instructions for use may be updated without prior notice.

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# 1. Symbols Used

## 1.1 In these Instructions for Use





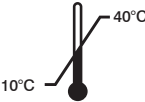









Indicates a potentially hazardous situation that could result in serious injury or death.



Indicates a potentially hazardous situation that may result in minor / moderate injury or damage of property.

## 1.2 On the Product / Packaging

 Serial number	 Catalogue number
 Manufacturer	 Date of manufacture
 Temperature limits	 Consult the Instructions for use
 Storage humidity range	 Atmospheric pressure for storage
 CE marking	 Store in a dry place
 Danger Electricity	 Hot Surface

## 2. Safety Information

### 2.1 Installation and Connection



#### Warning

- Ensure the product is positioned at least 5 cm away from the wall and refrain from placing any objects above it. Avoid proximity to heating appliances to prevent potential fire or electrocution hazards due to overheating.
- Maintain unobstructed airflow around the product by not blocking the ventilators on its left, right, and back sides. Blocked ventilators may lead to fire or breakdown due to increased internal temperatures.
- Keep the product away from water and avoid locations with excessive humidity and temperature to prevent damage.
- Avoid placing the product in areas with chemical exposure or gas emissions.
- Ensure the product is placed on a level surface and refrain from shaking or impacting it.
- Use only AC100-240V power-supply voltage to avoid the risk of fire or electrocution from incorrect voltage input.
- Do not place heavy objects on the power cord to prevent damage that could result in fire or electrocution.
- Refrain from disassembling the product, as unauthorized disassembly may lead to electrocution or breakdown.
- Avoid damaging, bending, twisting, or pulling the power cord to prevent potential fire or electrocution hazards.
- Ensure proper earthing of terminal outlet and power socket to prevent electric shock and fire hazards due to electricity leakage.
- Pay attention to the frequency of the power supply, power voltage, and allowable current value to ensure safe operation.

## 2.2 Operation



### Warning

- Only qualified personnel should operate this product.
- In the event of abnormal operation such as smoke emission or irregular noise, immediately switch off the power, unplug the device, and contact the distributor.
- If water leaks inside the product, promptly switch off the power, unplug the device, and contact the distributor. Continuing operation under such conditions may lead to fire or electrocution.
- Avoid touching the power plug with wet hands to prevent electric shock.
- Refrain from handling any liquid or metal power inside the curing chamber to avoid electric shock or fire resulting from internal circuit failure.
- Unauthorized disassembly of this product may result in electrocution or breakdown.
- Wear protective goggles during operation to shield eyes and skin from UV exposure.
- To stop or pause operation, press the STOP button and ensure the light is off before opening the door and removing the object.
- If operation needs to be stopped or paused by opening the door, open it slightly, confirm the light is off, then fully open the door and remove the object.



### Caution

- Avoid looking inside the product during operation.
- Refrain from pressing the Start-Stop button while the door is open.
- Do not operate the product with the door open, as it may pose a risk of eye damage.

## 2.3 Maintenance



### Warning

- In case of dropping, breakage, or damage to the product, switch off the power immediately. Then, unplug it and contact the distributor. Continuing to operate the product under such conditions may result in fire or electrocution.
- Always remember to unplug the product before performing any maintenance tasks.
- Prior to moving the product, ensure to switch off the power and unplug it.
- When removing the plug, avoid pulling on the power cord.
- When inspecting, cleaning, or replacing fuses, always switch off and unplug the unit. Allow the unit to cool off completely by leaving it off for at least 10 minutes.



### Caution

- Ensure regular inspections of both the equipment and its components.
- If the product will not be used for an extended period, remember to disconnect the plug for safety purposes.



### 3. Product Information

- **Save time**

The Dentrtec UV 1000 utilizes fast-curing high-power LED technology, along with a broadband LED, offering both top and bottom light sources. This innovative design eliminates the need to flip over the curing object during the process, saving valuable time.

- **Save money**

Benefiting from a stable and high-power LED, coupled with a constant current circuit, the Dentrtec UV 1000 eliminates the inconvenience and expense of replacing UV fluorescent light tubes.

