



GENEVA SCIENTIFIC

LAB EQUIPMENT SOLUTIONS

LED PLANT GROWTH CHAMBER - LED-36HVL LT



Model	LED-36HVL LT
Exterior Dimensions (WxDxH)	42.3" x 33.6" x 79.3"
Temp. Range (w/ lights on)	-5-44C +/- 0.5C
Interior Space	29.7 cu.ft.
Total Shelving Floor Area	10.8 sq.ft.
Maximum Growing Height	21.5"
Light Intensity (6" from lamps)	950 micromoles/m2/sec
Number of Tiers	2

Applications

*This chamber is specifically designed for plant growth light quality studies and other experiments requiring specific wavelengths of light

*Offers ability to measure cold hardiness, freeze tolerance, heat stress, and exposure to a series of temperatures (spring, summer, fall and winter-like conditions)

*"Constant Temperature Defrost" allows chamber to operate at low temperatures under full lighting without temperature defrost spikes

*Glass side walls give full view of each shelf without disturbing experiment, and glass is evenly heated over its entire surface eliminating condensation

Percival's IntellusUltra Controller

*Percival Scientific has built a reputation of providing flexible, customized options for research scientists around the world. We have taken the philosophy to the next level with our improved IntellusUltra controller. Now choose from the levels of functionality that meet your research needs.

Lighting System

*Standard color choices include cool white, red, far red, and blue LEDs

*Non-standard color choices include UV, warm white, full spectrum white, and green

*Each color is independently dimmable between 10-100%

*Two externally mounted LED lamp banks which reduce interior heat load

*Externally mounted lamp banks separated from chamber growth space by side walls

*Programming and control of the lighting is done via IntellusUltra real time controller

Cabinet Construction

*Interior constructed of 22-gauge electro-zinc plated steel

*Exterior constructed of 18-gauge exterior electro-zinc plated steel

*Welded seams and joints on outer and inner shells

*Inner shell supported by non-compressing/non-thermal conducting material locking inner liner in place without a metal-to-metal bond to outer case

*Chamber is completely self-contained

*Overall wall thickness is 2"

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Cabinet Construction cont.

- *Two 1 1/4" diameter access ports on right hand wall
- *Chamber floor equipped with floor drain and hose assembly
- *Contains casters assembly and adjustable leveling legs to compensate for floor unevenness in the lab

Insulation

- *Woodless construction using CFC-free insulation (overall wall thickness is 2", ample insulation for maintenance of stated temperature range)

Door

- *One door opening of 29.2" x 57.5" providing full access to chamber interior (magnetic gasket provides a tight seal to door frame)

Interior Space

- *29.7 cu.ft. with work area of 10.8 sq.ft. provided on two tiers

Shelving

- *Two tiers of white epoxy coated steel wire shelving (shelf is 27"D x 28.8"W)
- *Shelving is vertically adjustable in 1/2" increments
- *Maximum growing height is 21.5"

Finish

- *Interior and exterior painted with high reflective, environmentally friendly, high temperature baked white powder coating

Refrigeration

- *Refrigerant: R-407c
- *Constant temperature defrost allows chamber to operate at low temperatures under full lighting without temperature defrost spikes (typically, low temperature systems are defrosted by the diversion of hot gas through the coil or via electric heaters, causing a significant temperature spike during the defrost period)
- *Dual coil system has been utilized in order to maintain a constant low temperature within chamber
- *Coils work in tandem (as one coil is cooling, the other coil is defrosted via hot gas)

Refrigeration cont.

- *Self-contained air-cooled condensing unit with hot gas bypass system for continuous compressor operation, extended life and close temperature control (this continuous running condensing unit ensures precise temperature control by alternately cycling refrigerant and hot gas to coil; this also prolongs life of compressor, and eliminates risk of ice build up in coil)
- *Optional outdoor all weather air-cooled condensing unit or self-contained water-cooled condensing unit available upon request
- *Heat rejection to ambient with standard chamber = 6900 BTU/hr

Temperature Range

- *-5-44C (+/- 0.5C) with lights on and 2-44C (+/- 0.5C) with lights off

Temperature Safety Limit Controls

- *Experiment Protection: Adjustable high and low temperature controls, audible alarms, and visual indicators provided
- *Controls shut down all power to chamber, activating alarms (when the temperature returns to the normal range the system will automatically reset)

Convenience Receptacles

- *Two 120/1/60 convenience receptacles provided inside chamber

Electrical Requirements

- *Consult Geneva Scientific for electrical requirements and amperage draw.

Options

- *Additive Humidity Control with Sensor
- *Dehumidifier with Sensor
- *IntellusUltra Connect
- *Android-Based Touch Screen
- *Door with Observation Window with Cover
- *Door with Fresh Air Ports
- *Self-Contained Water-Cooled Condensing Unit



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