

Plant Growth Chamber

< CO₂ control >

Dimmable



LPH-411PF(S/D/P)T-SPC

Choose from 3 LED colors!



SUNRAY LIGHT
WHITE



PLANTFLEC
YELLOW



PLANTFLEC
PINK

5-side irradiation

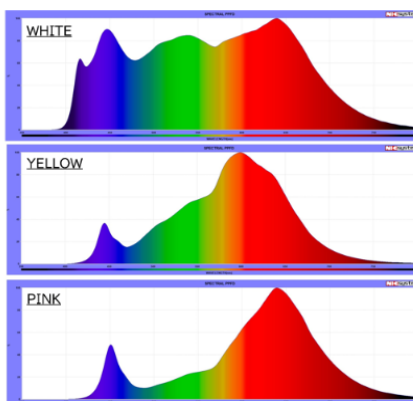


The measurement port on the ceiling.

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



LED spectrum



The CO₂ control function is added to Standard Plant Growth Chambers.

You can choose the lighting from the following:

-White color: sun-like LED (SUNRAY LIGHT)

-Yellow/Pink color: LED for plant growth (PLANTFLEC)

Three-position controller is used for temperature and humidity control, which provides low running costs. This model can be used for research such as relationship between CO₂ concentration and plant growth rate.

Features

- An operation touch panel with time display is mounted on the upper part of the main body, which allows easy operation.
- This model allows program control (real-time mode / accumulated operation time mode).
- CO₂ concentration can be controlled between atmospheric one and 3,000 ppm (controlled with addition of CO₂).
- Two-level wind speed control is installed to protect wind-sensitive plants.
- The inner door has energy-saving functions, being used as one door or two up-and-down doors as per usual.
- 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 tests
- Growth of rice, arabidopsis, etc.
- Insect experiments
- Environmental tests

Options

- Pressure Regulator with a flow meter
- Table for a water tank (Size:W300×D400×H900mm)
- Evaporator for drained water
- CO₂ removal unit



Specifications

Model	White LED	LPH-241PFST-SPC	LPH-411PFST-SPC
	Yellow LED	LPH-241PFDT-SPC	LPH-411PFDT-SPC
	Pink LED	LPH-241PFPT-SPC	LPH-411PFPT-SPC
Outer dimensions (mm)		W760 × D726 × H1,767	W880 × D806 × H1,875
Inner dimensions (mm)		W512 × D485 × H980	W670 × D565 × H1,100
Control system		Real-time based control (24 hours)/Cumulated hours-based control(Up to 999 hours and 59 minutes/step)	
Repeat		24steps/5patterns with a pattern link function	
Control methods		ON/OFF control for three-position control, refrigerator, and humidifier; and proportional control for heater	
Temperature		+5°C to 50°C ± 1°C (15°C ~ when all lights on)	
Humidity		50-80%RH ± 10%RH (15°C to 45°C)	50-90%RH ± 10%RH (25°C to 45°C)*
Illuminance		White and Yellow LED: 0 to 20,000 lx, Pink color: 0 to 12,000 lx They can be continuously dimmed from 20% to 100% or 0% (all lights off).	
Photon flux density		White LED:0 to 330 μmolm-2s-1, Yellow LED: 0 to 280 μmolm-2s-1, Pink LED: 0 to 260 μmolm-2s-1	
Light source	illumination	White: Straight tube sun-like LED lamp (SUNRAY LIGHT) Yellow and Pink: Straight tube LED lamp (PLANTFLEC) for plant growth	
	Number of lamps	Left, right, and rear: 4 lamps (40W) x 3 sides, Ceiling and door: 4 lamps (20W) x 2 sides	Left, right, rear and door: 4 lamps (40W) x 4 sides, Ceiling: 6 lamps (20W) x 1 side
Refrigerator		200W	300W
Heater		500W	
Humidifier		80W	
CO ₂ concentration		ambient to 3,000ppm	
Shelf		5 shelves (adjustable)	6 shelves (adjustable)
Operation current (maximum)		White: 13.5A Yellow and Pink: 12.5A	White: 14.5A Yellow and Pink: 13.5A
Power requirement		Single phase 100V 50/60Hz 15A E	
Weight (kg)		About 235	About 285

All types are capable of continuous dimming.

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

* The internal outlet of LPH-411PFST-SPC can be used up to 0.5A, LPH-241PFST-SPC can be used up to 1A.

* 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.

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

* For long-term operation under conditions of high temperature and high humidity, please contact us for confirmation.