Photometrics DV2™ Datasheet

Dual-Channel Simultaneous-Imaging System

The Photometrics® DV2™ utilizes a single-beamsplitter design to split the emission light from a microscope into two independent channels. Each channel is projected onto half of the CCD at the same time. Simultaneous multichannel imaging is essential for FRET and other emission ratiometric applications.

Features

- Simultaneous acquisition of two emission channels
- Emission can be separated by wavelength, polarization, or amplitude
- Easily mounts to most microscopes
- Improved adjustment control enables easier image alignment
- Redesigned aperture adjustments ensure apertures are parallel
- Uses standard 25-mm-diameter emission and polarization filters
- Bypass mode permits no-hassle, full-field imaging
- Exchangeable filter cube allows multiple applications to be run with minimal realignment
- Integrated, adjustable CCD mask minimizes ghosting
- Works with many Photometrics® and QImaging® cameras*

*Ratiometric Analysis

*Please contact your local representative to verify compatibility with specific cameras.
### DV2 Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
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<tbody>
<tr>
<td>Wavelength sensitivity</td>
<td>400 to 750 nm</td>
</tr>
<tr>
<td>Efficiency per image*</td>
<td>88 to 92%</td>
</tr>
<tr>
<td>Operation temperature</td>
<td>10 to 37°C</td>
</tr>
<tr>
<td>Detector attachment</td>
<td>C-mount (male)</td>
</tr>
<tr>
<td>Front attachment</td>
<td>C-mount (female)</td>
</tr>
<tr>
<td>External mounting option</td>
<td>¼-20 tapped hole on back of unit</td>
</tr>
<tr>
<td>Dimensions</td>
<td>6.5” at widest point x 8.5” height</td>
</tr>
<tr>
<td>Weight</td>
<td>4.8 lbs</td>
</tr>
<tr>
<td>Filters</td>
<td>Emission/barrier, neutral density, polarization; 1” (25.4-mm) max diameter; 0.39” (9.9-mm) max thickness</td>
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<tr>
<td>Patents</td>
<td>USA: 5,926,283 and 5,982,497; Australia: 731,476; Canada: 2,294,840; Other foreign patents pending</td>
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* Transmission values are also modified by filter transmission.

Note: All specifications are typical and subject to change.

### Applications

- Fluorescence resonance energy transfer (FRET) imaging
- Polarized FRET analysis
- Calcium imaging with fluo-3/Fura Red™ (Molecular Probes) or dual-emission indo-1 imaging
- Fluorescence polarization/anisotropy imaging
- Simultaneous fluorescence/DIC imaging
- Drug discovery with Cy3/Cy5
- Single-molecule fluorescence (SMF) imaging
- pH imaging with SNARF
- Multiwavelength total internal reflection fluorescence (TIRF) imaging
- Voltage sensing with di-4-ANEPPS
- Fluorescence in situ hybridization (FISH) imaging
- cAMP imaging with FICRhR
- Multichannel confocal microscopy when used in conjunction with a spinning-disk confocal