

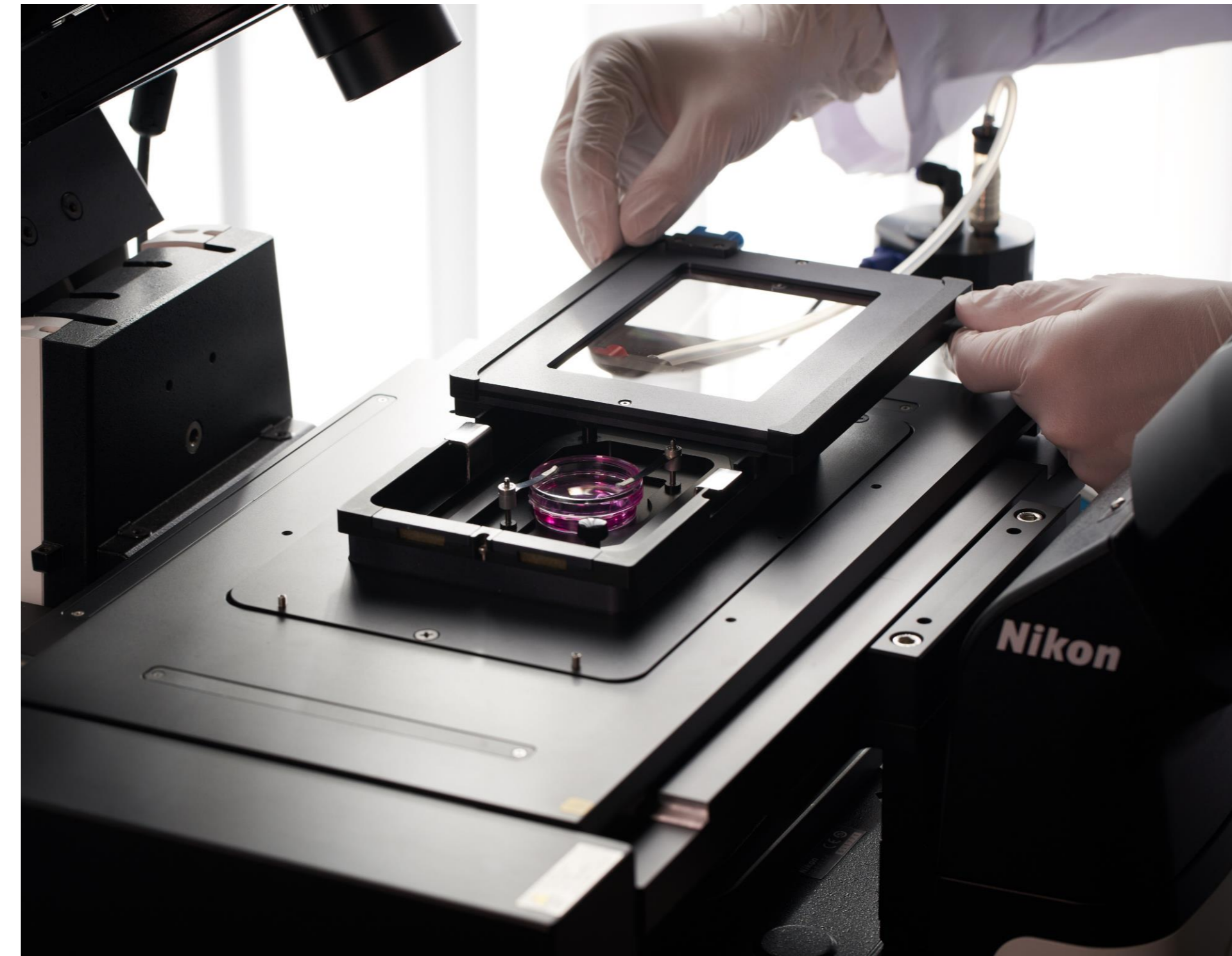
Incubator System T

Stage-top Live Cell Incubating System



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1. Configuration

#01

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#02

Temperature Controller
&
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#03

Touch Pad Controller

#04

Humidifier & Lens
warmer

#01 Incubator



Incubator

Offers an optimal on-stage cell culture environment by maintaining the temperature, humidity, and pH during time-lapse imaging.

