

PLANT GROWTH CHAMBERS



PGC-Series 3-Side Illumination Plant Growth Chamber provides reliable controlled climatic condition of temperature, humidity, lighting and CO₂ concentration(Optional). Ideal to growing plant, plant tissue culture or any other laboratory experiments needs controlled climatic simulation. Various choice of capacity from 200L ~ 864 L for tissue culture and plants growing. Light bank on the 3- side with fluorescent lamps provides light intensity up to 30,000 LUX.



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3-SIDE ILLUMINATION Wide Range

Plant Growth CHAMBER



Specifications BL-PGC-960L

Chamber Volume (Capacity)	864 Liters
Inner Dims. (W x D x H)	1300 x 680 x 1350 mm
Outer Dims. (W x D x H)	1500 x 1000 x 2150 mm
No. of Shelves included	6 EA
No. of Shelf position	35 EA by 25 mm spacing

Heating	Forced Air Convection
Cooling	CFC Free air cooled compressor
Control	Program Mode 1 Patterns Memory 11 Segments Manual Mode Fixed Temp. operation with timer

Temp. Range $+0^{\circ}\text{C} \sim +70^{\circ}\text{C}$ (light off)/ $+10^{\circ}\text{C} \sim +70^{\circ}\text{C}$ (light on) without humidification

Accuracy $\pm 0.3^{\circ}\text{C}$ at $+15^{\circ}\text{C}$, 70% RH Light off

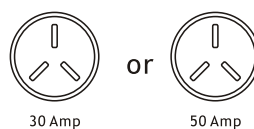
Uniformity $\pm 1.0^{\circ}\text{C}$ at $+15^{\circ}\text{C}$, 70% RH Light off
Sensor Class A PT-100 Ω sensor










Humidity Range $\pm 30\% \sim 90\% \text{ RH}$

Accuracy $\pm 3.0\%$ at 70% RH

Uniformity $\pm 6.0\%$ at 70% RH

Plug config.



	Temp. $+0^{\circ}\text{C} \sim 70^{\circ}\text{C}$
	Humidity 30 ~ 85% RH
	Lighting 0 ~ 30,000 Lux
	CO ₂ Conc. amb. ~ 5000 ppm (%)
	Program Controller
	Timer On / Off 
	Photoperiodic Control 

Sensor	Electronic Humiral Sensor
Illumination Range	0 ~ 30,000 Lux by 8-step combination
Lamp configuration	20 ea x 36 Watt fluorescent tube
Sensor	Built-in LUX Meter in chamber
CO2 Conc. Range	ambient ~ 5,000 ppm (~ 0.5 %)
Accuracy	±50 ppm
Sensor	NDIR-Diffusion (Infra Red) CO ₂ Sensor
<i>Remark : CO2 control available only when optional CO2 control OHC-100 is included</i>	
Safety	Over-Temperature Cut-Off Low water level Cut-Off Over
	Current Cut-Off
Material	Body : Epoxy Powder Coated Steel Chamber : Stainless Steel 304
Electrical Requirement	220 ± 10% VAC, 50/60Hz, 1-Phase
Heater Capacity	6.0 kW
Power Rating	43 amps
Plug Configuration	50 AMP Plug
Net Weight	380 kg
Shipping Weight	550 kg
Shipping Dims. (W x D x H)	1630 x 1080 x 2180 mm, wooden crating

F. Feature

Controller (PGC-4CP Programmable Controller)

- ✓ High precision Digital PID Microprocessor controls temperature, humidity, lighting and CO₂ concentration(optional) in one integrated unit with easy to use 4-line back-light LCD Display interface
- ✓ Programmable operation capability of various climatic conditions of temperature, humidity, light intensity and CO₂ conc(optional). with time duration up to 11 Segments 999 cycles or unlimited repeating operation
- ✓ Temperature, humidity, light intensity, CO₂ conc(optional). calibration and auto-tuning function
- ✓ Class A Pt-100 Ω temperature sensor
- ✓ Precision electronic humidity sensor
- ✓ Built-in LUX Meter in chamber to measure and display light intensity
- ✓ The most accurate NDIR-Diffusion (Infra Red) CO₂ Sensor(optional)
- ✓ Automatic defrost cycle **Construction**
- ✓ Durable epoxy powder coated metallic casing
- ✓ Corrosion resistant Stainless Steel 304 chamber
- ✓ Durable Stainless Steel 304 Sheath Heater and Copper-Aluminum fin evaporator ✓ Removable and height adjustable shelf
- ✓ Built-in humidifier and automatic water supply
- ✓ Double layer vacuum tempered safety glass ceiling on light bank
- ✓ Tempered Safety inner glass door **Performance**
- ✓ Forced air circulation of controlled temperature and humidity to achieve excellent thermal uniformity
- ✓ Durable Stainless Steel 304 Sheath Heater and copper-aluminum finned evaporator
- ✓ Temperature control within 0.1 °C resolution
- ✓ Humidity control within 1 % RH resolution
- ✓ Lighting control from 0 ~ 30,000 Lux by 8 Step light intensity for photoperiodic Day-Night simulation
- ✓ Lamp-on-Delay System by turn on lamp one by one which provides gradual increase of light to eliminate sudden light intensity change
- ✓ CO₂ concentration control within 1 ppm (1%) resolution(optional)
- ✓ Separate heating and cooling compartment prevents contamination and maintenance free
- ✓ Cooling system with hermetically sealed compressor **Convenience**
- ✓ Outer door with self adhesive magnetic packing
- ✓ Inner glass door with air tight gasket for easy observation of sample during experiment.

- ✓ Removable and height adjustable shelf by 25mm spacing
- ✓ Easy to access Light Bank System for convenient maintenance
- ✓ Corrosion resistant Stainless Steel 304 (ASTM 304) chamber
- ✓ Auto-defrost system, user settable interval and time
- ✓ Built-in casters for easy transport

Safety

- ✓ DUAL OVER TEMP. CUT-OFF
Digital system cut-off heater and AUDIO VISUAL ALARM in case $+2^{\circ}\text{C}$ above set temperature
Analog system cut-off heater 10% above set temp.
- ✓ MAX TEMP CUT-OFF heater and AUDIO VISUAL ALARM when $+1^{\circ}\text{C}$ above maximum limit
- ✓ OVER COOLING. CUT-OFF
Digital system automatically cut-off compressor in case -3°C below set temperature
- ✓ SENSOR DISCONNECTION ALARM
- ✓ LOW WATER LEVEL ALARM AND CUT-OFF
- ✓ HUMIDIFIER DRY-BURN PROTECTION
- ✓ OVER CURRENT CUT-OFF : Electric Leakage Breaker

Options & Accessories

Art No.	Descriptions
PGC-100	Optional CO2 Control amb. ~ 5,000 ppm with NDIR CO2 Sensor
PGC-101	2 Stage CO2 Gas Regulator
PGC-102	Flow Meter
PGC-103	Metering valve
PGC-C15	PVC Coated Wire Shelf, W570 x D545 mm
PGC-A99	Shelf Support, Set of 4 EA

Warranty

1 Year full coverage warranty