eSUN eBox-Lite-US

eSUN eBOX Lite Upgraded 3D Printing Filament Dryer Box User Manual

Model: eBox-Lite-US

1. Product Overview

The eSUN eBOX Lite is an upgraded filament dryer box designed to maintain optimal conditions for 3D printing filaments. It effectively removes moisture, preventing common printing issues such as stringing, clogging, and poor adhesion. This device also functions as a filament storage box and spool holder, providing a comprehensive solution for filament management.
Key features include efficient heating, even temperature distribution, low-noise operation, and broad compatibility with various filament types and spool sizes.

Figure 1: eSUN eBOX Lite Filament Dryer Box with a red filament spool inside.

2. Package Contents

Verify that all items are present in the package:

- eBOX Lite Dryer Box
- Power Adapter (US Plug)
- User Manual (this document, and a physical copy)
- Filament Outlet Tube/Bayonet

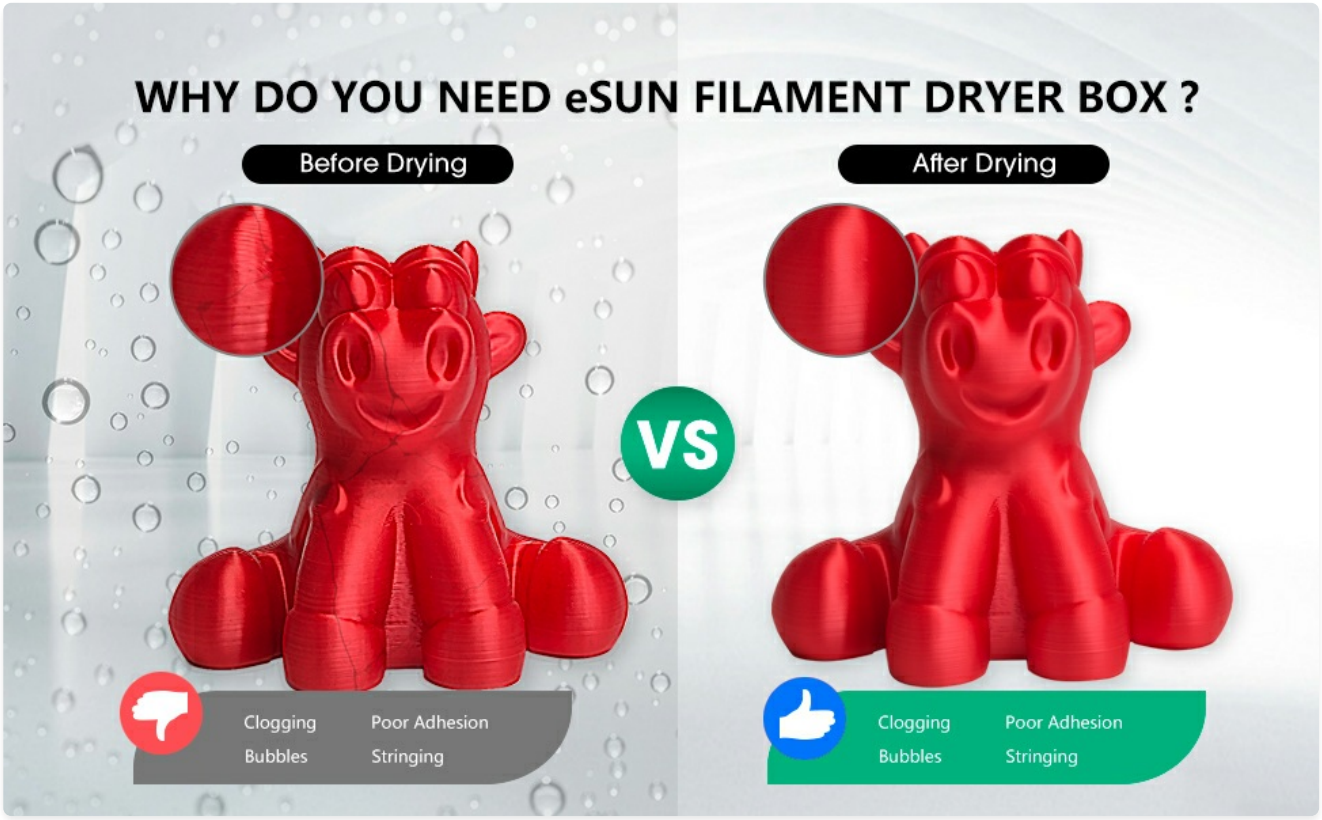

Figure 2: Illustration of the eBOX Lite and its included accessories.

