

Plant Growth Chamber

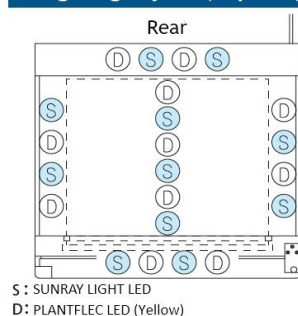
< Standard model >
Dimmable & Dual-Color



L(P)H-411PFDST-S(P/PC)



Lighting Layout (Top View)



5-side irradiation



The measurement port on the ceiling.

Works as a single door—
perfect for growing tall plants.



This is an energy-saving model of a standard closed-type plant growth chamber, equipped with alternating Plantflec Yellow and SUNRAY LIGHT LEDs.

Features

- This is an energy-saving model of a standard closed-type plant growth chamber, equipped with alternating Plantflec Yellow and SUNRAY LIGHT LEDs.
- An operation touch panel with time display is mounted on the upper part of the main body, which allows easy operation.
- It allows both constant operation at any temperature/light/ (humidity) and day/night switching operation.
- Five-sided illumination. The light can be continuously dimmed from 20% to 100% or 0%.
- Three-position controller is used for temperature and humidity control (proportional control for heating), which provides low running costs.
- The inner door has energy-saving functions, being used as one door or two up-and-down doors as per usual.
- Two-level wind speed control is installed to protect wind-sensitive plants.
- A hole of 40 mm diameter for measurement is included as standard.
- Humidity control system can be selected from "only humidification" or "only dehumidification" or "both humidification and dehumidification."

Applications

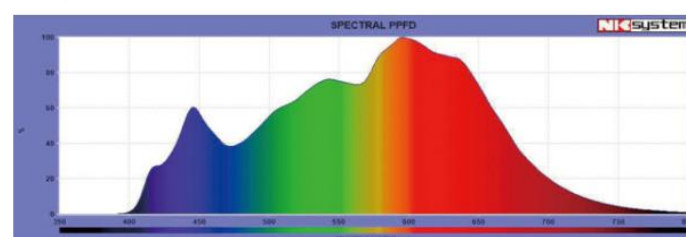
- Plant cell/tissue culture, germination, acclimation, or growth test
- Environmental test
- Growth of rice, arabidopsis, etc.
- Insect experiment
- Environmental resistance test for plants
- Storage test at constant temperature and at constant humidity (only Model LPH)

Options

- Table for a water tank (Size:W300×D400×H900mm)
- Evaporator for drained water



LED spectrum



Specifications

Model		LH-411PFDST-S	LPH-411PFDST-S
Outer dimensions (mm)		W880 × D806 × H1,875	
Inner dimensions (mm)		W670 × D565 × H1,100	
Control system		Changeover between constant operation and day/night switching operation	
Control methods		Three-position control method: Refrigerator and humidifier, ON/OFF control; heater, proportional control	
Temperature		+5~50°C ± 1°C (+15~ when all lights on)	
Humidity		—	50-90%RH ± 10%RH (15-45°C)
Illuminance		0 to 19,000lx, They can be continuously dimmed from 20% to 100% or 0% (all lights off)	
Photon flux density		0 to 285 μmolm ⁻² s ⁻¹	
Light source	Illumination	Straight tube sun-like LED lamp (SUNRAY LIGHT) Straight tube LED lamp (PLANTFLEC) Yellow for plant growth	
	Number of lamps	Left, right, rear and door: 40W 4 lamps (2 lamps x 2 colors) x 4 sides, Ceiling: 20W 6 lamps (3 lamps x 2 colors) x 1 side	
Refrigerator		300W	
Heater		500W	
Humidifier		—	80W
Shelf		6 shelves (adjustable)	
Operation current (maximum)		11A	14.5A
Power requirement		Single phase 100V 50/60Hz 15A E	
Weight (kg)		About 275	About 285

Model		LH-411PFDST-SP	LPH-411PFDST-SP	LPH-411PFDST-SPC
Outer dimensions (mm)		W880 × D806 × H1,875		
Inner dimensions (mm)		W670 × D565 × H1,100		
Control system		Real-time based control (24 hours)/Cumulated hours-based control (Up to 999 hours and 59 minutes/step) 24steps/5patterns with a pattern link function		
Repeat		1 to 99 times or unlimited		
Control methods		Three-position control method: Refrigerator and humidifier, ON/OFF control; heater, proportional control		
Temperature		+5~50℃ ± 1℃ (+15~ when all lights on)		
Humidity		—	50-90%RH ± 10%RH (15-45℃)	
Illuminance		0 to 19,000lx, They can be continuously dimmed from 20% to 100% or 0% (all lights off)		
Photon flux density		0 to 285 μmolm ⁻² s ⁻¹		
Light source	Illumination	Straight tube sun-like LED lamp (SUNRAY LIGHT)		
		Straight tube LED lamp (PLANTFLEC) Yellow for plant growth		
	Number of lamps	Left, right, rear and door: 40W 4 lamps (2 lamps x 2 colors) x 4 sides, Ceiling: 20W 6 lamps (3 lamps x 2 colors) x 1 side		
Refrigerator		300W		
Heater		500W		
CO ₂ concentration		—	—	ambient to 3,000ppm
Humidifier		—	80W	
Shelf		6 shelves (adjustable)		
Operation current (maximum)		11A	14.5A	
Power requirement		Single phase 100V 50/60Hz 15A E		
Weight (kg)		About 275	About 285	

* Temperature sensor: platinum resistance temperature sensor, humidity sensor: polymer film capacitive sensor, humidifier: ultrasonic humidifier.

* Power requirement does not include the power-outlet installed inside the chamber. The internal outlet can be used up to 0.5A.

* These chambers are designed to operate in ambient temperatures 15 to 30°C in general. The specified performance may not be achieved depending on actual usage conditions.

* Supply purified water (disilled or reverse osmosis water) only.

* The specified performance may not be achieved depending on the combination of temperature and humidity.

* Depending on the sample, drainage installation may be required.

* When lighting, temperature setting should be 15°C or higher.

* Keep 30cm or more clearance at both sides and the back of the product to prevent exhausted heat from being trapped and hindering the cooling function.

* The specified control accuracy for temperature and humidity applies when lights off.

* For long-term operation at high temperatures, please contact us for confirmation.

* The specified performance may vary depending on the installation environment, settings, and the placement of samples and other conditions inside the chamber.

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