#01 Incubator



Incubator Body & Cover

- ▶ Dual-layered incubator cover for heat insulation
- ▶ Tempered glass for breakage-free(Gorilla 6 Glass)
- ▶ Easy sample insertion by 4-handle Adapter Frame
- ▶ Connected C-Type cable
- ▶ 3-channel fluidics port
- ▶ Sliding & Whole opening cover

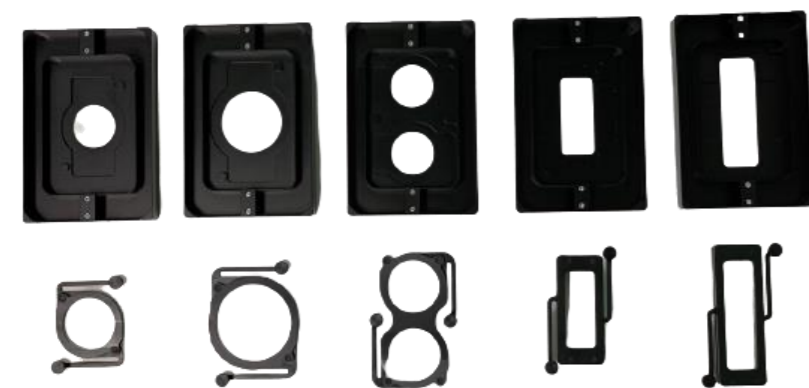


Adapter Frame

- ▶ Easy sample insertion by 4-handle Adapter Frame

Bottom Base Frame

- ▶ Provide flexible height of incubator configuration considering W.D of condenser(Fit to 26mm & 30mm)



Sample Holder(water reservoir type) & Magnetic Fixing Cover

- ▶ Compatible with commercial products
- ▶ Easy & stable handling using magnetic assembly
- ▶ Improves the maintenance of humidity, preventing media from evaporation



Incubator Cover



Sample Holder
(Water Reservoir Type)



