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.

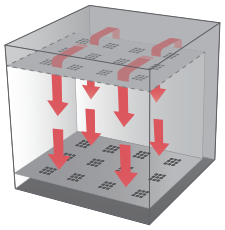
Structural Functional Features

General control system

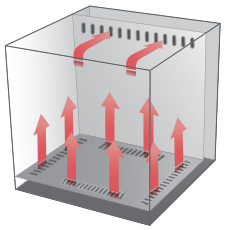
- 5°C to 50°C(lamp off) / 10°C to 50°C. (lamp on)
- Max. to 35,000Lux for GC-1000.
  Max. to 20,000Lux for GC-300 Models.
- 40 to 80% RH for GC-300TLH. (at 20 to 35°C)
  50 to 90% RH for GC-1000TLH. (at 20 to 35°C)
- Max. 5,000ppm CO_2 on/off system. (option)
- Microprocessor PID control / Temperature 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

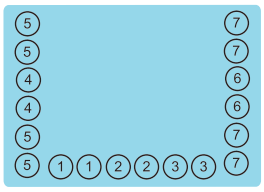


GC-1000

Outstanding Safety

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

[REAR]



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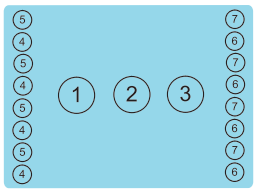
GC-300 lamp arrangement

[REAR]



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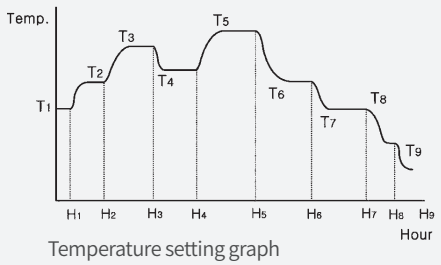
GC-1000 lamp arrangement

Lamps setting

- Control illumination values with the below lamp setting arrangements.

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

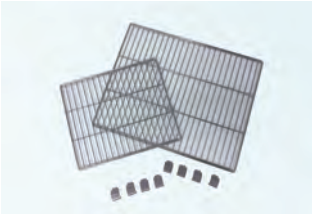
* 00:00 time value setting for the step 10 makes total number of step is 9 as the above graph.

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 (±°C / °F)	0.4 / 0.72 - without humidity			
	Variation at 25°C (±°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 (±%RH)	-	3	3	
Illumination	Range (Lux)	0 to 20000	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 5000	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)		50/60Hz, 12.5	50/60Hz, 16	50Hz, 23.2	60Hz, 30
Cat. No.		**AAHA1012K**	**AAHA1022K**	**AAHA1032K**	**AAHA1031K**

Accessories Page 107 Wire Shelves, Perforated Shelves, Recorder, CO_2 Sensor

Accessories for Incubator



Wire Shelf
(2 shelves included as standard)
- Stainless Steel
- Uniform temperature distribution based on high air permeability

Perforated Shelf
- Stainless Steel
- Robust structure is ideal for heavy load samples

Recorder (Dot)
- 6-channel graph-type temperature recorder.
- Adjustable recording range, speed, etc.

CO_2 Control System
- CO_2 control system for optimal photosynthetic conditions (Sensor, PCB, Valve, etc)

Model	Wire Shelves		Perforated Shelves		Recorder	CO_2 Control System
	Cat. No.	Quantity of shelves (standard/max.)	Cat. No.	Quantity of shelves (max.)	Cat. No.	Cat. No.
IB4-03	00FDA0009739	2 / 4	AAA125341	4	-	-
IB4-05	00FDA0009738	2 / 5	AAA125342	5	-	-
IB4-10	00FDA0009737	2 / 8	AAA125343	8	-	-
IB4-15	00FDA0009736	2 / 9	AAA125344	9	-	-
IM-10	00EDA0008244	2 / 4	AAA24511	4	-	-
IB-02G-2C/4C[1)]	00EDA0008136	2 / 4	AAA12531	4	-	-
ILP-02	00EDA0008223	1 / 6	AAA24501	6	-	-
ILP-12	00EDA0008221	2 / 13	AAA24502	13	-	-
IL3-15/15A	00EDA0008219	2 / 6	AAA22521	6	-	-
IL3-25/25A	00EDA0008220	3 / 13	AAA22522	13	-	-
IL-11-2C/4C[1)]	00EDA0008219	2 / 12	AAA12532	12	-	-
GC-300TL	00EDA0008220	3 / 14	AAA22522	14	AAAA1501	AAAA1521
GC-300TLH	00EDA0008220	3 / 14	AAA22522	14	AAAA1501	AAAA1521
GC-1000TLH	00EDA0008222	6 / 29	AAAA1512	29	AAAA1502	AAAA1521

1) Standard for each chamber

LC DataKeeper
- High-integrity software compliant with FDA 21 CFR Part 11
- Integrated with Jeio Tech equipment to undergo GMP audits

LC GreenBox
- Real-time monitoring and control via mobile app
- Connect up to 4 devices to one
- Communication port connectivity via a RS-232 port

BMS Port
- Real-time equipment monitoring from a central monitoring facility
- Useful for safety management at laboratories that operate multiple devices

Stacking Set (-05 / -15 models only)
- Double stackable
- Firm stacking allows efficient utilization of space

(※ When double stacking, the minimum control temperature of the upper chamber may be limited due to the heat generated by the lower chamber)

Model	IB4-03	IB4-05	IB4-10	IB4-15
LC DataKeeper-Basic[1)]	SSA11001			
LC DataKeeper-Pro[1)]	SSA11002			
LC GreenBox	AAHQ1011K			
BMS Port	AAA125534			
Stacking Set	-	AAA125547	-	AAA125549
Water Tray	AAA125443	AAA125444	AAA125445	AAA124554
Communication Port[2)]	AAA125533			

1) Trial version is available for 30 days, offering the same features as the Basic version, and can be requested through the website.
2) Communication port is provided as a standard in advanced (-V) model and is an optional add-on for the basic (-S) model for connecting LC DataKeeper, LC GreenBox, BMS, and PC.