Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>CV8000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample format</td>
<td>Multiple well plate (6, 12, 24, 48, 96, 384, 1536 wells), glass slide</td>
</tr>
<tr>
<td>Image mode</td>
<td>Confocal mode: max. 4 color simultaneous recording Bright field/phase contrast (10x, 20x) for 6, 12, 24 well plates, digital phase contrast (10x, 20x)</td>
</tr>
<tr>
<td>Output data format</td>
<td>Image data: 16bit TIF, PNG  Numerical data: CSV, original format</td>
</tr>
<tr>
<td>Excitation wavelength</td>
<td>405/445/488/561/640 nm, all solid laser, max. 5 lasers  (Option) 365 nm LED</td>
</tr>
<tr>
<td>White light illumination</td>
<td>LED</td>
</tr>
<tr>
<td>Autofocus</td>
<td>Laser-based mode, image-based mode</td>
</tr>
<tr>
<td>Objectives</td>
<td>Max. 6 lenses are available, automatically switchable Dry: 2x, 4x, 10x, 20x, 40x Water immersion: 40x, 60x Phase contrast: 10x, 20x Long working distance: 20x</td>
</tr>
<tr>
<td>Confocal unit</td>
<td>Lens-enhanced wide-view dual Nipkow disk confocal scanner, 50 μm pinhole  (Option) 25/50 μm pinhole disk exchanger</td>
</tr>
<tr>
<td>Camera</td>
<td>sCMOS (effective pixels: 2000X2000 pixel size: 6.5 μm), max. 4 cameras</td>
</tr>
<tr>
<td>Stage incubator</td>
<td>Temperature: 35-40℃ CO₂ supply box (CO₂: 5%, forced humidification)</td>
</tr>
<tr>
<td>Dispenser</td>
<td>(Option) Disposable tip type (96tip or 384tip type)</td>
</tr>
<tr>
<td>Bar code reader</td>
<td>(Option) 1 or 2 dimension</td>
</tr>
<tr>
<td>Workstations</td>
<td>Dual-monitor work station for system control, dual-monitor work station for data analysis</td>
</tr>
<tr>
<td>Analysis software (CellPathfinder)</td>
<td>Granularity, Neurite, Nuclear morphology, Nuclear translocation, Plasma membrane translocation, Machine learning, Label-free analysis, 3D analysis, Texture analysis, etc.</td>
</tr>
<tr>
<td>Operating environment</td>
<td>15-30℃, 30-70%RH (no condensation)</td>
</tr>
<tr>
<td>Power supply</td>
<td>Measurement unit: AC100-240V, 50/60Hz, 2KVA max  Workstation for system control: AC100-240V, 50/60Hz, 1.3KVA max  Workstation for data analysis: AC100-240V, 50/60Hz, 690VA max</td>
</tr>
<tr>
<td>Dimensions</td>
<td>Measurement unit: W1280×D895×H1450 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>Measurement unit: 510Kg</td>
</tr>
</tbody>
</table>

Layout

<table>
<thead>
<tr>
<th>Top view</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Front view</td>
<td></td>
</tr>
</tbody>
</table>

Workstation for data analysis is not indicated above. Desk is not included in the system.

We offer the best after-service program to meet your requirement and budget. Our HCA experts will support you to obtain the best results easily.

Contact: csu_livecell_imaging@cs.jp.yokogawa.com

Reliable after-service / Powerful technical support

You should use the manual carefully in order to use the instrument correctly and safely. This product falls under the category of class 1 laser product.

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Printed in Japan, SOS
Live, high speed and high quality

**Time lapse/kinetic assays**
- Stage incubator enables live cell imaging over 3 days without supplying additional water
- Disposable tip type liquid dispenser for kinetic assays
- Hypoxia experiments and FRET
- Ionomycin was applied to A10 cells labeled with Fluo-4 during recording with 100ms intervals.

**Calcium response**
- Fast kinetic responses can be visualized by applying drugs during time lapse recordings.
- Users can choose the pinhole disk matching to the purpose of the experiments.
- Z-resolution in thick samples is improved by using 25 μm pinhole disk.

**Analysis software**
- Preset analysis menus for a variety of applications
- Flexible graph functions to display analysis results
- Direct link between chart and object images

**Machine learning**
- Software learns the features of the sample objects collected by users.
- DPC function is a powerful tool to analyze unstained bright field samples.

**Stage incubator performance**
- Cells were incubated in CV8000 for 68 hours. Proliferation rate was comparable to that in a CO₂ incubator.

**Simultaneous recording of 4 channels**
- Image fields in a 384 well plate
- 1 field/well, 4 camera simultaneous recording

**Calcium response**
- Users can choose the pinhole disk matching to the purpose of the experiments.
- Z-resolution in thick samples is improved by using 25 μm pinhole disk.

**Validation technology**

**Over twenty years of experience**
- Yokogawa CSU confocal scanner unit has been selected by top scientists, and more than 2800 units have been sold in the world.
- High-speed and low-phototoxic imaging are achieved by microlens-enhanced Nipkow disk system.

**25/50 μm pinhole disk exchanger**
- Users can choose the pinhole disk matching to the purpose of the experiments.
- Z-resolution in thick samples is improved by using 25 μm pinhole disk.

**Analysis software**
- Preset analysis menus for a variety of applications
- Flexible graph functions to display analysis results
- Direct link between chart and object images

**Machine learning**
- Software learns the features of the sample objects collected by users.
- DPC function is a powerful tool to analyze unstained bright field samples.

**Water immersion objectives**
- 40x and 60x water immersion objectives provide brighter and higher resolution images.
- Automated water supply

**Image fields in a 384 well plate**
- 1 field/well, 4 camera simultaneous recording

**60x water immersion lens**
- 40x and 60x water immersion objectives provide brighter and higher resolution images.
- Automated water supply

**Label-free analysis**
- DPC function is a powerful tool to analyze unstained bright field samples.

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*1 Depends on conditions and samples.
*2 Optional
*3 1 field/well, 4-camera simultaneous recording
*4 As of September 2017
*5 Digital phase contrast