

i-Labware

more than just equipment



i-Cube Microplate Incubator E10030

User Guide and Operating Manual

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User / Owner Responsibility

Thank you for purchasing an i-Labware product. We appreciate having you as a customer and wish you many years of safe and satisfied use of your equipment.

PLEASE READ THIS MANUAL BEFORE OPERATING THE EQUIPMENT

The i-Cube Microplate Incubator is for laboratory use only and is designed to function as specified when operated and maintained in accordance with the instructions supplied in this manual.

This equipment must be periodically checked, calibrated, maintained and/or, components repaired and replaced when necessary for equipment to operate reliably. Parts that have failed in whole or in part, exhibit excessive wear, are contaminated or are otherwise unfit for use, should be immediately discarded and replaced. To maintain the warranty, replacement parts must be installed or supplied by i-Labware Pte Ltd. Equipment that is not functioning correctly must not be used. This equipment must not be modified by unauthorized personnel or with unauthorized components.

Please keep this manual in a convenient place for future reference.

Receiving

1. Examine shipping carton for signs of external damage.
2. Unpack all items. Retain and store original shipping cartons and materials for use in the event the equipment must be shipped.
3. Inspect the equipment and accessories for any sign of damage that may have occurred during shipping. If damage is discovered, immediately file a damage claim with the carrier. Notify i-Labware or your local i-Labware distributor of the claim, and we will do all we can to assist you.
4. Compare quantities received to quantities shown on the packing list. Report any discrepancies to i-Labware or your local i-Labware distributor immediately.
5. Complete the following information:

Rec'd by: _____ Date: __/__/__

Serial number verified: _____

Contact Us

i-Labware Pte Ltd

enquiry@i-labware.com

www.i-labware.com

Warnings and Cautions



Do not install, maintain, or operate this equipment without reading, understanding and following the proper i-Labware Pte Ltd instructions. Otherwise, injury or damage or both may result.



This product is meant for use in the laboratory and should be used in accordance with safe laboratory practices.



Repairing or tampering of the equipment components by the user or unauthorized personnel voids all warranties and specifications. The prevention of tampering with the equipment is the sole responsibility of the user or owner. i-Labware assumes no liability for any malfunction, failure, damage or loss to either equipment or life.



Never open the case of the equipment or attempt to modify the product in any way since this can result in damage to the unit.



Do not plug the equipment power cables into an electrical outlet if the power cable is damaged. To prevent electric shock, the 3-pin plug supplied with the equipment's power cable should be plugged into properly grounded electrical outlets. Be sure to grasp the plug, not the cable, when disconnecting equipment from an electric socket.

Warnings and Cautions



Hot surfaces. The equipment may have very hot surfaces. If an operator contacts a hot surface, injury may occur. Use protective clothing to prevent injury. If other equipment comes in contact with a hot surface, damage to the equipment may occur. Ensure the area around this equipment is kept clear to prevent damage from occurring.



Cap the tubes before placing in the blocks. Liquids may spill out if the tube is open when heated. This could result in damage to the block or the equipment.



Check the voltage rating before you connect the equipment to an electrical outlet to ensure that the required voltage and frequency match the available power source.



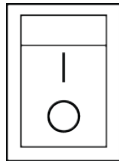
To prevent the risk of fire, electrical shock or malfunction, avoid using the equipment where it will be exposed to:

- Extreme temperatures
- Heat sources such as radiators or stoves
- Corrosive gases or strong magnetic field
- High humidity or moisture
- Excessive dust or sand
- Excessive vibration or shock

Warnings and Cautions



The vent on the equipment is designed for aeration. Do not cover the vent or place the equipment in a closed-in wall unit. Leave a 10.2 cm (4 in) minimum of clearance on all vented sides of the equipment to permit the airflow required for proper ventilation. Restricting airflow can damage the equipment or cause a fire. Do not stack equipment or place equipment so close together that it is subject to re-circulated or preheated air.



The main switch is on the rear of the equipment. Switch to "I" to power on the device, and switch to "O" to power off the device.



Power off when the operation is completed. If the equipment is not in use for extended periods, unplug the device from the electrical source and cover the equipment to protect from dust.



If your equipment does not operate normally - in particular, if there are any unusual sounds or smells coming from it - unplug it immediately and contact i-Labware or your local distributor.