3. Setup Instructions

1. **Placement:** Place the eBOX Lite on a stable, flat surface away from direct sunlight, heat sources, and excessive humidity. Ensure adequate ventilation around the unit.
2. **Power Connection:** Connect the provided power adapter to the DC input port on the back of the eBOX Lite. Plug the adapter into a standard US power outlet (AC100-240V ~ 50/60Hz).
3. **Loading Filament:**
    - Open the transparent lid of the eBOX Lite.
    - Place your filament spool onto the internal rollers. Ensure the spool rotates freely. The maximum compatible spool size is Φ200mm (diameter) x 73mm (height).
    - Thread the filament through the designated outlet hole on the lid. If using the outlet conduit, attach it to the hole and thread the filament through it.
    - Close the lid securely.

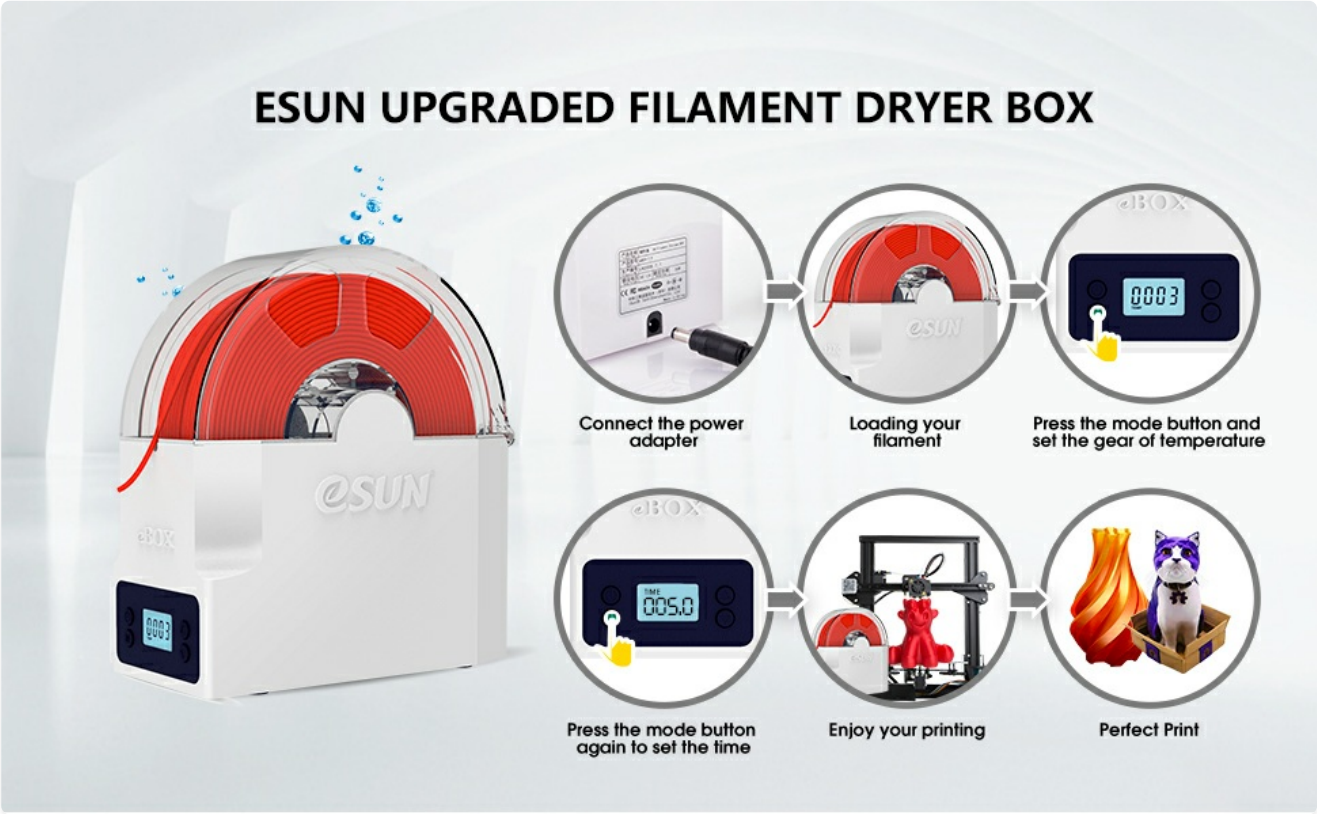

Figure 3: Visual guide for connecting power and loading filament.