- **Multiple functions**

Users can effortlessly configure curing details to enhance process efficiencies through the Intensity Duty-Cycle Timer (IDT) settings.

- **Post-curing for 3D printing**

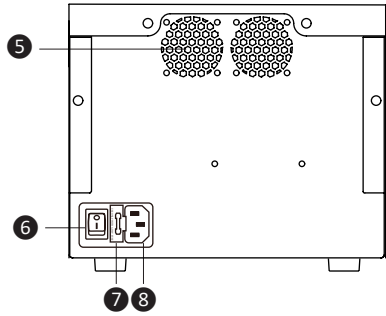
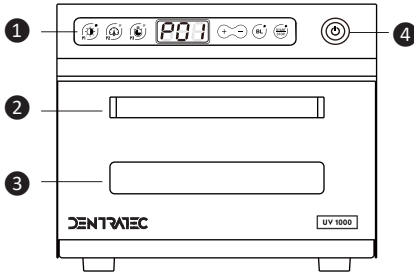
The Dentrtec UV 1000 incorporates high-power Ultra Violet A (UVA) LEDs, ensuring a rapid and uniform curing cycle.

#### 3.1 Indications for Use

This product is intended for exclusive use in laboratory and professional settings as a light curing machine.

## 4. Package And Part Name

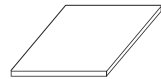
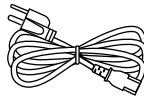
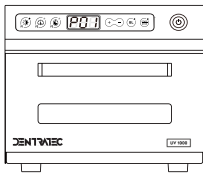
### 4.1 Part Name



- ① Operation Panel
- ② Handle
- ③ Door
- ④ Power Button

- ⑤ Cooling Fan
- ⑥ Power Switch
- ⑦ Fuse
- ⑧ Outlet

### 4.2 Components



Description	Quantity
UV 1000	1
Power cord	1
Instructions for use	1
Glass plate	1

## 5. Functions

### 5.1 Instruction for Touch Panel



- ① : Adjust the light intensity from Level 1 to Level 16.
- ① : Adjust the duty cycle (See chapter 5.2) from Level 1 to Level 10 (consistent brightness)
- ① : Adjust the working time between 5 seconds and 995 seconds.
- ① **P1** : Memory program 1.
- ① **P2** : Memory program 2.
- ① **P3** : Memory program 3.
- ② **Display** : Indicate numerical value and remaining seconds.
- ③ **+** : Increase the level of intensity, duty cycle and working time. Hold and press the button to fast-forward.
- ④ **-** : Decrease the level of intensity, duty cycle and working time. Hold and press the button to rewind.
- ⑤ **BL** : Bottom light setting.
- ⑥ : Start and stop curing.

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### 5.2 IDT (Intensity, Duty-Cycle, Timer) Settings

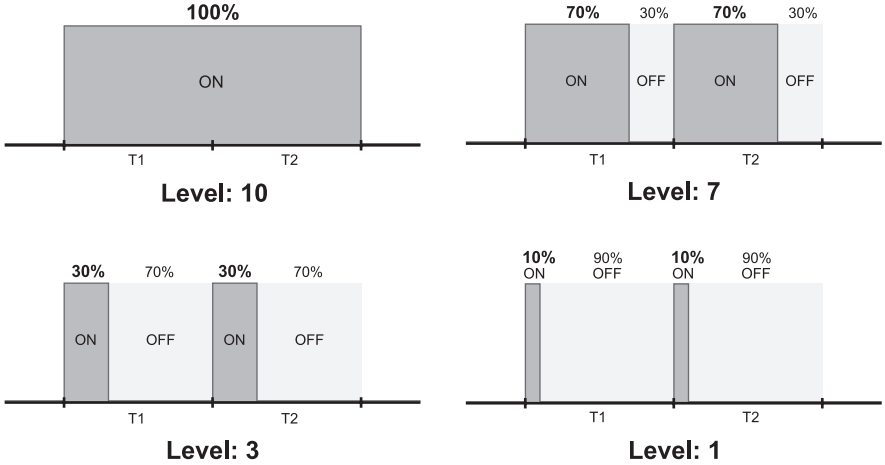
- **Intensity Setting**

Depending on the strength, thickness, and shape of the material, operator can set the light intensity from Level 1(lowest) to Level 16(strongest). Intensity range: 7018 -112295 mW/cm<sup>2</sup> when LED current at 43.8-700mA.