Adapter Frame



Incubator Body

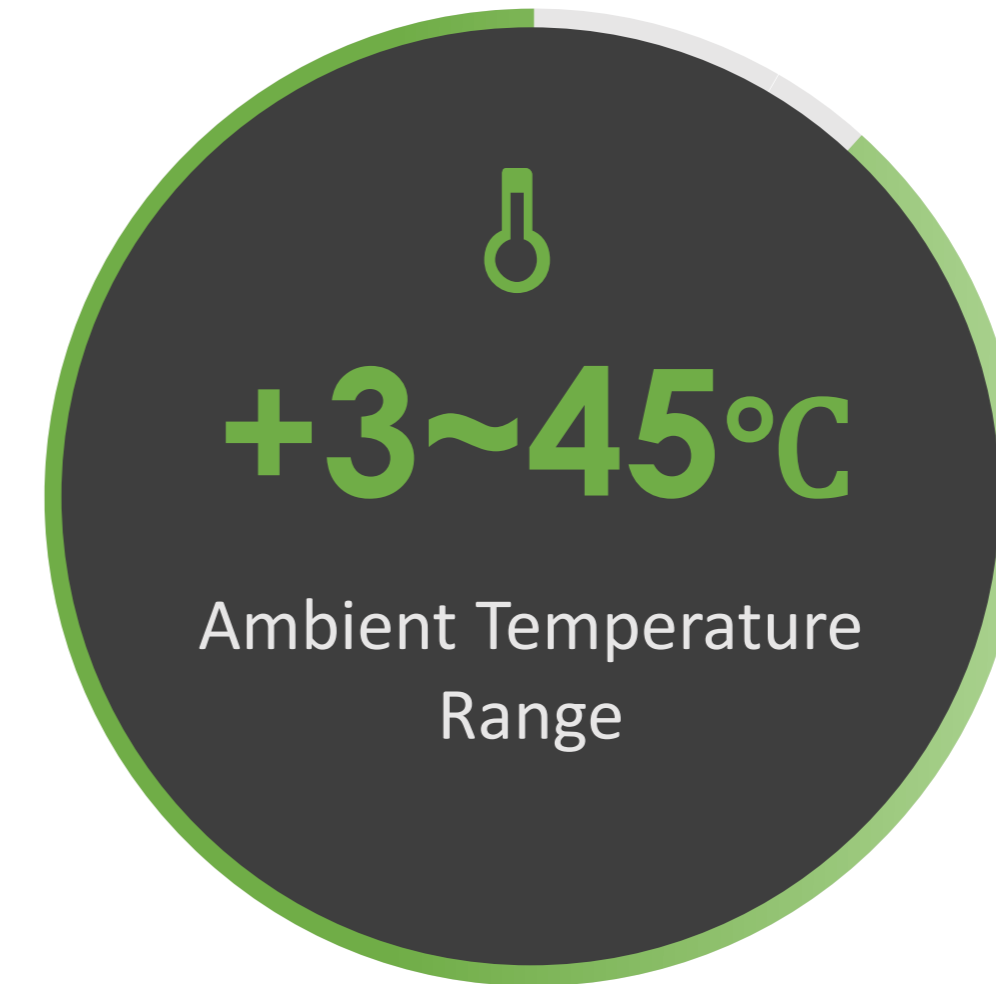
#02 Temperature Controller & Gas Mixer



Temperature Controller

Enables maintaining the temperature of all heating parts including incubator cover, incubator main body, humidifier, and lens-warmer

Can be used Independently without Gas Mixer(Pre-Mixed Gas)



- ▶ **3 types of Temperature Feedback Mode**
Automatic External sensing, Direct Sample(K-type) sensing, Manual sensing
- ▶ **Provide 4 heating channels**
Incubator cover, body, humidifier, lens warmer
- ▶ **Stable and durable temperature distribution**
- ▶ **PID control of all parameters**

#02 Temperature Controller & Gas Mixer




200cc/min
CO₂/O₂/N₂
Precise & Stable Gas
feeding system

Gas Mixer

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

	Standard	Hypoxia	Hyperoxia
CO ₂	1 ~ 20%	1 ~ 20%	1 ~ 99%
O ₂	-	1 ~ 20%	
Base Gas	Air	Air	N ₂

▶ Available with 3 types of gas controller
CO₂, O₂, N₂

▶ Solenoid valve and a reservoir for uniform gas blends
For Standard, Hypoxia & Hyperoxia conditions, Simple & convenient control

▶ PID control system regulates gas concentration

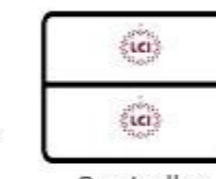
▶ Internal air pump for a stable gas flow

#03 Touch Pad Controller



Touch Pad Controller

- ▶ Provide the parameters required to control Anytime & anywhere in real-time
- ▶ GUI with intuitive and easy control
Option selection is intuitive, Easy to input offset value



PC

USB A cable

Touch pad

USB mini cable

Controller

- * 8 inch monitor
: Wide screen for a better visualization & operation
- * Button embedded
: For integrated system operation

#04 Humidifier & Lens warmer



Lens Warmer

For high-resolution imaging, it is necessary to control the temperature of the immersion objective lens.
To avoid heat loss, wrap the lens warmer onto the objective lens to generate and maintain a proper temperature.

- ▶ For high-magnification & high-resolution imaging
- ▶ Preventing thermal dissipation from sample temperature



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 environment of medium by preventing evaporation

