7’’ Square Hotplate

User Manual

HP550-S LED Digital 7” Square Hotplate

Please read the User Manual carefully before use, and follow all operating and safety instructions!
We cannot be responsible to inform at real-time if the outline and specifications are subject to change for improvement.

12300245

Contents

Preface

Welcome to the “7” Square Hotplate User Manual”. Users should read this Manual carefully, follow the instructions and procedures, and be aware of all the cautions when using this instrument.

Service

When help needed, you can always contact the Service Department of manufacturer for technical support.

Please provide the customer care representative with the following information：

• Serial number（ on the rear panel ）
• Certification
• Description of problem (i.e., hardware or software)
• Methods and procedures adopted to resolve the problems
• Your contact information

Warranty

This instrument is warranted to be free from defects in materials and workmanship under normal use and service, for a period of 24 months from the date of invoice. The warranty is extended only to the original purchaser. It shall not apply to any product or parts which have been damaged on account of improper installation, improper connections, misuse, accident or abnormal conditions of operation.

For claims under the warranty please contact your local supplier. You may also send the instrument directly to manufacturer, enclosing the invoice copy and by giving reasons for the claim.

1. Safety Instructions

	Warning! • Read the operating instructions carefully before use. • Ensure that only trained staff works with the instrument.
	Risk of burn! • Caution when touch the housing parts and the hotplate which can reach temperature of 550 ℃. • Pay attention to the residual heat after switching off.
	Protective ground contact！ • Make sure that socket must be grounded (protective ground contact) before use.

• When working wear personal safety guards to avoid the risk from:

- Release of toxic or combustible gases

• Set up the instrument in a spacious are on a stable, clean, non-slip, dry and fireproof surface. Do not operate the instrument in explosive atmospheres, with hazardous substances or under water.

• Temperature must always be set to at least 50℃ lower than the fire point of the media used.

• Be aware of hazards due to unsafe container.

• Process pathogenic materials only in closed vessels.

• Check the instrument and accessories prior to each use. Do not use damaged components. Safe operation is only guaranteed with the accessories described in the “Accessories” chapter. Accessories must be securely attached to the device and can not come off by themselves. Always disconnect the plug before fitting accessories.

• When the external temperature sensor needed, the tip of the measuring sensor must be at least 5-10mm from vessel bottom and wall.

• The instrument can only be disconnected from the main power supply by pulling out the main or the connector plug.

• The voltage stated on the label must correspond to the main power supply.

• Ensure that the main power supply cable does not touch the hotplate. Do not cover the device.

• Forbid to put pressure and over heat media on the surface of glass ceramic, that can be caused surface broken.

• The instrument may only be opened by experts.

2. Proper use

The instrument is designed for mixing and/or heating liquids in schools, laboratories or factories.

• Observe the minimum distances between the devices, between the device and the wall and above the assembly (min. 100 mm)

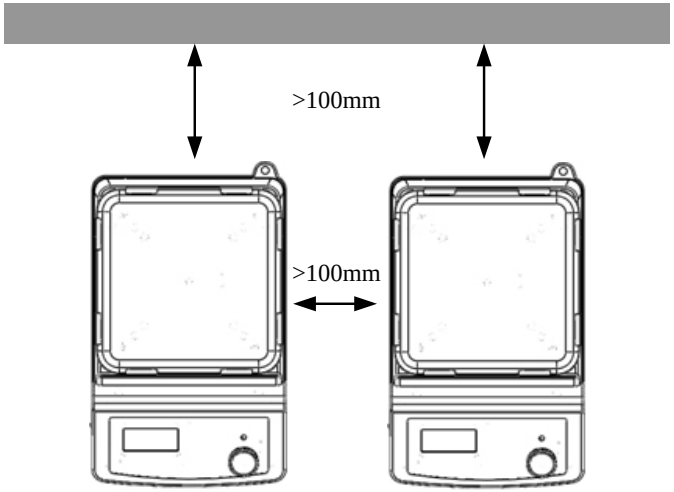

Figure 1

This device is not suitable for using in residential areas or other constraints mentioned in Chapter 1.

3. Inspection

3.1 Receiving Inspection

Unpack the equipment carefully and check for any damages which may have arisen during transport. Please contact manufacturer/supplier for technical support.

Note:
If there is any apparent damage to the system, please do not plug it into the power line.

3.2 Listing of Items

The package includes the following items:

Items	Qty
Main unit	1
Power cable	1
User Manual	1

Table 1

4. Control

4.1 Control elements

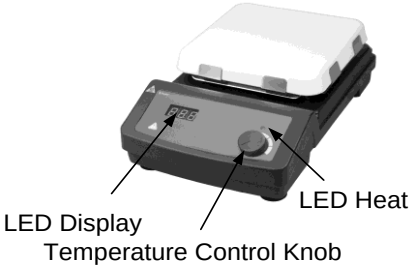

Figure 3

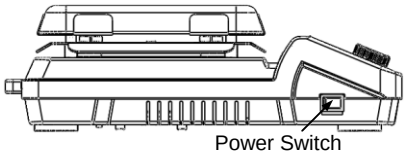

Figure 4

Items	Descriptions
Temperature control knob	The heating function is switched ON or OFF by rotating knob.
LED Display	If rotate the heating knob, LED displays the temperature setting value and shift to real value in the duration of 5 seconds.
LED Heat	When the heating function is switched ON, the LED Heat flash.
Power Switch	Switch ON or OFF the instrument.