Power off when cleaning the instrument. Use a soft, dry cloth to clean the equipment. If necessary, slightly moisten the cloth. Do not use abrasive cleansers, wax, or solvents (such as paint thinner or cleansing alcohol), since these may dull the finish or damage the surface of the equipment. The wells in the heating block should be cleaned periodically with alcohol to ensure good heat transfer between the block and tubes.

General Description

The i-Cube Microplate Incubator is a well-designed bench-top micro-processor based incubator which combines a proportional-integral-derivative controller (PID controller) mechanism to deliver unmatched performance and reliability. The instrument is suitable for biochemistry, microbiology and clinical laboratories in which heat and/or shaking treatment is required.

Product Features:

1. LCD display. The set temperature and actual temperature simultaneously displayed.
2. User-friendly operation interface. Small footprint, streamlined and elegant. Easy to clean.
3. Uniform heating. No deviation between the set temperature and actual temperature.
4. Microprocessor controlled time and temperature. Good linearity of temperature control.
5. Configured for 2 standard plates. Alarm signals when operation is complete.

Specifications

Normal Operation Conditions

Ambient Temperature: 5°C ~ 30°C
Relative Humidity: ≤70%
Power Supply: AC90 ~ 230V

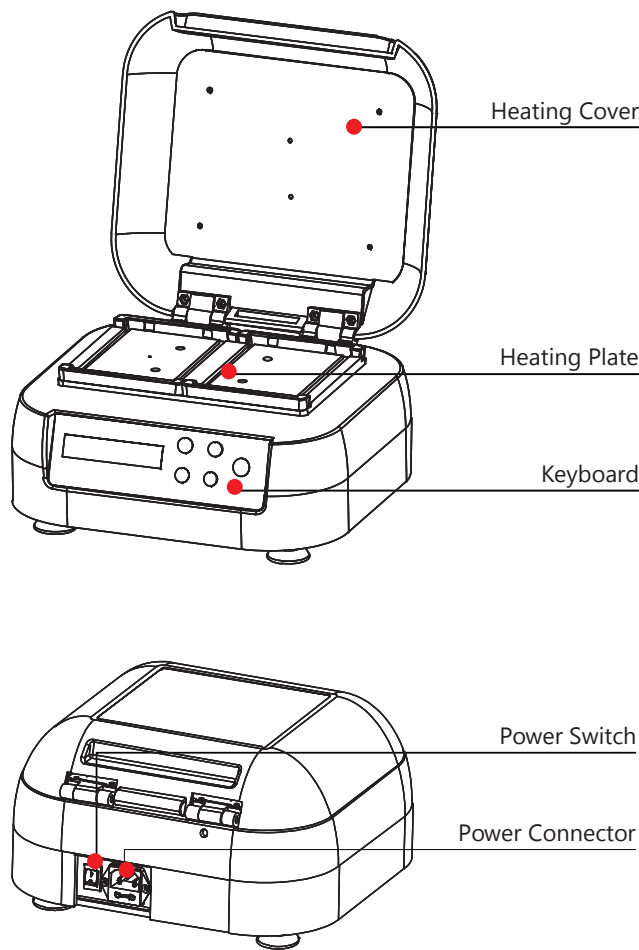
Equipment Specifications

Temperature Range	R.T.+5°C - 70°C
Heating Time	≤25 min (R.T. to 70°C)
Timing	1min - 99h59min
Temperature Precision	≤ ± 0.5°C
Display Accuracy	0.1°C
Module Temperature Uniformity	≤ ±0.5°C
Capacity	2 Plates
Power	150W
Dimension	248 x 264 x 157 mm
Net Weight	3.0 kg

Component Identification

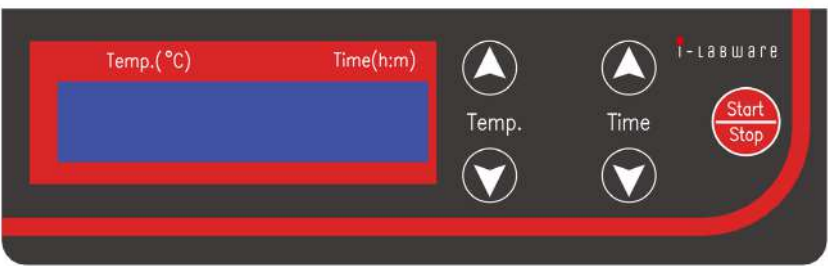
This chapter describes the instrument's mechanical structure, the keyboard and functions of each key, as well as preparations before powering the system. Please read this chapter well before operating the i-Cube Microplate Incubator for the first time.

