Plant Growth Chamber

Provision of optimum photosynthesis conditions for plant growth

GC-1000TLH

GC-300TLH

Optimal photosynthesis condition for plant growth.

- Uniform temperature and humidity. (TLH models)
- Reinforced Blue and Red spectrums lighting system for plant photosynthesis.
- Optional CO_2 sensor. (option)
- Programmable temperature, humidity, and lighting.
- Progressive temperature, humidity, illumination program control for optimization of plant growth environment for night and day.
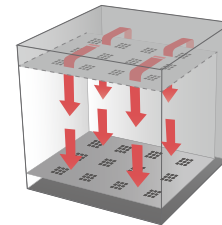
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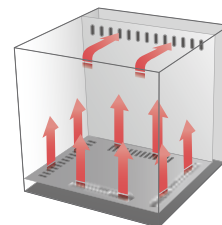## Structural Functional Features

General control system
- 5°C to 50°C(lamp off) / 10°C to 50°C. (lamp on)
- Max. to 35,000Lux for GC-1000.
  Max. to 20,000Lux for GC-300 Models.
- 40 to 80% RH for GC-300TLH. (at 20 to 35°C)
  50 to 90% RH for GC-1000TLH. (at 20 to 35°C)
- Max. 5,000ppm CO_2 on/off system. (option)
- Microprocessor PID control / Temperature calibration / Automatic tuning.
- 10 step programmable temperature, humidity, and illumination profiles and repeatable steps of up to 999 cycles.
- Advanced performance of low and high temperature and humidity control, achieved by adapting the humidification tank exterior to the chamber, added benefit for long term test.

Illuminance control system
- Uniformed luminescence distribution.
- Broad distribution of side lamps for hastening the growth of plants.
- High intensity illumination of upper lamp for light efficient and low thermal load. (for GC-1000TLH/1000TL)
- Unique construction for minimization of heat increase from surrounding lamps.
  - Tempered glass door blocks heated air from lamps.
  - Designed to exhaust heated air through upper vent holes.
    (for GC-1000TLH)
- Stable and long lasting lighting through introduction of high frequency electronic ballast lamps.
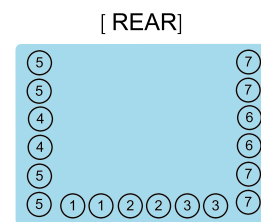
GC-300

GC-1000

Outstanding Safety
- Automatic shut off after overheat alarm.
- Low and empty water level alarm.
- Power supply leakage breaker.
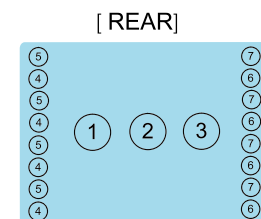- Over current protection,
- Open door alarm.

Lamps setting
- Control illumination values with the below lamp setting arrangements.

[REAR]

[FRONT]

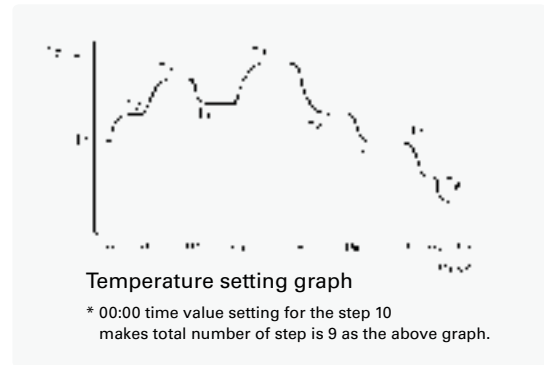GC-300 lamp arrangement

[REAR]

[FRONT]

GC-1000 lamp arrangement

▗▌ Use Convenience Features

- Ergonomically designed door construction.
  - Inner glass door with silicone and external door with magnetic sealing for dual airtight packing.
  - Well designed providing a smooth open for minimization of damage to plants.
- Wide inner tempered glass door for clear observation of plant growth without affecting inner chamber's environment.
- Tall plants can be grown inside of the chamber with adjustment of shelve level.
- Maintenance of water supply are easily performed with a front water tank. (GC-1000TLH)
  - Water level check indicated by water level bar in the tank.
- Water supply during operation is also available for long term test purposes.
- Adjustable water tank position. (for GC-300TLH)
- Detachable condenser air-filter for easy maintenance of refrigerating efficiency.
  - Maintenance of air filter no longer cumbersome with our detachable condenser air filter.
- Casters for easy mobility during installation or relocation.
- Eco-friendly CFC-free refrigerant use.

Temperature setting graph

* 00:00 time value setting for the step 10 makes total number of step is 9 as the above graph.

Specification

Model		GC-300TL		GC-300TLH		GC-1000TLH	
Chamber volume (L / cu ft)		300 / 10.6		300 / 10.6		1000 / 35.3	
Temperature	Range (°C / °F)	5 to 50 / 41 to 122 - Lamp off / 10 to 50 / 50 to 122 - Lamp on / 20 to 50 / 68 to 122 - with humidity					
	Fluctuation at 25°C ($\pm$°C / °F)	0.4 / 0.72 - without humidity					
	Variation at 25°C ($\pm$°C / °F)	1.0 / 1.8 - without humidity					
Humidity	Range (%RH)	-		40 to 80 at 20 to 35°C		50 to 90 at 20 to 35°C	
				70 to 90 at 36 to 50°C		60 to 90 at 36 to 50°C	
	Fluctuation at 60%RH ($\pm$%RH)	-		3		3	
Illumination	Range (Lux)	0 to 20,000		0 to 20000		0 to 35000	
	Control (steps)	10		10		11	
	Fluorescent lamp (W)	32 x 18ea		32 x 18ea		32 x 16ea	
	Metal lamp (W)	-		-		400 x 3ea	
CO_2 (Option)	Range	750 to 5,000		750 to 5000		750 to 5000	
	Sensor	NDIR CO_2 sensor		NDIR CO_2 sensor		NDIR CO_2 sensor	
Dimensions	Interior (W x D x H, mm / inch)	510 x 540 x 1100 / 20 x 21.3 x 43.3		510 x 540 x 1100 / 20 x 21.3 x 43.3		1200 x 800 x 1080 / 47.2 x 31.5 x 42.5	
	Exterior (W x D x H, mm / inch)	700 x 805 x 1900 / 27.6 x 31.7 x 74.8		700 x 805 x 1900 / 27.6 x 31.7 x 74.8		1410 x 1070 x 2150 / 55.5 x 42.1 x 84.6	
	Net weight (Kg / lbs)	250 / 551.2		250 / 551.2		550 / 1212.5	
Electrical requirements (230V, A)		60Hz / 15	50Hz / 15	60Hz / 15	50Hz / 15	60Hz / 17	50Hz / 17
Cat. No.		AAHA1011K	AAHA1012K	AAHA1021K	AAHA1022K	AAHA1031K	AAHA1032K

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