Climate Control Chamber

Ocean Life Science Corporation

Address: A3/27a, Chanakya Place, Part-1,Opp: C-2 Janak Puri, Pankha Road New Delhi-110059
Email: info@olsc.us, olsc.lab@gmail.com
Phone: (+91) 9999136670, 7835864003

USA Headquarters

30 N Gould St, Ste R
Sheridan, Wyoming 82801
United States

Product Overview/Applications

- The Ocean Life Science Corporation Plant Growth Chamber is a state-of-the-art environmental simulation chamber specifically engineered for advanced plant research, seed germination, tissue culture, insect studies, and controlled-environment experiments. The chamber offers precise control of temperature, humidity, lighting, and optional CO_2 enrichment to ensure highly reproducible and reliable research conditions.
- The chamber is designed with flexible two-tier and three-tier growth configurations, enabling researchers to maximize usable growth area according to their experimental requirements.

Lighting System

- Exterior body constructed from wet-painted galvanized steel for superior corrosion resistance and long service life.
- Interior fabricated from reflective white, wet-painted galvannealed steel.
- This facilitates precise light intensity levels to be maintained throughout the life of experiment.
- Standard color choices include cool white, full-spectrum LEDs.
- Non-standard color choices include blue, red, far red, red-blue-far red combination, red-green-blue combination, red-blue-far red-white combination LEDs.
- 1,100 µmol m^{-2} s^{-1} at 15–20 cm from light source (Two-Tier), 775 µmol m^{-2} s^{-1} per tier at 15–20 cm from light source (Three-Tier).
- IP-rated LED fixtures and drivers, Open-loop programmable dimming, Balanced broad-spectrum LEDs, Supplemental far-red fixtures, Additional 10% far-red output when enabled, Uniform light distribution throughout the chamber.
- Each color of the lights is independently regulated and dimmable from 0% to 100%.
- Programming and control of the lighting is done via HMI touch screen real time controller.

Air Flow

Airflow for this chamber is distributed uniformly outward from back sides of the walls and back through the air pump on top of the cabinet, which using OLSC innovative horizontal-to-vertical air refresh system. Airflow is sufficiently to ensure uniformity as well as proper air exchange on the leaf surface. Fresh air intake can be adjustable which also helps to ensure adequate ambient gas exchange.

Refrigeration

- Self-contained air-cooled condensing unit with hot air bypass system for continuous compressor operation, extended life and close temperature control. An electronic modulating valve provides tight temperature control while ensuring quiet operation. Pressure transducers are included for monitoring the status of the refrigeration system.
- Rear chamber wall mounted evaporator coil incorporates an air circulation fan.

Safety Limit Controls

- Adjustable high and low temperature/humidity/pressure controls, audible alarms, and visual indicators display on the screen.
- Controls shut down all power to the chamber, activating alarms (when the temperature/humidity /pressure returns to the normal range, the system will automatically reset).
- Backup “high/low” alarms provide a further level of protection while visual and audible notification is provided when any alarm be activated. Contacts for connection to a remote management system are also included.
- One access port of approximately 50 mm diameter with light-tight cap

Key Product Attributes

- Counterbalanced Lighting system
- Standard lighting provides a wide spectrum at high intensity
- Certifications: ISO, CE, USFDA, IEC & NSIC,

Optional CO_2 Control System

- Integrated CO_2 sensor
- Control valve
- Injection system
- Control range: Ambient to 2,900 ppm
- Sensor measurement range: Up to 3,000 ppm

Advanced Touch Screen Controller

- The chamber is equipped with a full-color industrial touchscreen HMI featuring:
- Real-time and historical trend graphs

1. Programmable temperature, humidity, and lighting control
2. Audible, visual, and email alarm notifications
3. Storage of minimum 16 user programs
4. Each program contains minimum 48 lines with 1-minute resolution
5. Multi-day and seasonal scheduling capability
6. Password-protected access for users, administrators, and service personnel
7. Light output runtime tracking
8. Day Light Integral (DLI) display for current and previous 12–15 days
9. Psychrometric chart display
10. Data logging and CSV export