Structure Description



Component Identification

Keyboard and Display Panel



Display Panel

	Current Temperature	Remaining Time
PV	37.1	10:30
SV	37.0	15:00
	Set Temperature	Set Time

Component Identification

Key Functions

Temp ▼▲

Key to set the temperature. Press ▲ or ▼ to set the target temperature. Press and hold ▲ or ▼ to set the temperature quickly. Press ▼ continuously until it displays “OFF” on the LCD to shut the thermo function.

Time ▼▲

Key to set the time. Press ▲ or ▼ to set the target time. Press and hold ▲ or ▼ to set the time quickly. Press ▼ continuously until it displays “OFF” on the LCD to shut the time function

Start / Stop

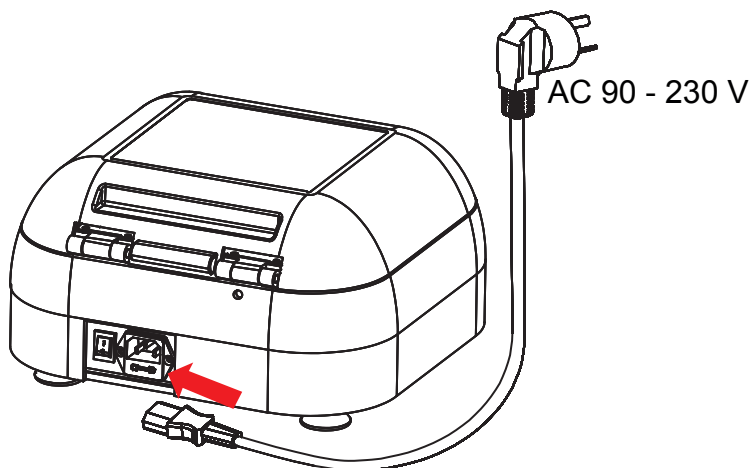
Press the Start/Stop key to start or stop the program. A short press will start the program while a longer press will stop the program.

Operation Guide

Device Installation

Place the instrument on a horizontal and stable surface.

Plug the power jack into the power socket and connect the other end to the power port on the rear of the instrument. The voltage should be between 90-230V.



Operation Guide

Temperature and Time Settings

a) Switch on the device, the instrument enters the initial interface with a beep. Refer to the right chart.

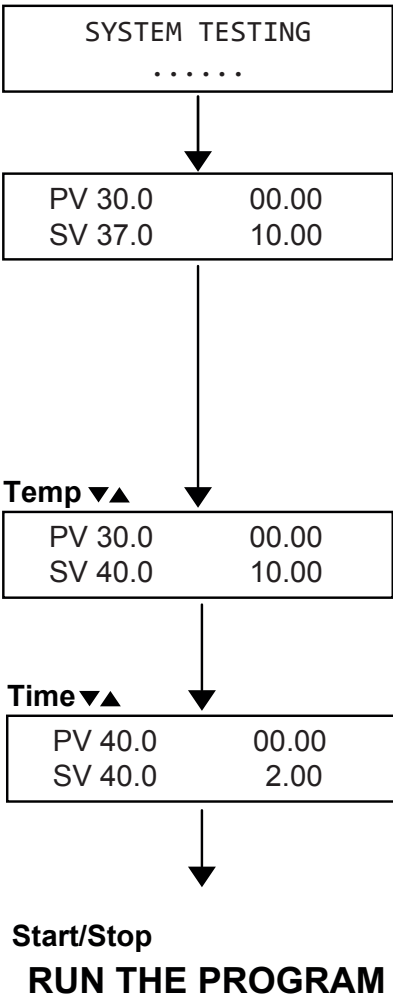
b) After 2 seconds, the instrument enters the operation interface. Refer to the right chart. 30.0 (after the PV) is the current block temperature. 37.0 is the set temperature in the previous operation. 10:00 is the set time in the previous operation.