80%
Maintain Humidity
>60 hrs

2. Key Features

#01

Long-term Live Cell Imaging

#02

Easy & Intuitive

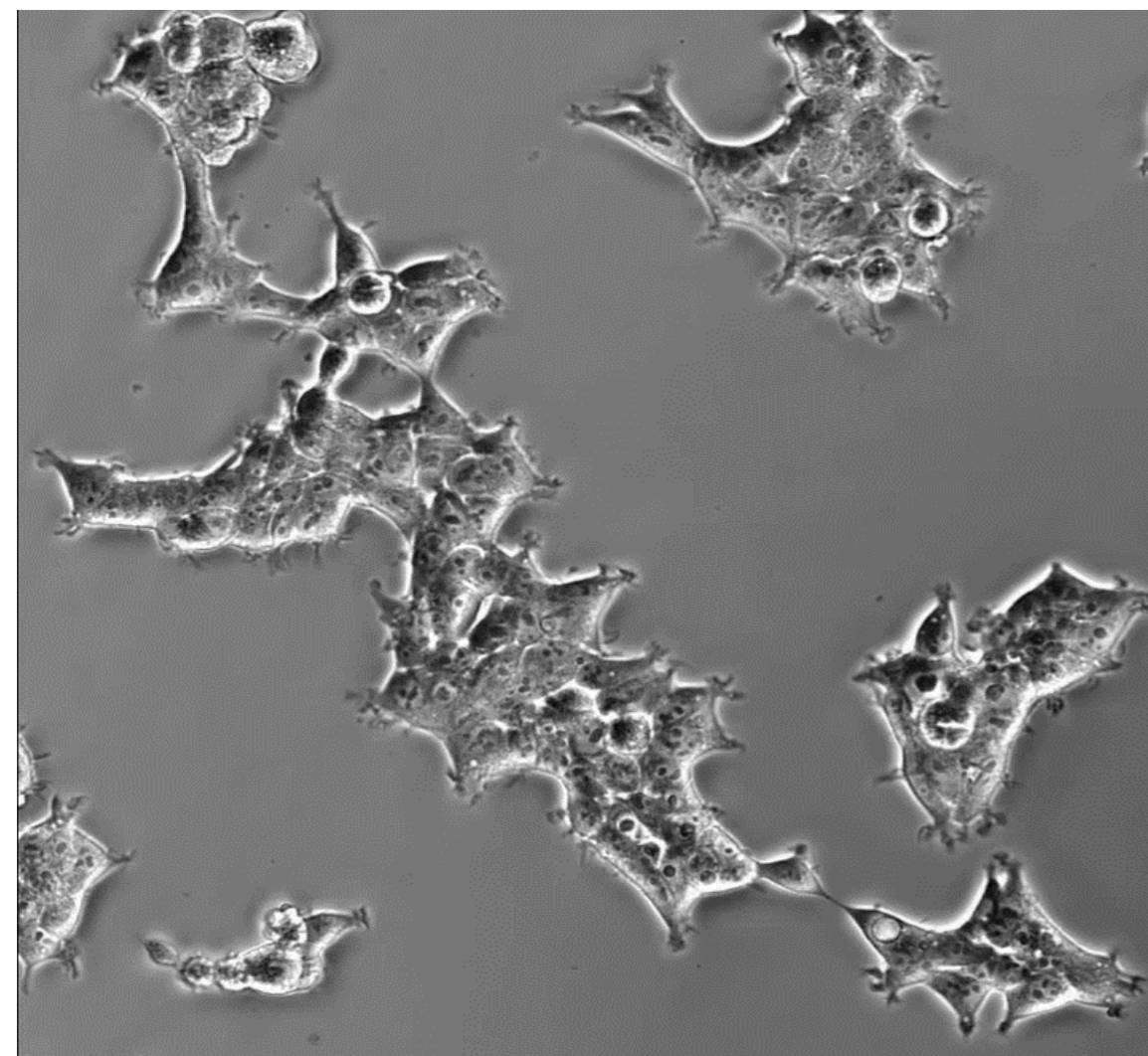
#03

Reliable & Reproducibility

#04

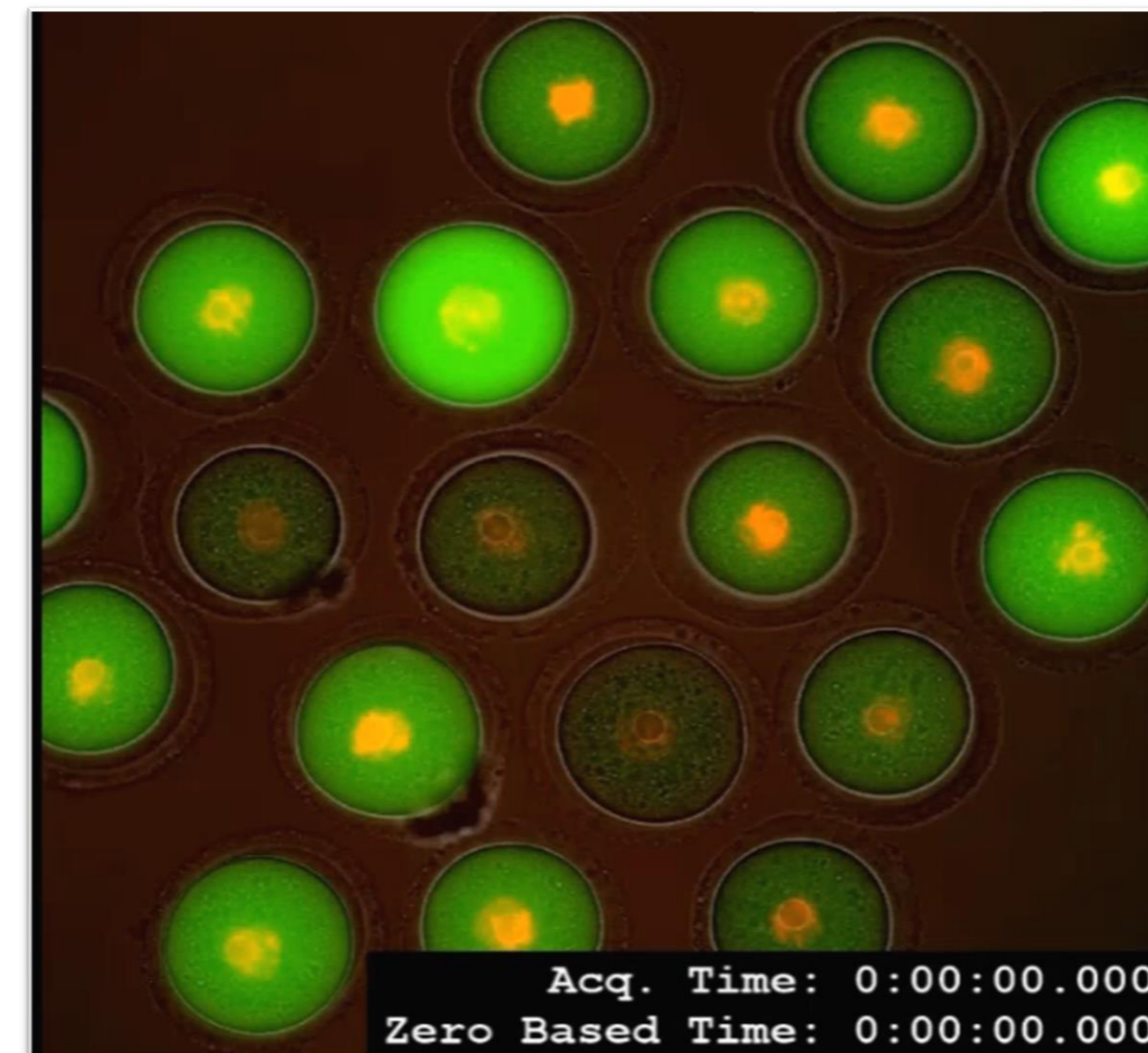
Universal for Microscopes

#01 Long-term Live Cell Imaging



CHO cell

37.5°C, 5% CO₂
Phase-contrast Imaging