Table 2

4.2 Display

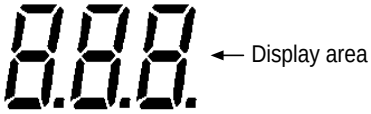

Figure 5

Display	Descriptions
Display area	When the heating function is switched ON and rotate the stirring knob, LED displays the temperature setting value and shifts to real value in 5 seconds. When the heating function is switched OFF and the hotplate temperature is still above 50℃, LED displays Hot, otherwise LED displays 0.

5. Trial run

• Make sure the required operating voltage and power supply voltage match.
• Ensure the socket must be properly grounded.
• Plug in the power cable，ensure the power is on and begin initializing.
• Place vessel on the work plate.
• Set the target temperature and start heating.
• Stop the heating functions.

If these operations above are normal, the device is ready to operate. If these operations are not normal, the device may be damaged during transportation, please contact manufacturer/supplier for technical support.

6. Working with external temperature sensor

Figure 6

The external temperature sensor PT1000 is the Manufacture’s standard accessory. If the sensor is plugged in and rotate the heating knob, LED displays the temperature setting value and shifts to real value in 5 seconds. Safe circuit controls hotplate temperature. Comparing with the temperature control of the hotplate, the external temperature sensor can control the medium’s temperature more precisely. The heating function will be stopped automatically under abnormal conditions. Please operate follow the instructions below:

- Switch OFF the instrument.
- Ensure the external temperature sensors is inserted in the media heated.
- Switch ON the instrument and run heating function.

If the heating function did not work, please contact manufacturer/supplier for technical support.

7. Residual heat warning

In order to prevent the risk of burns from a hotplate, digital hotplate has a residual heat warning function. When the heating function is switched off and the heating plate temperature is still above 50℃, “Hot” will flash to warn that there is a hazard of burns from the hotplate. When the hotplate temperature drops to below 50℃, the unit will automatically switch off. If users want to turn off the LCD or LED immediately, just pull out the plug directly. When the plug is pulled out, the residual heat warning function cannot be run.

8. Faults

- Instruments can’t be power ON
- Check whether the power line is unplugged
- Check whether the fuse is broken or loose
- Fault in power on self test
- Switch OFF the unit, then switch ON and reset the instruments to factory default setting.
- Unit cannot be powered off when switched off.

If these faults are not resolved, please contact manufacturer/supplier.

9. Maintenance and Cleaning

- Proper maintenance can keep instruments working properly and lengthen its lifetime.
- Do not spray cleanser into the instrument when cleaning.
- Unplug the power line when cleaning.
- Only use recommended cleansers:

Dyes	Isopropyl alcohol
Construction materials	Water containing tenside / Isopropyl alcohol
Cosmetics	Water containing tenside / Isopropyl alcohol
Foodstuffs	Water containing tenside
Fuels	Water containing tenside

- Wear the proper protective gloves during cleaning of the instrument.
- Before using other method for cleaning or decontamination, the user must ascertain with the manufacturer that this method will not harm the instrument.
- Send in the case of service the instrument back in the packaging carton. Storage packing is not sufficient for the back dispatch. Use additionally a suitable transportation packing.
- The enamel makes the hotplate easier to care for and more resistant to acids and bases. Because of it, however, the hotplate is also more susceptible to extreme fluctuations in temperature and the force of impact. This can result in cracks forming or the coating flaking off.

Warning!
Cut off power when maintenance and cleaning.

10. Associated standards and regulations

Construction in accordance with the following safety standards:
EN 61010-1 UL 3101-1 CAN/CSA C22.2(1010-1) EN 61010-2-10
Construction in accordance with the following EMC standards:
EN 61326-1
Associated EU guidelines:
EMC-guidelines: 89/336/EWG Instrument guidelines: 73/023/EWG

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

11. Specifications

Items	Specifications
Voltage [VAC]	100-120/200-240
Frequency [Hz]	50/60
Power [W]	1010
Plate material	Glass ceramic
Dimensions of workplate (mm)	184×184
*Heating power [W]	1000
*Temperature range [℃]	RT-550, increment: 5
*Temperature display [℃]	LED
*Temperature display accuracy [℃]	±1
*Control accuracy of heating temperature [℃]	±10
*The safety temperature of the hotplate [℃]	580
*Temperature sensor in medium	PT1000
*Control accuracy of heating temperature with temperature sensor [℃]	±0.5
*Residual heat warning	50℃
Dimensions (mm)	215×360×112
Weight [kg]	3.8
Permitted ambient temperature [℃]	5-40
Permitted relative humidity	80%
Protection class acc. to DIN 60529	IP21

Table 3

12. Ordering information

Cat No.	Descriptions
51212101xxxx	HP550-S LED Digital 7’’ Square Hotplate, glass ceramics hotplate, USA plug, 100-120V, 50Hz/60Hz
51212112xxxx	HP550-S LED Digital 7’’ Square Hotplate, glass ceramics hotplate, Cn plug, 200-240V, 50Hz/60Hz
51212122xxxx	HP550-S LED Digital 7’’ Square Hotplate, glass ceramics hotplate, Euro plug, 200-240V, 50Hz/60Hz
51212132xxxx	HP550-S LED Digital 7’’ Square Hotplate, glass ceramics hotplate, UK plug, 200-240V, 50Hz/60Hz
Accessories	
18900016	PT1000-A Temperature sensor for digital hotplate model, length of 230mm
18900136	PT1000-B Glass coated temperature sensor for digital hotplate model, length of 230mm
18900017	Support clamp of PT1000

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