

Cooled CCD Cameras

based on the Sony 1300 × 1030 Interline CCD

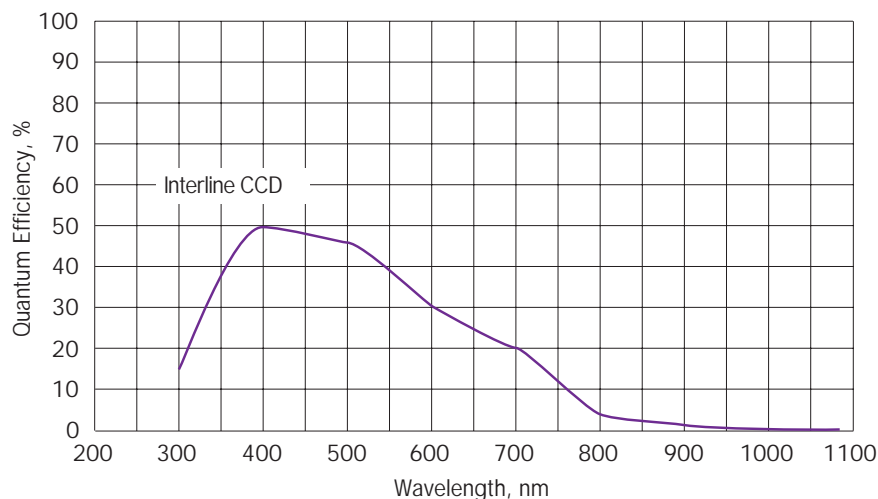
MicroMAX-1300Y

These cameras are ideal for high resolution fluorescence microscopy applications requiring high blue-green sensitivity, but not requiring high frame rates.

These cameras are recommended for GFP imaging, FISH and general fluorescence imaging.

The key features include:

- High QE in the blue-green
- Smallest pixel: 6.7 μm , 1.3 million pixels
- Electronic shuttering
- Programmable readout capabilities (subregion, binning)
- 100% duty cycle
- Fast focus video signal



CCD Array

Sony ICX061

CCD Format

1300 × 1030; 8.71 × 6.90 mm overall;
6.7 × 6.7 μm pixels center-to-center

Full Well Capacity

20,000 electrons typical;
40,000 with 2 × 2 binning

Readout Noise

6-9 electrons at 1 MHz

Spectral Range

300-800 nm

Dynamic Range

11-12 bits

Response Nonlinearity

<1%

Blemish Specifications

Grade 0, no point, cluster, or column defects. These specifications are based exclusively on the manufacturer's cosmetic blemish definitions.

Operating Temperature

-10°C for RTE/CCD with TE cooling

Readout Rates (frames per second)

Thermostating Precision

±0.040°C over entire temperature range

Typical Dark Charge

0.05 electrons/pixel-second at -10°C

Scan Rate

1 MHz

		Region			
		1300×1030	400×400	200×200	100×100
Binning	1×1	0.7	2.6	5.4	9
	2×2	1.9	5.4	9	14
	3×3	3.2	7.5	12	17
	4×4	4.3	9	14	19

QE values presented above are average for the entire pixel area, including the effect of microlenses with nearly collimated light (as output from a microscope). Effective QE may decline slightly in low f/# systems.

Lumogen coating is not recommended on this CCD.

Although no mechanical shutter is required on this camera, a mechanical shutter is available either mounted on the camera or for the use elsewhere in the optical path for special operating modes.