48hr Long-term Imaging
20x(NA:0.5) Ph1 DLL Objective Lens



Mouse Egg

37.5°C, 5% CO₂
Multi-Color Imaging
2hr Long-term Imaging
20x(NA:0.75) Plan Apo Lambda Lens

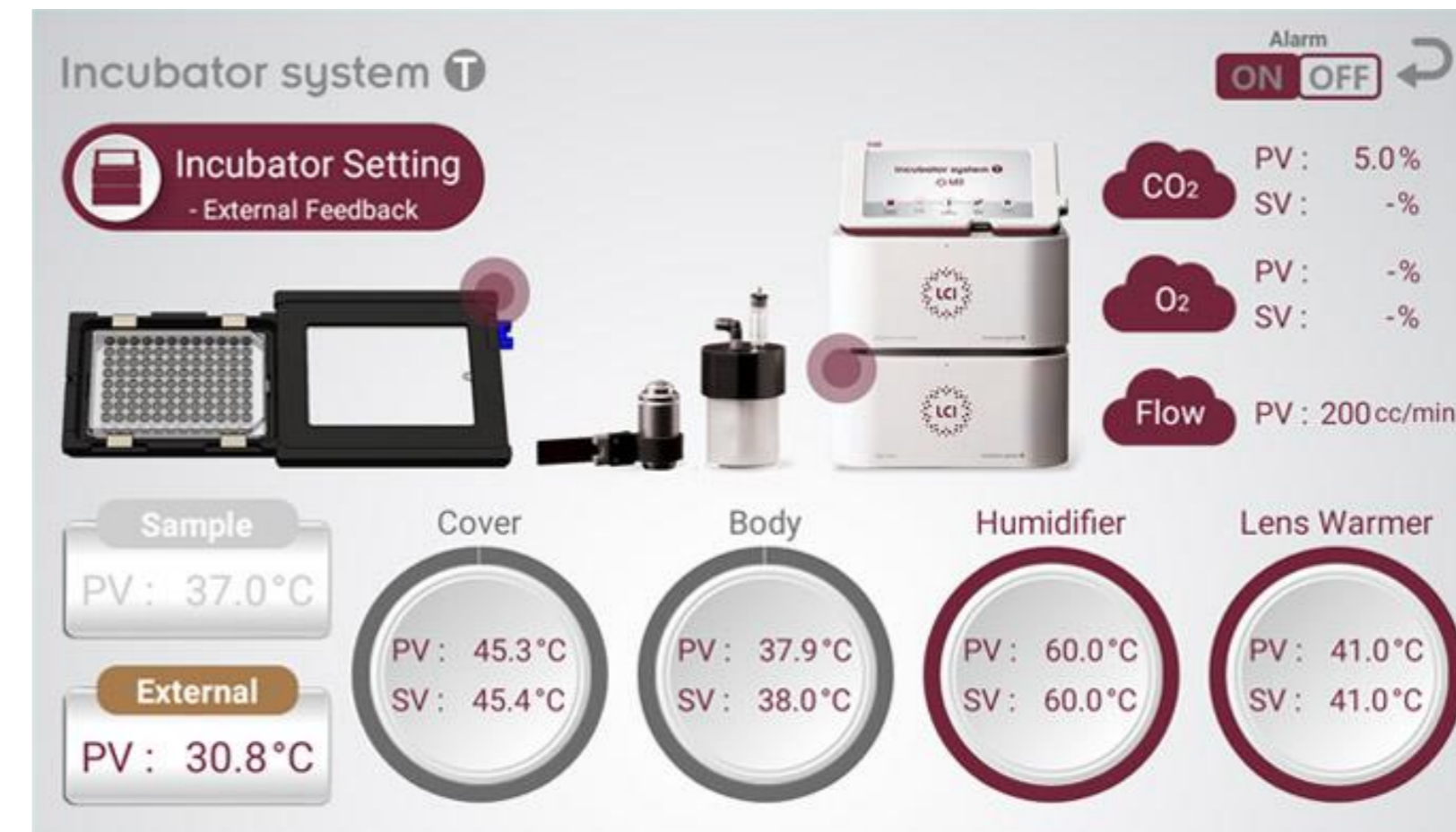
Incubator System T provides stable and precise control of the sample environment for long-term Live Cell imaging.

