

Live Cell Instrument

Image EXFLUORER

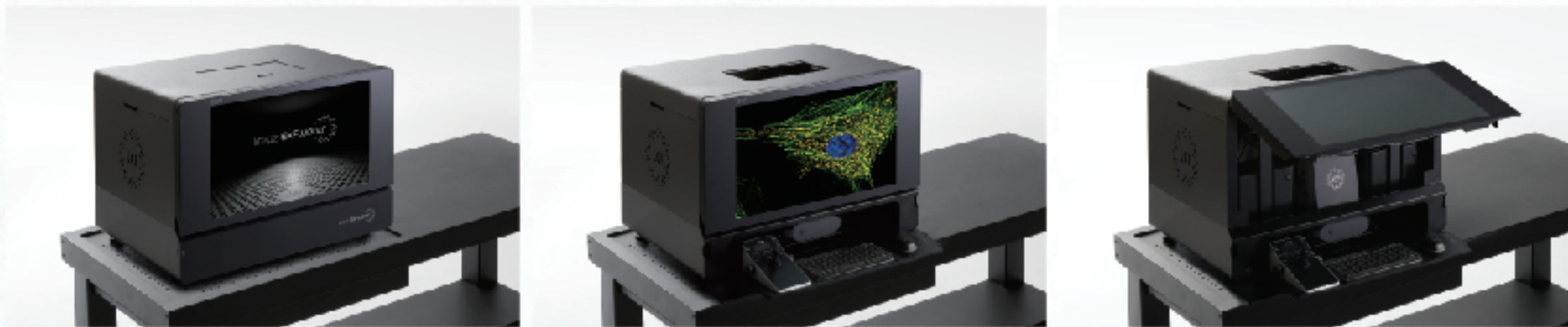
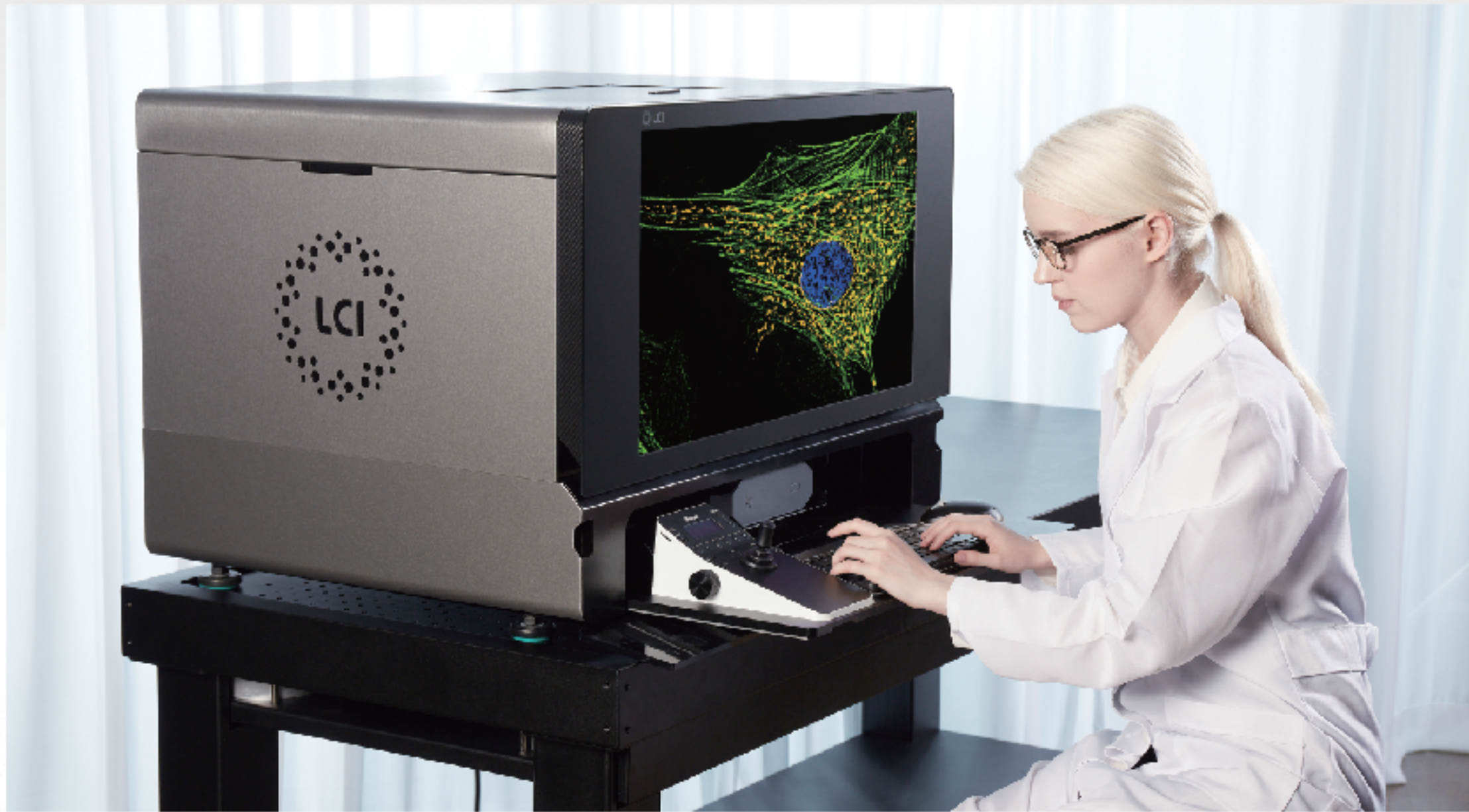