OLSC-116E-35| with Expended Temperature and Humidity Range

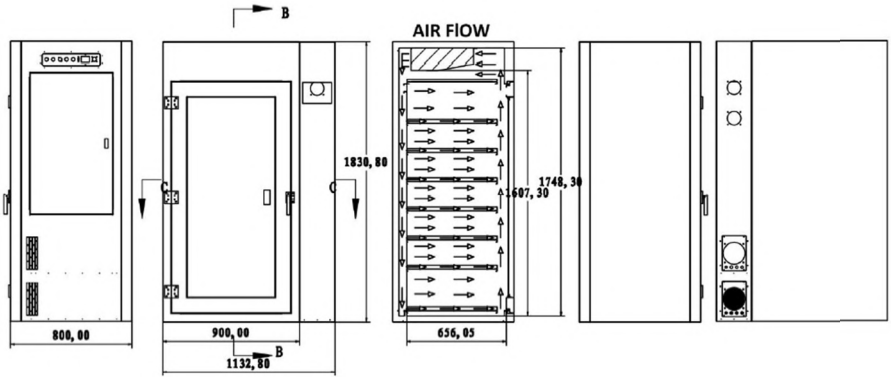
The OLSC-116E-35 ensures absolute constant test conditions throughout the research area. A big advantage of this chamber is tis low space requirement and flexibility in terms of water supply. The wide temperature and humidity range make his constant climate chamber ideally suited for stress using series.

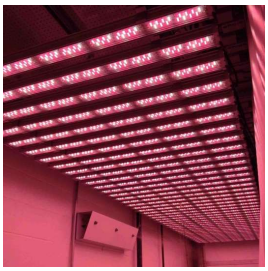
Main Features

- Temperature range: +3°C to +50°C
- Humidity range: ambient RH to 90% RH
- Programable lighting conditions under regulated
- Temperature regulation with resistive temperature sensor
- Humidity regulation with capacitive humidity sensor and vapor humidification
- Equipped with smart phone APP remote control system
- Equipped with fresh air system
- LCD touch display temperature and humidity along with additional information and alarms
- Independent temperature safety device with visual and audible temperature alarm
- Easily operate with reliable regulating system which works in tandem with an HMI (Human-Machine Interface) consisting of a touch screen display
- Flush-mounted door design for better air impermeability
- Exterior: Wet-painted galvanized steel
- Interior: Reflective white wet-painted galvannealed steel
- Equipped with 4 stable castors and two with brakes, moveable to anywhere

Observation Window (OPTIONAL)

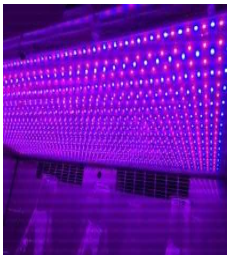
- Dual-pane unheated observation window
- Size: 240 × 860 mm (9½" × 34")
- Light-tight cover for complete darkness when required








Technical

Parameter	Standard	Option
Model	OLSC-116E-35	
Exterior Dimensions	1164 mm x 800 mm x 1940 mm	
Interior Dimensions	776 mm x 656 mm x 1550 mm	
Growth Capacity	27.6 ft3	
Temp. Range Lights ON	+3°C to +50°C	-
Lights OFF	+3°C to +50°C	-10°C to +45°C
Temp. Display Precision	0.1°C	
Temp. Fluctuation	±0.5°C	
Temp. Uniformity	±0.5°C	
Humidity Range Lights ON	50% RH to 90% RH	30% RH to 99% RH
Lights OFF	50% RH to 90% RH	30% RH to 99% RH
Humidity Uniformity	±6% RH	
Temp. & Hum. Sensor	YES	
Control System	Programable Man-Machine Interactive Control system with 7" Touch Screen HMI display	
Smart Phone APP Remote Control System	Equipped with smart phone APP remote control system	
Fresh Air System	Equipped with fresh air system	
Growing Space	27.6 ft^3 (~782 L).	
Shelves	Equipped with 4 modular shelves	
Lights & Intensity	Two-tier: 1,100 µmol m^{-2} s^{-1}, Three-tier: 775 µmol m^{-2} s^{-1}	
Lights Color	Cool white	One/three/four/eighteen color(s)
(CO2)	-	Ambient to 3000-5000 PPM
Electrical Supply	AC 110-277V ±5%, 50/60Hz, 15Amp	

An ISO, CE, USFDA, IEC & NSIC Certified Company

Plant Growing Cases


Transgenic Rice Growing


Haruna Growing


Tobacco Growing


Citrus Growing


Magic Bean Growing


Lupin Growing


Arabidopsis Growing


Soybean Growing

OCEAN LIFE SCIENCE CORPORATION

Leading manufacturer of laboratory equipment's

CORPORATE ADDRESS

Address: A3/27A, Chanakya Place, Part-1, Opp: C-2 Janak Puri, Pankha Road New Delhi-110059, INDIA

Overseas Partner

Darsun Scientific
30 N Gould St, Ste R Sheridan, Wyoming 82801 United States

We also offer:

LABORATORY FURNITURE & INTERIOR, HOSPITAL FURNITURE & INTERIOR
HMI & PLC, SOLUTIONS , CONSULTANCY SERVICES

An ISO 9001:2008 | ISO 13485 | EN: 12469 Compliance
OHSAS 18001 | WHO:GMP Products | NSIC Registered