An effective and stable incubating system maintains temperature, humidity, and pH.

#02 Easy & Intuitive

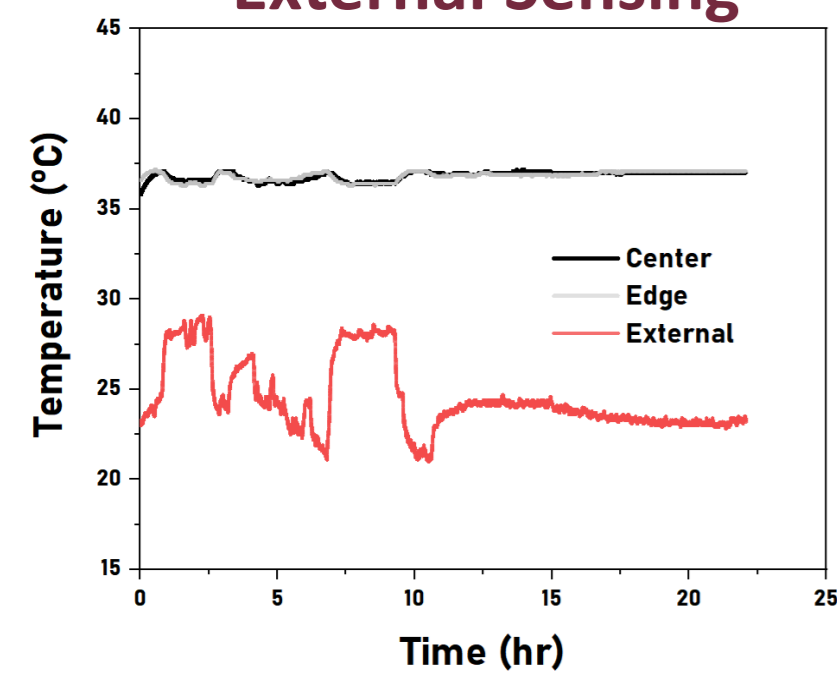


- ▶ Compact Size & Easy Assembly
- ▶ Easy to control input offset value
- ▶ Easy installation by using color cable
- ▶ User-friendly Operator