LCI
Live Cell Instrument



Image **ExFluor**

The Image ExFluor is a turnkey solution to beyond conventional fluorescence microscope, integrating ability of high-contents imaging, live-cell assay, 2D/3D deconvolution and auto-focusing based on full-automated wide-field imaging system. Now, there is no reason to the researchers spend valuable time to set-up a microscope system to discover biological question. There will be nothing more to prepare except preparing only your live-cell sample and your curiosity. Our Image ExFluor will be your user-friendly and intuitive imaging partner in your cellular research.



- **All-In-One System**

All of the hardware component and powerful acquisition & analysis software is integrated in the one system.

- **Live Cell Assay**

LCI's dedicated heating chamber & gas mixing system can support stable long-term Live Cell Imaging.

- **2D/3D Deconvolution**

It offers to your 2D/3D fluorescence image more vivid and detail from haze and out-of-focus background. Integrated GPU system can support reliable & fast process of computational process of the deconvolution.

- **High-Contents Imaging**

The researcher can acquire abundant data and perform high throughput assay through combined with automated hardware and acquisition & analysis software.

- **Flexible Fluorescence Imaging**

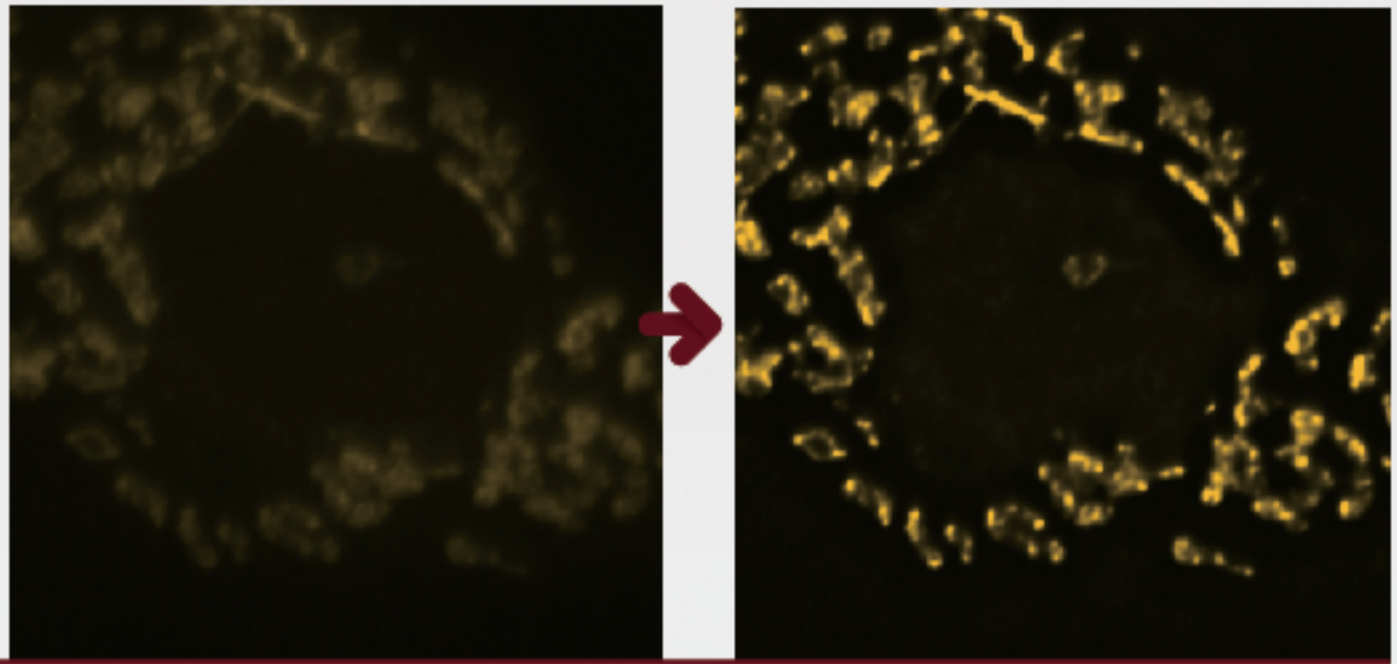
Full automated components allow multi-dimensional fluorescence imaging such as time-lapse, multi-color, multi-point, Z-stack.