4. Operating Instructions

The eBOX Lite features a simple control panel with a display and buttons for setting temperature and time.

4.1. Control Panel Overview

- **Display:** Shows current settings (temperature level, time remaining).
- **Mode Button:** Used to cycle between temperature setting mode and time setting mode.
- **Up/Down Buttons:** Used to adjust values (temperature level, time).

4.2. Setting Temperature and Time

1. **Power On:** After connecting the power, the display will light up.
2. **Set Temperature Level:**
    - Press the **Mode** button once to enter temperature setting mode. The display will show a number (1, 2, or 3).
    - Use the **Up/Down** buttons to select the desired temperature level based on your filament type:
        - **Level 1:** Approximately 40°C (suitable for PLA/PLA+)
        - **Level 2:** Approximately 50°C (suitable for ABS/ABS+/PETG)
        - **Level 3:** Approximately 55°C (suitable for PVA/Nylon/PC)
    - Press the **Mode** button again to confirm the temperature level and proceed to time setting.
3. **Set Heating Time:**
    - The display will now show the time setting (e.g., "00.0h").
    - Use the **Up/Down** buttons to set the desired heating duration from 0 to 18 hours. For optimal drying, eSUN recommends at least 2 hours for most filaments.
    - Press the **Mode** button again to start the drying process. The display will show the remaining time.

The eBOX Lite will maintain the set temperature and humidity throughout the drying cycle. Once the time expires, the heating will stop, but the box will continue to provide a dry storage environment.