Temperature unit is "°C". Timing unit is "HH:MM".

c) Press ▼ or ▲ of the Temperature key to set the desired temperature. Press and hold ▲ or ▼ to increase or decrease the settings quickly.

d). Press ▼ or ▲ of the Time key to set the desired time. Press and hold ▼ or ▲ to increase or decrease the settings quickly. The instrument will confirm and autosave the set values.

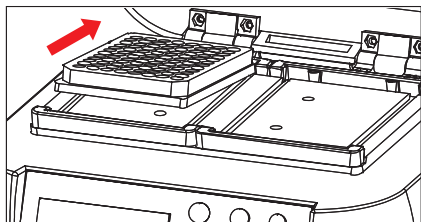
e) Press the Start/Stop to run the program. When the device is in operation, "CON" will be displayed. A Time display of "∞" indicates that the timing function is turned off.



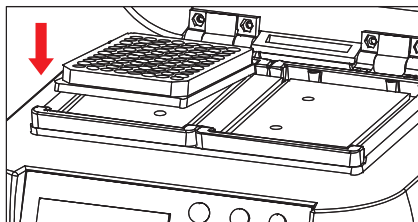
Operation Guide

Plate Installation

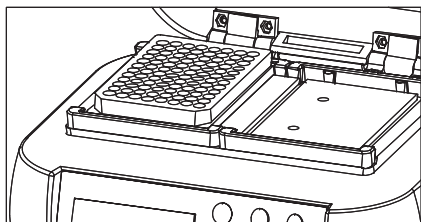
a) Open the lid. Slightly tilt and insert one end of the plate onto the plate-tablet



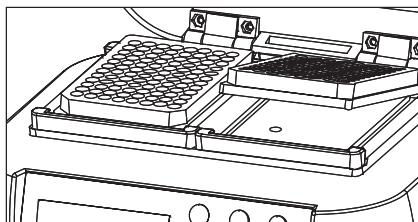
b) Press down the other side of the plate as shown by the figure.



c) After inserting the plate into the plate-tablet, firmly press down the plate again to ensure good contact to the heating tablet.



d) To insert the second plate, repeat steps a - c.



Troubleshooting

No.	Issue	Possible Cause	Solution
1	No signals on the display when the power is turned on.	No power	Check the power connection
		Broken adapter	Change the adapter
		Broken switch	Change the switch
		Others	Contact your local i-Labware distributor
2	The actual and displayed temperatures are different	Broken sensor	
3	"OPE.1" is shown in the temperature display with beeping of alarm.	Temperature sensor of the cover is disconnected	
4	"OPE.2" is shown in the temperature display with beeping of alarm	Temperature sensor of the heating plate is disconnected	
5	"SHO.1" is shown in the temperature display with beeping of alarm	Temperature sensor of the cover is short	
6	"SHO.2" is shown in the temperature display with beeping of alarm	Temperature sensor of the heating plate is short	
7	"HHH.1" is shown in the temperature display with beeping of alarm	Temperature of the cover out of control.	
8	"HHH.2" is shown in the temperature display with beeping of alarm	Temperature of the heating plate out of control	
9	No heating of the heating block	Broken sensor or heater	
10	Keys on the keyboard not functioning	Broken keys	

i-Labware Warranty

i-Labware warrants products manufactured and supplied by it against defects in materials and workmanship when used normally for a period of 12 months after delivery. This warranty does not apply: (a) to consumable parts, such as protective coatings that are designed to diminish over time, unless failure has occurred due to a defect in materials or workmanship; (b) to cosmetic damage, including but not limited to scratches, dents and broken plastic on ports (c) to damage caused by use with another product (d) to damage caused by accident, abuse, misuse, fire, earthquake or other external cause (e) to damage caused by improper use of the i-Labware product, operating in inappropriate conditions (f) to damage caused by refitting without authorization (g) to an i-Labware product that has been modified to alter functionality or capability without the written permission of i-Labware (h) to defects caused by normal wear and tear or otherwise due to the normal aging of the i-Labware product, or (i) if any serial number has been removed or defaced from the i-Labware product.

Contact Us

i-Labware Pte Ltd

enquiry@i-labware.com

www.i-labware.com