



Incubator System T

Stage-top Live Cell Incubating System

- Automatic Sensing Mode
- Magnetic attachment
- User-friendly control
- Touch pad
- Compact system



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Stage-top Live Cell Incubating System

Incubator System T is an intuitive and integrated system that maintains all essential parameters in a physiological state and ensures optimal experimental conditions for cell viability on the microscope for the purpose of 'happiness for the cells and success for researchers.'

It provides precise controlled conditions including optimized temperature, humidity, CO₂, and optional O₂ levels for a long-term live cell imaging with various Magnetic Imaging Chambers fitted perfectly. Temperature of main body, incubator cover, humidifier, lens warmer, and gas concentration is controllable and recordable. The gas gradients are programmable by CCP(Computer Controlled Program) software.

FEATURES

Automatic Sensing Mode Temperature control by 3 types of heating feedback

01 External Mode [World-wide 1st]

The optimal temperature control algorithm minimize deviation and optimize temperature of the incubator by feedback control from outside temperature automatically.

02 Sample Mode

The optimum incubator temperature is adjusted by sensing the temperature of sample or target.

03 Manual Mode

The environments for researchers' purpose can be performed by setting the temperature desired by the user.

*** LCI's incubator system maintains the humidity over 90%.**

- Compatible with various of microscope
- Compact system & Easy assembly
- Custom incubating system is available

Easy-to-use

- Available with various chamber types
- Magnetic attachment cable
 - Patent magnetic connection
 - Easy installation & maintenance
 - Intuitive connection
- Touchpad control
 - Wide screen & Intuitive GUI
 - Easy set-up/control/handle
- Sliding incubator cover
- Whole open incubator cover



INCUBATOR

Incubator offers optimal on-stage cell culture environment by maintaining the temperature, humidity, and pH during time lapse imaging. Thermal design of the incubating cover and body are designed to provide heat inside the incubator.



Dual-layered incubator cover for heat insulation



Tempered glass for breakage-free using Gorilla 6 Glass



Magnet supporting attachment



Sliding & Whole opening cover



3-channel fluidics port



Temperature control by 3 types of heating feedback



Easy sample insertion by 4-handle Adapter Frame



Fit to 26mm & 30mm W.D. of condenser



Sample holder with Magnet Fixing Cover of Fixing Clip

Water Reservoir Type Sample Holder

The water reservoir around the sample holder improves the maintenance of humidity, preventing media from evaporation.



35mm Culture Dish



Two-35mm Culture Dish



50/60mm Culture Dish



Chambered Coverglass



Chambered Glass



CONTROLLER

Temperature Controller

Provides stable and precise control of sample temperature for long-term imaging. Using PID Control, it enables maintaining the temperature of all heating parts including incubator cover, incubator main body, humidifier, and lens-warmer.

- 3 types of heating control : External, Sample (K-type), Manual sensing feedback
- 4 heating channels: Incubator cover, body, humidifier, lens warmer
- Simple cable attachment with color connector
- Stable and durable temperature distribution
- Real-time thermal response, graph, alarm function
- PID control of all parameters

Temperature Controller



Gas Mixer

Gas Mixer

Provides accurate concentration gas of CO₂, N₂, or O₂ for research application

- Available with 3 types of gas controller
- Solenoid valve and a reservoir for uniform gas blends
- PID control system regulates gas concentration
- Internal air pump for a stable gas flow
- Straight quick connection by tubing fittings



Humidifier

Humidifier generates and helps the incubator to maintain relative humidity, and prevents evaporation which can cause cell damage. CO₂ gas flows into incubator through heated water controlled by the humidifier sensor.

- Keeps saturated humidity in the incubator
- Maintains osmolality of medium by preventing evaporation
- Internal thermal sensor for accurate feedback
- Magnetic connector

Lens Warmer

For high-resolution imaging, it is necessary to control the temperature of the immersion objective lens. Oil, glycerin, or water acts as a thermal coupling medium which draws heat away from the specimen. To avoid heat loss, wrap the lens warmer onto the objective lens to generate and maintain a proper temperature. Its silicone band fits to all types of objectives.

- For high-magnification & high-resolution imaging
- Uses magnetic attachment technique prevents cord breakage by tangling or over tension
- Specialized silicone material heating band wraps the lens without gap, preventing thermal dissipation from sample temperature



Remote Touchpad

Android tablet PC provides intuitive graphical screen for all of parameters required to control incubator system.