- **Cell Analysis with AI**

Some of cell-counting assay can be supported by powerful analysis module based on AI algorithm. Using AI analysis module, now the researcher doesn't need to cell staining for counting & segmentation of cell. In the future, the updating image analysis algorithm can be added on present software.

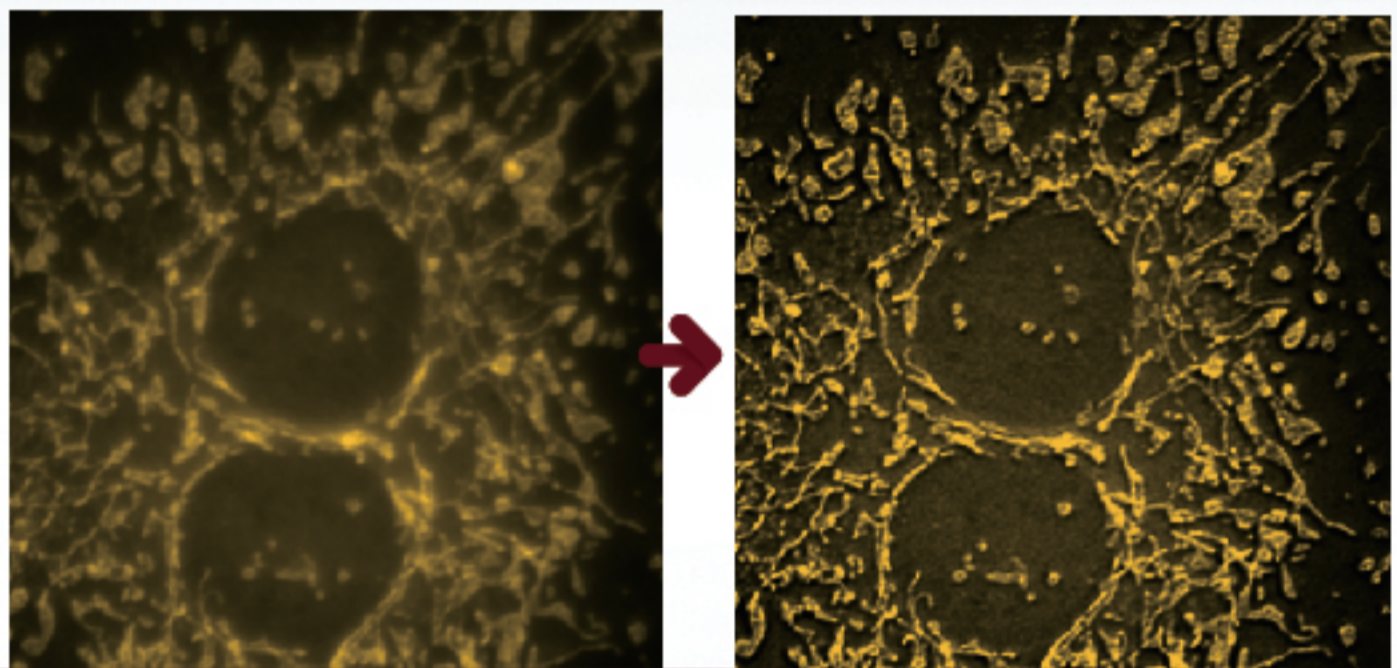
2D-deconvolution

- Objective lens: 100X
 - NA: 1.30
 - RI: 1.515
 - Fixed BPAE cells
- Mitochondria were labeled with red fluorescent MitoTracker™ Red CMXRos



