

LED series

Percival® model LED-100HL2



applications

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

Please compare your own requirements to the specifications listed below.

percival's IntellusUltra controller

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

Please refer to www.percival-scientific.com for additional information regarding the control system.

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%
- Each tier is independently dimmable
- Programming and control of the lighting is done via IntellusUltra real time controller

airflow/circulation

- Uniform air circulation moves across each shelf through air diffusers on the rear wall
- Air travels along the entire back wall, over the shelves and returns to the ceiling fans through an opening between the light fixture and the door

cabinet construction

- Cam-type fasteners and vinyl gaskets
- Interior and exterior constructed of 24-gauge electro-zinc plated steel
- Stainless steel floor
- Chamber floor equipped with floor drain with attached ¾" plastic tubing
- Chamber cabinet is attached to angle frame base containing heavy duty swivel casters

LED-100HL2 specifications (subject to change without notice)

Temp Range <small>with all lights on</small>	Interior Space <small>volume</small>		Total Shelving Floor Area		Maximum Growing Height		Exterior Dimensions						Light Intensity <small>6" from lamps unless otherwise noted</small>	Tiers	LED Colors
							width		depth		height				
°C	ft³	m³	ft²	m²	in	cm	in	cm	in	cm	in	cm	µmoles/m²/s		
10-44±0.5	147.9	4.2	36.7	3.4	29	73.7	100.5	255.3	40.6	103.1	111.1	282.2	950	2	4*

Each color and tier is independently dimmable. *Cool White + Red + Far Red + Blue combination.

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insulation

- Woodless construction using foam-in-place 2" [5.1 cm] thick CFC free urethane insulation foam (this is an environmentally friendly foam with global warming potential [GWP] of 0.0 and ozone depletion potential [ODP] of 0.0)

doors

- Two reach-in doors each with an opening of 29.3" x 57.3" (74.3 cm x 145.4 cm) (magnetic gasket provides a tight seal to door frame)

interior space

- 147.9 ft³ (4.2 m³) with work area of 36.7 ft² (3.4 m²) provided on two tiers

finish

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

refrigeration

- Self-contained water-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)
- Solenoid valves have extended stem for quiet and long life operation
- Heat rejection to the ambient (standard refrigeration system) with water-cooled self-contained condensing unit = 6100 BTU/hr.
- Optional outdoor all weather air-cooled condensing unit or self contained water-cooled condensing unit available upon request

temperature range

- 2°-44°C (±0.5°C) lights off and 10°-44°C (±0.5°C) lights on (full fresh air) within work area on horizontal plane with lights on

temperature safety limit controls

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

humidity control (optional)

- Additive control of humidity in %RH through use of ultrasonic humidifiers will maintain humidity levels up to 75% (+/-5%) RH lights on up to 90% (+/-5%) lights off, between 15° and 30°C
- Humidifier requires distilled or de-mineralized water
- Optional dehumidification via independent coiling coil and reheat heaters will maintain humidity levels down to 40% RH between 15°C and 30°C

options (most popular)

- IntellusUltra Connect (C9)
- IntellusUltra Connect and Android-based Touchscreen (C9T)
- IntellusUltra (standard) and Android-based Touchscreen (C8T)
- Ultrasonic Humidifier with advanced RH Sensor (H11)
- Dehumidification via independent dehumidifying coil with reheat heaters and Ultrasonic Humidifier (H12)
- Ultrasonic Humidifier with Electronic RH sensor (H14)
- Ultrasonic Humidifier and Dehumidifier with Electronic RH sensor (H15)
- CO₂ enrichment package
- Outdoor all weather air-cooled condensing unit or self-contained air-cooled condensing unit
- Dry alarm contacts
- Extended temperature ranges available
See other catalog sheets or consult factory for additional accessories.

convenience receptacles

- Two convenience receptacles provided inside chamber

electrical service requirements

- 120-208/3/60, 4 wires plus ground
- RLA=22, MCA=28 (provide 30 amp per leg minimum [standard chamber])
- Chamber must be direct wired to a terminal block inside of chamber



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