**Suggestion:** When curing flat and/ or thin material, lower the intensity level with longer timer to optimize the overall strength of the material.

- 🕒 **Duty Cycle**

Duty cycle is the ratio between pulse duration and the period (Picture below shows the difference between different cycles). Depending on the shrinking rate of the material, operator can set the duty cycle from level1 (10%) to level 10 (100%).



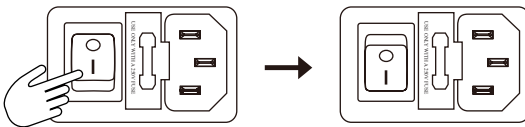
**Suggestion:** When curing small and/ or thin material, lower the duty cycle level to reduce the shrinkage deformation rate.







- 🕒 **Curing Time**

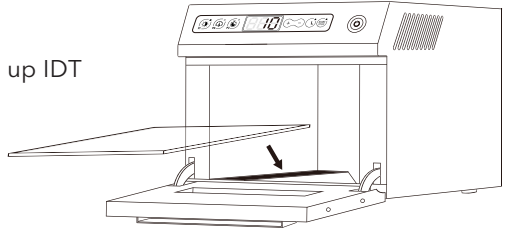
Set the time between 5 - 995 seconds with 5 seconds interval.

### 5.3 Basic Operation

1. Turn on the Power Switch.




- Put the glass plate into UV 1000 and press  to power on.
- Press     to set up IDT and Bottom Light.
- Press  to cure.

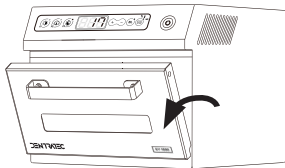



### 5.3.1 Pause Curing during the Operation



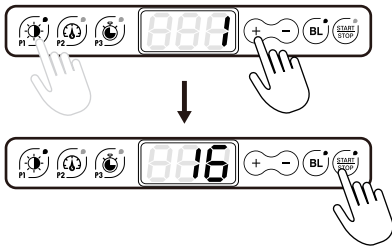
Press  to pause curing.

The  button will start flashing when paused.



Curing will be paused once the door is opened. The  button will start flashing as well.

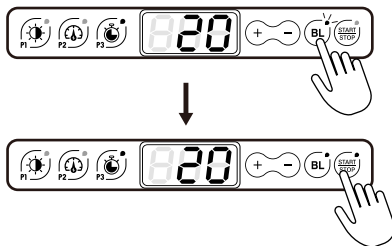
### 5.3.2 Reset IDT when Pause Curing



Pause curing and press the buttons to reset IDT setting.

After resetting, press  to restart it.

### 5.3.3 Set Bottom Light



Press the **BL** button.

After setting, press  to start the upper and lower light sources.

### 5.3.4 Memory Mode

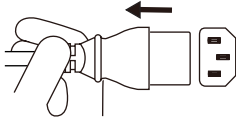
1. Make sure the power is on.
2. Call up setting
  - (1). Press **P1 / P2 / P3** to select pre-saved function.
  - (2). Press **P1 / P2 / P3** twice rapidly, the Display will show the index of function which been called up and with two beep sounds.
3. Save setting
  - (1). Enter the setting that need to be modified.
  - (2). Modify curing setting.
  - (3). Press the button of the function that you want to modify.
  - (4). Long press the button, the Display will show "P0x" and with two beeps.

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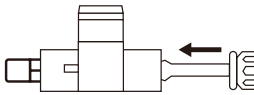
## 6. Troubleshooting

Trouble	Possible Cause	Measures
Time display does not light up even if the power switch is turned on.	Blowout of fuse.	Replace with new fuse. Contact our customer service if the problem persist.
LED do not light up even if the <b>START STOP</b> is pressed.	Door is not closed correctly.	Ensure the door is closed properly.
Er1	Overheat	Immediately turn off the unit. Contact our customer service and mention the error number on the display.