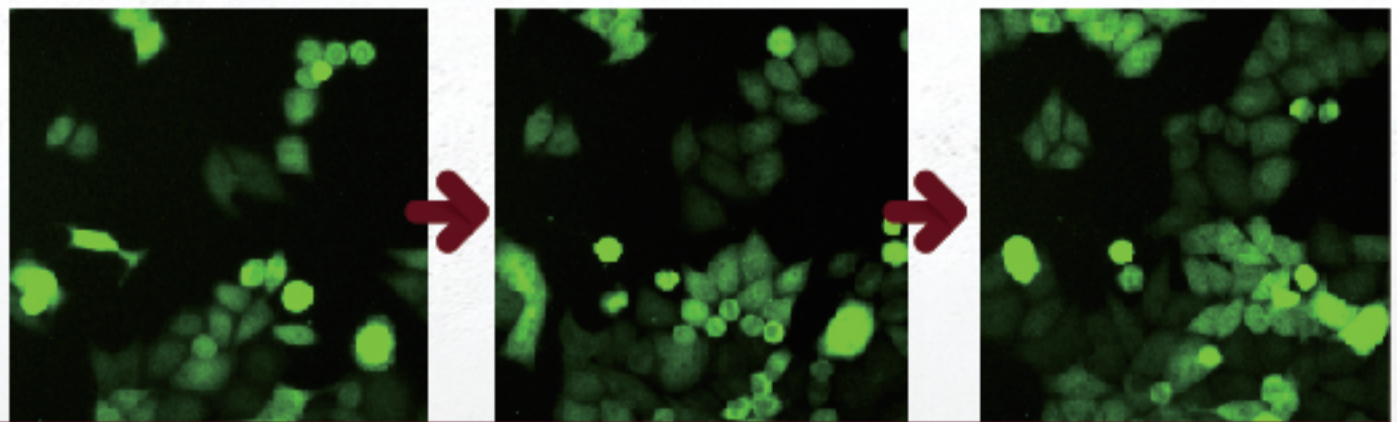
3D deconvolution

- Objective lens: 100X
 - NA: 1.30 RI: 1.515
 - Z-step: 0.200 um
 - No. of Z-stack: 11
 - Maximum intensity projection
 - Fixed BPAE cells
- Mitochondria were labeled with red fluorescent MitoTracker™ Red CMXRos