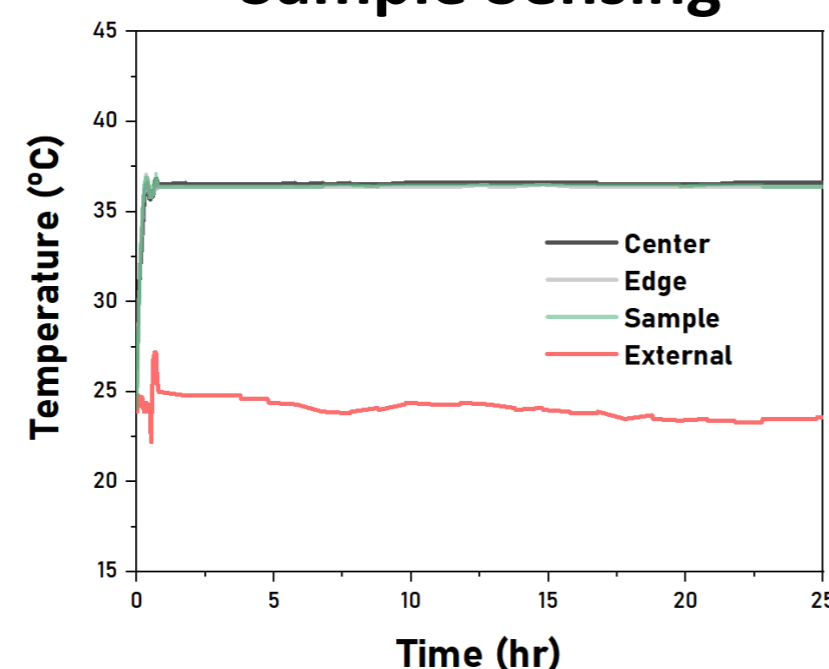


#03 Reliable & Reproducibility

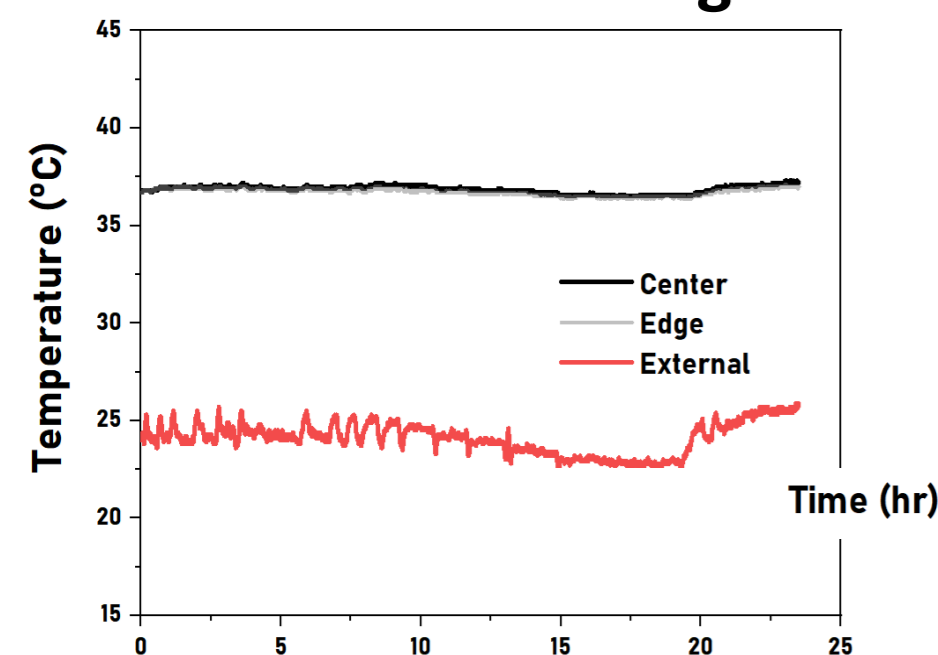
External Sensing



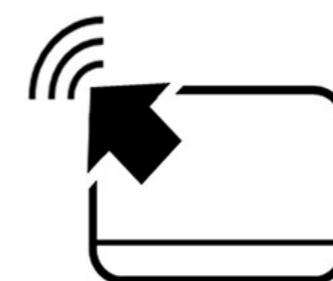
Sample Sensing



Manual Sensing

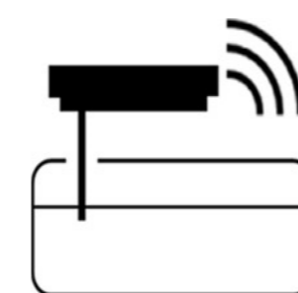


*Set Value: 37°C, Well-plate,
24+ hour temperature control



External Mode [Most Universal Mode]

The optimal temperature control algorithm that minimizes temperature deviation by detecting changes in the temperature outside the incubator automatically adjusts the temperature of the incubator optimized for cell growth.