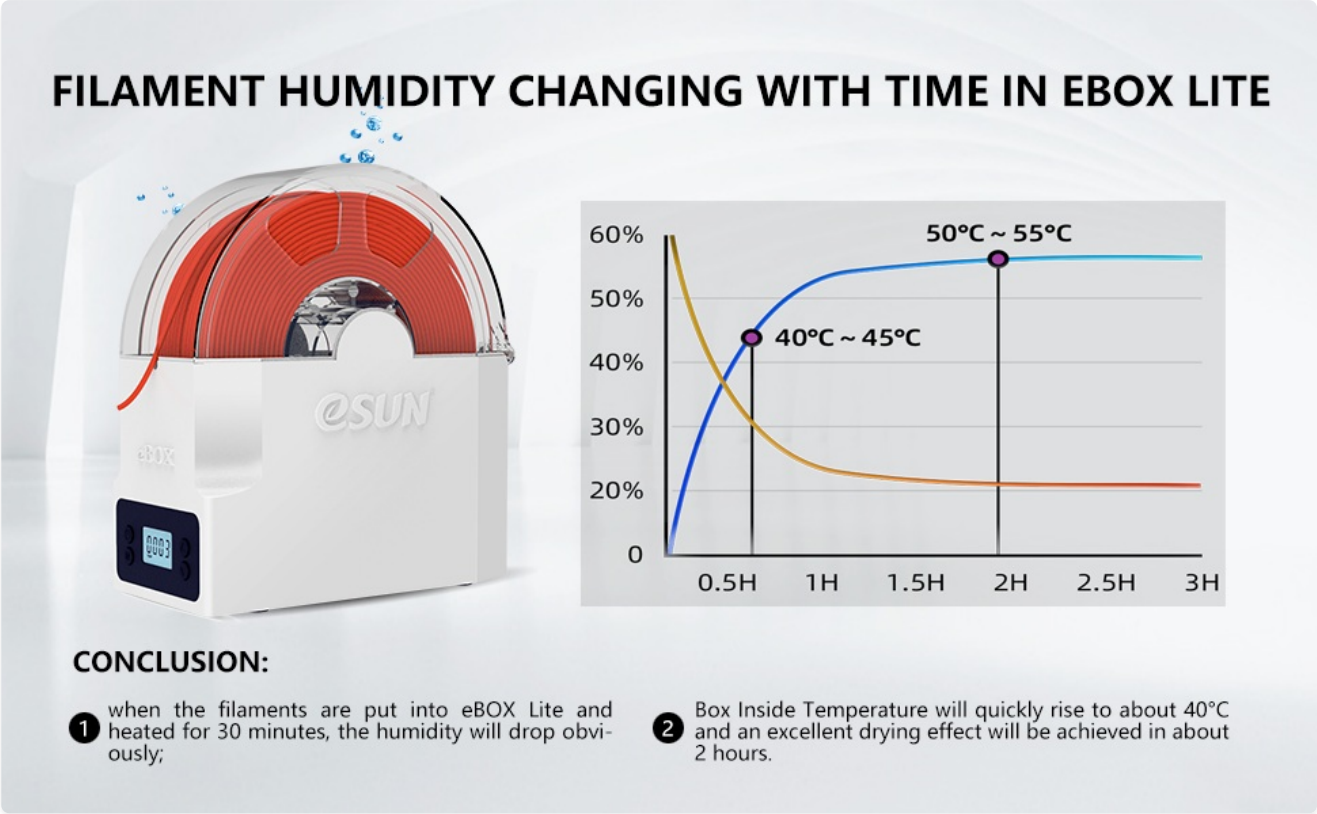

Figure 4: Recommended temperature levels and corresponding filament types.

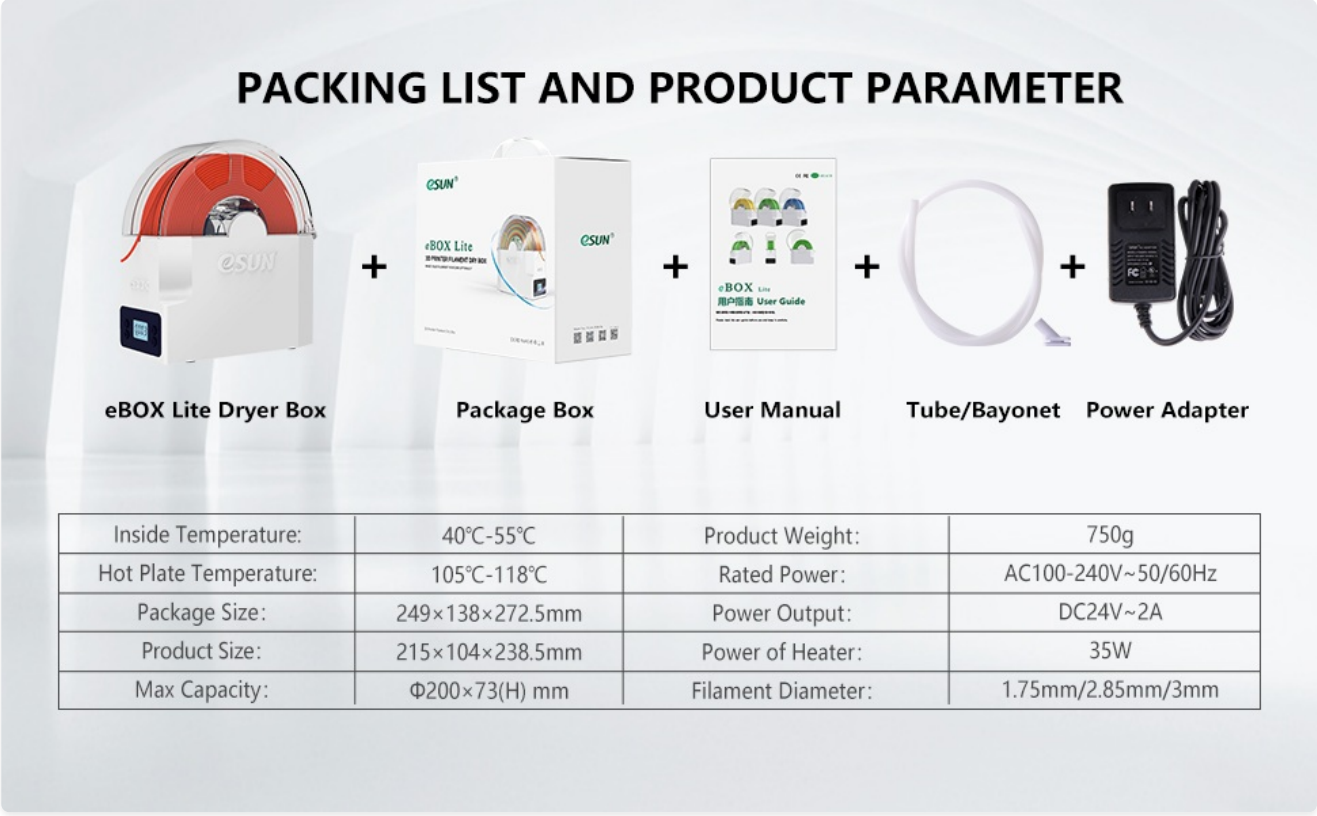

Figure 5: Graph illustrating humidity reduction over time during drying.