- Controls system & all parameters by smartphone and other devices
- Intuitive & easy GUI for real-time temperature and control
- Automatically save and check real-time data with PC
- Enables on-line troubleshooting

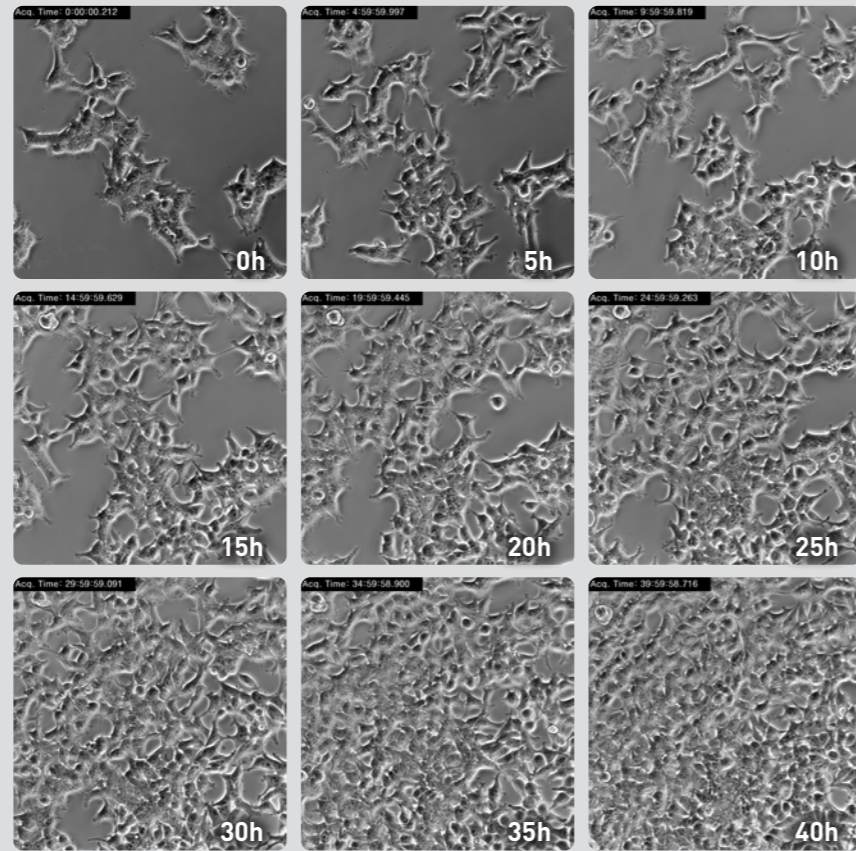
Graphical User Interface

The Incubator System T is an intuitive and user-friendly operator, which can be remote-controlled by smartphones and other mobile devices through app. The operator controls all parameters for the system anytime & anywhere in real time.



Cell Growth

- Cell incubating by LCI stage-top incubator system T : 37°C, 5% CO₂
- Phase contrast Imaging with Time Lapse
- CHO cell
- 20x Ph1 DLL Objective Lens / NA: 0.5



SPECIFICATION

Incubator

Dimension	171.5(W) x 139(D) x 15.5(H) mm
Dimension (Incubator Body)	170(W) x 124.5(D) x 20(H) mm 170(W) x 124.5(D) x 24(H) mm
Glass	Dual Glass - Gorilla 6 - ITO heating glass
Weight	250g (Incubator cover) 155g (Incubator body, 26mm) 196g (Incubator body, 30mm)
Cable Type	Magnet

Temperature Controller

Dimension	220(W) x 300(D) x 100(H) mm
Operation	Touch Pad
Weight	3.24kg
Temperature Range	Ambient +3°C ~ 40°C
SV Resolution	0.1°C
Sensor	PT 100ohm (5ea) Thermocouple sensor (K-type)
Control Method	PID
Volume Humidifier	250cc
Volume Reservoir	50cc
Power	100~240V

Gas Mixer

Dimension	220(W) x 300(D) x 100(H) mm		
Operation	Touch Pad		
Weight	4.44kg		
Gas Type	100% CO ₂	100% O ₂	100% N ₂
Input Gas Pressure	0.12Mpa	0.15Mpa	0.15Mpa
Concentration Range	CO ₂	0~20%	
	O ₂	0~99%	
Accuracy	±0.1%		
SV Resolution	0.1%		
Flow Rate	Max 200ml/min		
Sensor	CO ₂	NDIR	
	O ₂	Thermal conductive	
	N ₂	Thermal conductive	
Control Method	PID		
Control Valve	CO ₂	Solenoid valve	
	O ₂	Proportional solenoid orifice	
	N ₂	Proportional solenoid orifice	
Power	100~240V		

Related Product [Magnetic Imaging Chamber]

- Patent magnetic attachment technology
- Coverslip bottom magnetic chamber system
- High resolution image
- Semi-permanent and non-toxicity
- Various design of chambers
- Customized design is available*



CMB
35mm Culture Dish

CMM
Multi-well + Round Coverslip

CMS
Multi-well + Square Coverslip

EC
Electric Stimulation

AC
Water Volume Adjustable

CF
Shear Stress Experiment