Sample Mode

By sensing the sample temperature, the optimum incubator temperature is adjusted.



Manual Mode

By setting the temperature desired by the user, various environments for researchers' purpose can be performed.

#03 Reliable & Reproducibility



Humidifier



Water reservoir



Magnetic fixing cover

More conveniently, Expanded volume of Humidifier and Water Reservoir in sample holder.

Minimize evaporation of the sample and maintain optimal humidity.

#04 Universal for Microscopes



Optimized compatibility to all types of Dish & Well-plate.
Incubator combined with all kinds of Microscope Stage.

*Custom made available for Incubator stage holder



3. Specification

Incubator		
Dimension	Incubator Cover	171.5(W) x 139(D) x 15.5(H)mm
	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 & Tempered heating glass	
Weight	250g(Incubator cover) 155g(Incubator body, 26mm) 196g(Incubator body, 30mm)	
Cable Type	C-type	
Available Chamber	35mm culture dish	
	50/60mm culture dish	
	Two-35mm culture dish	
	Chambered slides glass(24mm x 60mm)	
	Chambered cover glass(76mm x 26mm)	
Available Well Plate	6,12,24,48,96 well plate	
	Well slide	
	Well slip	

3. Specification

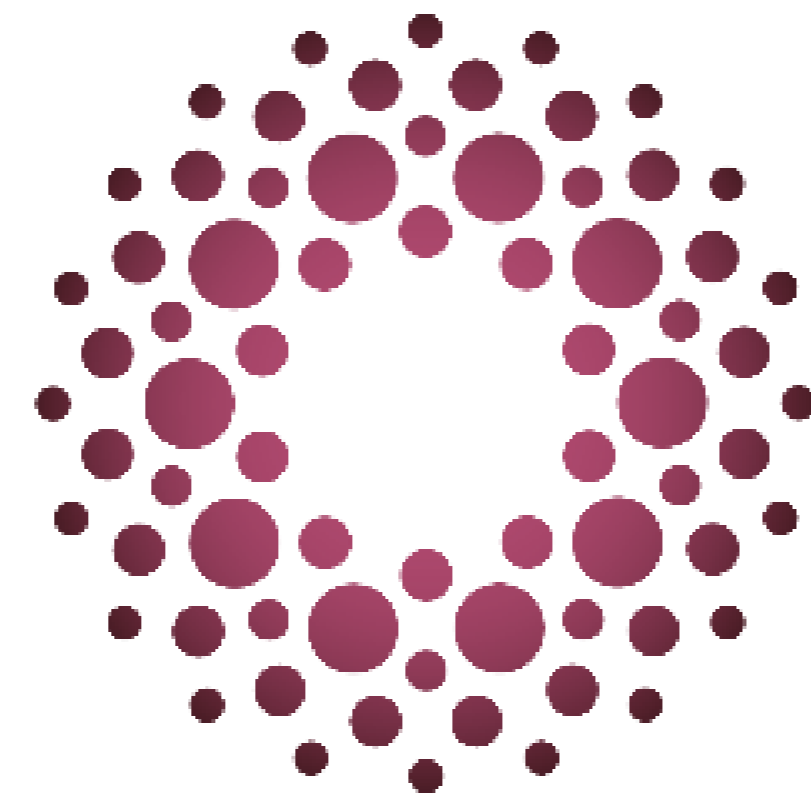
Temperature Controller

Temperature Range	Ambient +3~45°C
Operation	Touch Pad
Dimension	220(W) x 300(D) x 100(H)mm
Sensor	PT 100 ohm(x5) - External Sensor - Thermocouple sensor(K-type sensor)
Power	100–240V
Weight	3.24kg
Accuracy	±0.1°C
SV Resolution	0.1°C
Volume Humidifier	250cc
Volume Reservoir	50cc
Control Method	PID

3. Specification

Gas Mixer		
Dimension	220(w) x 300(D) x 100(H)mm	
Operation	Touch Pad	
Weight	4.44kg	
Input Gas Pressure	0.12Mpa	
Concentration Range	CO ₂	1-20%
	*O ₂	1-20%, 1-99%
Accuracy	±0.1%	
SV Resolution	0.1 %	
Flow Rate	Max 200cc/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	

*: Hyperoxia(OX-10) Only



LCI
Live Cell Instrument