5. Maintenance

Regular maintenance ensures the longevity and optimal performance of your eBOX Lite.

- **Cleaning:** Wipe the exterior of the unit with a soft, dry cloth. Do not use abrasive cleaners or solvents. Ensure the unit is unplugged before cleaning.
- **Internal Cleaning:** Periodically check the inside of the box for any dust or filament debris. Use a soft brush or compressed air to remove any accumulation.
- **Storage:** When not in use for extended periods, unplug the device and store it in a cool, dry place.

6. Troubleshooting

Problem	Possible Cause	Solution
Device does not power on.	Power adapter not connected or faulty; power outlet issue.	Ensure power adapter is securely connected. Try a different power outlet. Check if the power adapter is damaged.
Filament not drying effectively.	Incorrect temperature level set; insufficient drying time; lid not closed properly.	Verify the correct temperature level for your filament type. Increase drying time (e.g., to 4-6 hours or more for very wet filament). Ensure the lid is fully closed.
Display is blank or unresponsive.	Temporary software glitch; power interruption.	Unplug the device, wait 30 seconds, then plug it back in. If the issue persists, contact customer support.
Filament spool does not rotate smoothly.	Spool too large or not seated correctly; debris on rollers.	Ensure spool dimensions are within specifications (Φ200mm x 73mm). Re-seat the spool. Clean the rollers.

7. Specifications

Parameter	Value
Model Number	eBox-Lite-US
Inside Temperature Range	40°C - 55°C
Hot Plate Temperature	105°C - 118°C
Rated Power	AC100-240V ~ 50/60Hz
Power Output	DC24V ~ 2A
Power of Heater	35W
Product Weight	0.75 kg (1.65 pounds)
Product Size	215 x 104 x 238.5 mm
Package Dimensions	10.91 x 10 x 5.51 inches
Max Spool Capacity	Φ200mm (diameter) x 73mm (height)
Compatible Filament Diameter	1.75mm / 2.85mm / 3.00mm

Parameter	Value
Material Type	Polycarbonate

Figure 6: Detailed product specifications and package contents.

8. Warranty and Support

For warranty information and technical support, please refer to the official eSUN website or contact their customer service directly. Keep your purchase receipt as proof of purchase.

You can also find additional resources and a PDF version of the user manual at: eSUN eBOX Lite User Manual (PDF)

Related Documents - eBox-Lite-US

	[eSUN eBOX 3D Printing Filament Dryer User Guide] User guide for the eSUN eBOX filament dryer, covering setup, operation modes (Gram, Pound, WOC, TEMP, TIME), parameter settings, and specifications for 3D printing filament.
	[eSUN eBOX Lite User Guide for 3D Printer Filament Dry Box] Comprehensive user guide for the eSUN eBOX Lite, a filament dry box designed to keep 3D printer filaments in optimal condition. Learn about its features, specifications, operation, and parameter settings for various filament types.
	[eSUN 3D Printing Materials: Comprehensive Product Catalog and Guide] Explore eSUN's extensive range of 3D printing filaments, including PLA, PETG, ABS, and specialty materials. Discover product advantages, applications, and certifications for all your 3D printing needs.
	[eSUN PEBA-90A Thermoplastic Elastomer Filament Technical Data Sheet] Technical data sheet for eSUN PEBA-90A, a high-performance thermoplastic elastomer filament for 3D printing, detailing its properties, applications, and recommended printing parameters.
	[eSUN eVacuum Kit Pro 3 User Manual: 3D Filament Vacuum Storage Guide] Comprehensive user manual for the eSUN eVacuum Kit Pro 3, detailing its use, specifications, and troubleshooting for vacuum storage of 3D printer filament. Preserves filament quality by preventing moisture absorption.
	[eSUN 3D Printer Filament User Guide: Printing Parameters and Troubleshooting] Comprehensive user guide for eSUN 3D printer filaments, detailing printing parameters for various materials like PLA, ABS, PETG, ePEEK, and troubleshooting tips for common printing issues. Includes guidelines for optimal results.