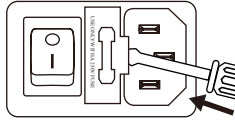
## 6.1 Instructions for Fuse Replacement



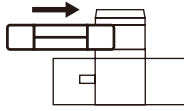
- ❶ Before replacing the fuse, turn off the power switch and pull out the plug.



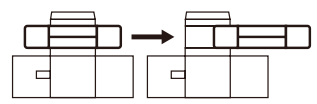
- ❷ Take out spare fuse at the bottom.



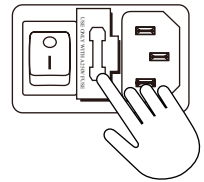
- ❸ Use flat head screw driver to unclench the cover shown above.



- ❹ Change the fuse.



- ❺ Take the fuse out.



- ❻ Put the fuse cover back.

\* Please replace the fuse if the panel indicator does not work. Be sure to pull the power cord before replacement. After replacement, if there's still a problem with the panel indicator, please contact Customer Service.

## 7. Maintenance And Cleaning

- Remember to have regular inspections of the equipment and parts.
- In case of malfunction, do not attempt to repair the product by yourself. Contact Customer Service.
- Before maintenance, switch off the power switch and pull out the plug.

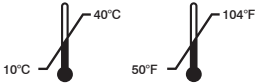

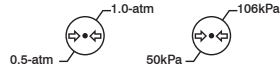
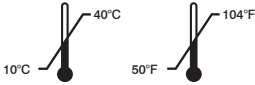

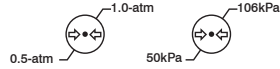
### 7.1 Cleaning Inner Chamber

- 1- When the inner chamber becomes soiled, use a soft cloth dampened with alcohol or cleaner to clean it.
- 2- If resin adheres to any part of the curing chamber, please remove it prior to next curing.

### 7.2 Cleaning Outer Case

- 1- Do not use organic solvent including benzene and thinner to clean.
- 2- Gently wipe the unit with a soft cloth moisture with alcohol or cleaner.

## 8. Product Specification

Type of Information	Specifications
Device name	Ultraviolet LED Curing System
Model name	UV 1000
Power input	AC 100-240 V / 50-60 Hz
Power consumption	90 W
Fuse	3 A
Quantity of LEDs	35
Wavelength of LEDs	355~415 nm, Peak: 365 nm, 385 nm, 405 nm
Curing time	5-995 seconds
Dimensions	L200 x W220 x H160 mm (max)
Weight	3 kg
Memory mode	3 curing settings in memory
Operating environment	<p>Indoor use only.</p> <p>Ambient temperature: </p> <p>Relative humidity: </p> <p>Atmospheric pressure: </p>
Storage and transport environment	<p>Ambient temperature: </p> <p>Relative humidity: </p> <p>Atmospheric pressure: </p>




## 9. Warranty

Dentrtec SAL provides a one-year warranty from the date of purchase, considered to be the date on the invoice, ensuring the product is free from manufacturing defects. Dentrtec SAL reserves the right to repair or replace any equipment failures resulting from manufacturing defects at its discretion. However, the following items are specifically not covered by the warranty:

1. Damage or equipment failure resulting from impacts or jolts during transportation after purchase or during regular use.
2. Damage or equipment failure caused by natural disasters like earthquakes, floods, lightning, pollution, incorrect electrical voltage, or voltage spikes.
3. Any efforts to alter or modify the product will void the warranty.

## 10. Declaration Of Conformity

 Manufacturer	Made in Taiwan
Safety	IEC / EN 61010-1 3rd : 2010
EMC	EN 61326-1:2013





# DENTRATEC

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✉ [support@dentratec.com](mailto:support@dentratec.com)

🌐 [www.dentratec.com](http://www.dentratec.com)

Dentratec, Joseph Chalhoub Villa, Aylout,  
Mansourieh, Lebanon