## LumiCult Vertical Incubator Shaker

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#### Introduction

Experience advanced laboratory equipment with our integrated LCD touchscreen interface, offering seamless control of temperature, speed, time, and real-time data on a single screen. Say goodbye to toggling between screens and enjoy an intuitive experience. Configure the rocker's rotation direction and control the forced convection fan easily. You can also set precise culture times as needed. Our system features robust three-wheel drive for smooth, stable, and quiet operation. Safety is a priority with over-temperature alarms, automatic power-off, and power-off recovery features. Enjoy 360° observation through the tempered glass door in a sleek and hygienic design. Plus, debugging holes on the side provide oxygen supply without disruption, and built-in lighting and UV sterilization enhance functionality.

#### **Product Features**

1. **Integrated LCD Touchscreen:** The LCD touchscreen conveniently displays temperature, speed, time, actual measurements, and operational status all on a single interface. This eliminates the need to switch between screens, enhancing the user's intuitive experience. Additionally, users have the flexibility to freely set the rocker's rotation direction. The touchscreen also provides real-time access to time accumulation and timing functions. You can effortlessly configure the forced convection fan to operate continuously, automatically, or turn it off as needed.

2. **Flexible Timing Control:** The system offers a timing function that allows users to set culture durations as desired, ranging from 0 to 999.9 hours.

3. **Robust Three-Wheel Drive:** A three-dimensional integrated partial three-wheel drive ensures smooth, stable, durable, and reliable operation.

4. **Safety Features:** Equipped with an over-temperature alarm and automatic power-off function, the system responds to abnormal situations promptly, preventing data loss due to power outages and crashes. It also includes a power-off recovery feature.

5. **Clear Observation:** The system features a hollow tempered glass door that facilitates clear observation from any angle without needing to open the door.

#### **Product Features - Continued**

6. **Sleek and Hygienic Design:** The equipment boasts a streamlined exterior with an interior lining made of corrosion-resistant 304 brushed stainless steel. The arc corner design simplifies cleaning, reducing the risk of bacterial growth. The outer shell is finished with electrostatic spray for added durability.

7. **Oxygen Supply without Disruption:** Convenient debugging holes on the side cater to the oxygen requirements of samples without necessitating door openings. This ensures a smoother experience for future customers seeking technical certification.

8. **Enhanced Functionality:** The system comes with built-in lighting and ultraviolet sterilization functions, enhancing its versatility and utility.

#### Unique Advantages

1. **Versatile Functionality:** This system seamlessly combines a full-temperature oscillating incubator and a light incubator, accommodating both static and dynamic cultures within a single unit.

2. **Space-Saving Design:** Featuring a double-layer rocking plate and a vertical layout, this design maximizes usable space while minimizing its footprint, making it an efficient use of floor space.

3. **Customizable Lighting Conditions:** Users have the flexibility to tailor lighting conditions to their specific requirements. With the capability to program up to 24 segments, each segment can have unique settings for temperature, light intensity, rotation speed, time, and more. This allows for the simulation of natural variations in sunlight intensity and temperature throughout the day, replicating the effects of sunrise and sunset.

4. **Efficient LED Lighting:** The system incorporates a specialized LED cold light source that combines high efficiency with energy-saving capabilities. It delivers exceptional light intensity, reaching up to 30,000LX, and offers stepwise adjustability from 1% to 100%. This source boasts a long service life.

5. **Uniform Temperature Distribution:** Utilizing a patented three-channel hot and cold gas mixing circulation air duct design, the equipment ensures consistent temperature uniformity throughout the entire chamber.

#### **Unique Advantages - Continued**

6. **Data Management and Analysis:** A built-in data memory function records temperature and rotational speed data in real-time at one-minute intervals. This data can be accessed to create historical records and real-time curves, facilitating in-depth analysis of temperature and rotational speed's impact on experiments. Data can be stored for up to 12 months and conveniently imported or exported via a USB interface.

7. **Smart Microcomputer Control:** The system employs PLC microcomputer intelligent control, enabling users to add programs at any time. This user-friendly interface allows for a more personalized experience, and programming capabilities can be easily upgraded.

8. **Effortless Cleaning:** Equipped with a patented built-in diversion waterproof system, the machine's internal cavity can be thoroughly waterproofed and rinsed without leaving any inaccessible areas. This innovative feature simplifies cleaning, eliminating the need for special tools.

9. **Precision Motor and Interference Shielding:** A high-quality servo motor provides precise speed control and robust stability. An integrated filter magnetic ring effectively shields the machine from external interference, enhancing overall stability.

10. **Reliable Cooling:** The system relies on imported high-quality compressors and nitrogen-free, environmentally friendly refrigerants. This combination ensures quiet operation, efficient cooling, and long-term stability even at low temperatures.

11. **User Safety and Cell Stability:** To enhance safety and protect cell cultures, the system features a user-friendly design with instant-stop or slow-stop functionality upon lid opening. This reduces shearing forces on cells and provides enhanced stability during operation. tively inhibiting sample volatilization. Humidity levels are displayed in real-time.



### **Technical Specifications**

Model	UMSI-233-1TI
Number of overlays	1 layer
Туре	Vertical
Display	LCD touchscreen
Rotation speed	10-300rpm
Speed control accuracy	1rpm
Shaking throw	26mm
Maximum load	50KG
Temperature control mode	PLC control mode
Temperature control range	<b>4-60</b> °C
Temperature display resolution	0.1 °C
Temperature fluctuation	<b>±0.1</b> °C
Temperature field uniformity	±0.8 °C @37 °C
Ambient temperature	<b>5-35</b> °C
Heating power	600W
Cooling power	278W
Volumn	233
Sterilization method	UV sterilization
Tray size	509×485mm
Tray capacity of shake flask	(250ml×25 or 500ml×16 or 1000ml×9) ×2 layers
Illumination	0-16000LUX(Standard) 0-30000LUX(Optional)
Power supply	AC220V±10%, 50-60Hz
Timing function	0-999.9hours
Weight	199KG
Dimension(W×D×H)	687×793×1229mm
Package siza(W×D×H)	850×810-×1440mm
Gross weight	235KG