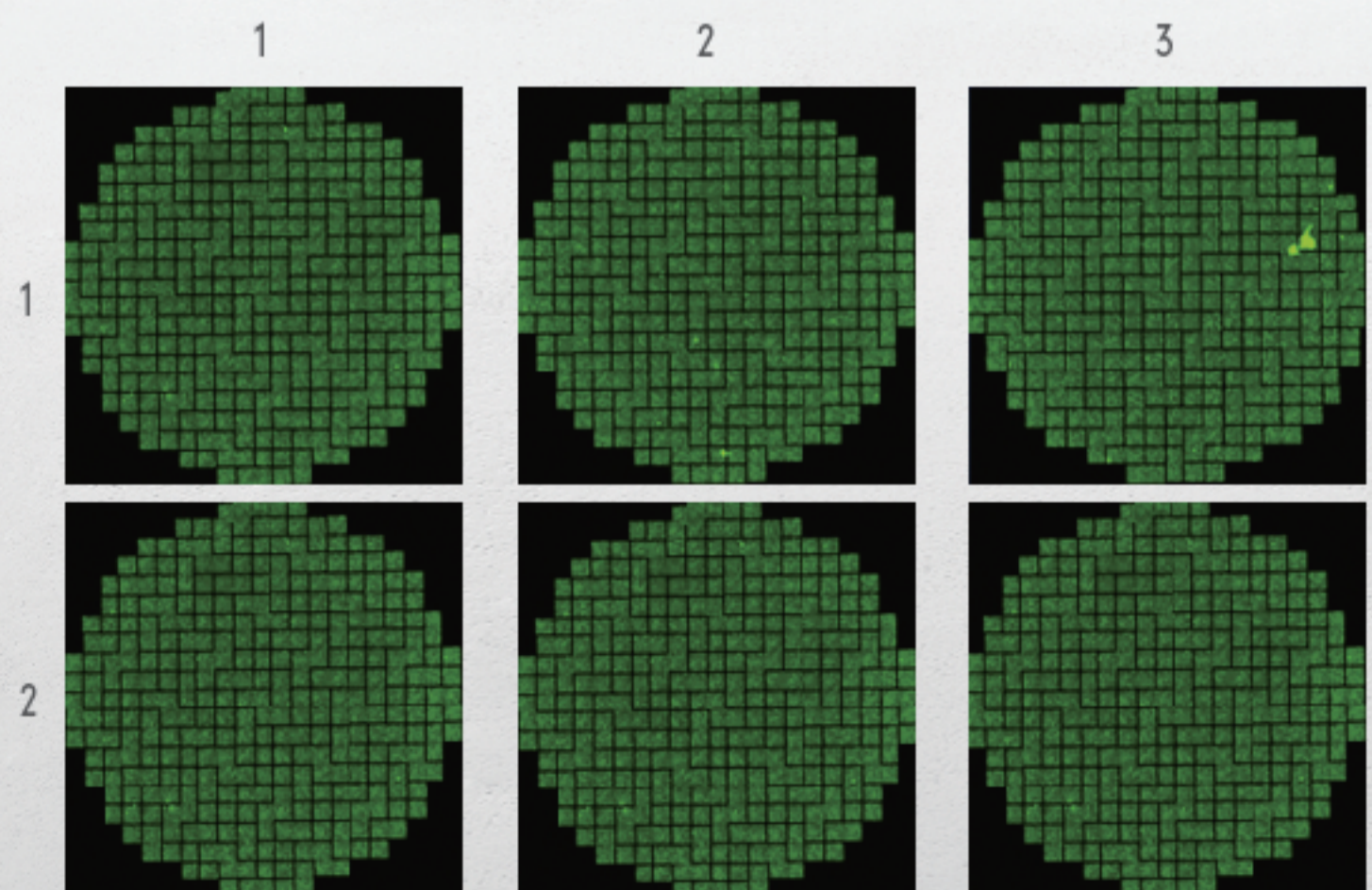
Live Cell Assay

- GFP expressed live Hela cell
- Time-lapse mode
- Time interval: 10h
- Objective lens: 10X
- Incubation mode: 37°C, 5% CO2



High-contents Imaging

- 6-wellplate with whole-stitching mode
- GFP expressed live Hela cell
- Objective lens: 10X



Specification

Imaging modes	Transmitted light (Bright-field), Fluorescence
Imaging Application	High-Contents, Live-Cell, 2D/3D Deconvolution, Multi-dimensional Imaging (X, Y, Z, T)
Objectives lens	10X/NA 0.45, 20X/NA 0.75, 40X/NA 0.95 (PlanApo λ) ¹
Illumination source	High power LED with > 60,000 hour life for fluorescence White LED > 70,000 hour life for transmitted light
Autofocus	Real time focus correction by NIR sensing
Fluorescence channels	DAPI, GFP, Cy3, Cy5 ²
Imaging Camera	4MP sCMOS
Exposure time	10 μ s to 5 s
Pixel size & Frame rate	6.5 x 6.5 μ m ² / 40 fps @ full resolution
Compatible imaging chamber	Well-plate, 35/ 50/ 60 mm culture dish, Chambered slideglass, Chambered coverslip etc.
Temperature control	Ambient +3°C to 45°C
Temperature control homogeneity	37°C \pm 0.3°C @ 23°C ambient
Gas control	O ₂ : 0-20%, CO ₂ : 0-20%
Humidity control	Incubator inside controlled by up to 95% relative humidity.
Display & PC	27" FHD monitor / HP mini workstation / Win10 / i5 8th-gen / 256 GB SSD / 2 TB HDD / GPU
Ambient operating temperature	20 °C to 30 °C (68°F to 86°F)
Dimensions (in)	32 in x 25 in x 22in (W x D x H)
Dimensions (cm)	80 cm x 63 cm x 57 cm (W x D x H)
Weight (kg)	120 Kg

The optical parts in Image ExFlorer are sourced from Nikon Instruments.

1 : The Objective lens can be compatible with Nikon CFI60 Obj. lens series.

End-user can select other obj. lens for their imaging application.

2 : End-user can select other fluorescence filter cubes.



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