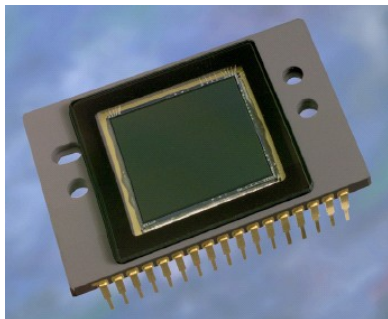


## Cooled interline transfer CCD cameras

PSL has supplied cooled CCD cameras for the last 25 years to end users and OEMs. A selection of high responsivity CCDs, combined with low noise characteristics, enables optimum photonic collection with best possible signal to noise ratio. Special read whilst expose mode allows 100% shutterless duty cycle and high sensitivity operation in low light level conditions.



## Applications:

- Fluorescence imaging
- Confocal microscopy / cell screening
- Chemiluminescence
- Spectroscopy
- Single molecule imaging
- Cell motility / live cell recording
- Electron microscopy
- Biochip reader
- Laser induced fluorescence
- Ophthalmology

## Photonic Science

Millham, Mountfield  
Robertsbridge, East Sussex  
TN32 5JU  
UK

Tel main office : +44 (0)1 580 88 11 99  
sales : +33 (0)4 76 93 57 20  
info@photonic-science.co.uk

## Photonic Science

## Information / products and services



Scientific detector  
systems

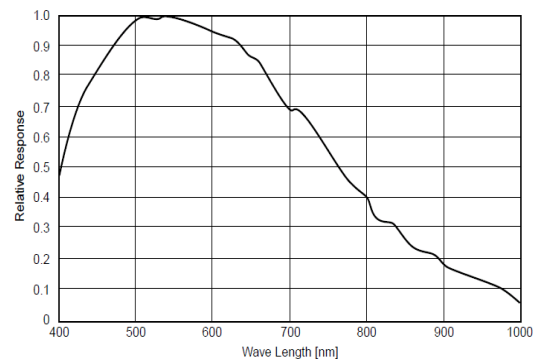
## Cooled interline cameras

Photonic Science Ltd selects premium grade CCD sensors:

- Small pixel size less < 8 microns pixel size
- Cooled CCD sensor with 55 degree C delta T
- Dual scanning frequency
- Sensor size from 11mm up to 22mm diagonal
- Quartz, glass and or fibre optic input windows
- Very low read out noise < 10 electrons
- Very low dark current with less than 0.05 electron per pixel per second (cooling options for further noise reduction)
- Gating time from microseconds to > 30 minutes
- Simultaneous integration / readout enabling 100% duty cycle acquisition
- On chip binning
- Detector synchronisation: pixel locked for dual channel acquisition
- Camera link and GigE digital interface
- Peltier / fan cut off option
- Low profile electronics
- Air cooled / water cooled option

## Cooled megapixel CCD camera

- 1392 (h) x 1040 (v) CCD array
- Input pixel size: 6.45 x 6.45 microns
- 11 mm diagonal
- 13 fps at full resolution @ 25 MHz
- 32 fps in binning 2x2 @ 12.5 MHz
- Readout noise : 8-9 electrons @ 12.5 MHz, 11-13 electrons @ 25 MHz
- Full well capacity : 18,000 electrons in binning 1x1; 32,000 electrons in binning 2x2
- Dark current : <0,01 electrons / pixel / second
- Full vertical binning for 1D spectroscopy with 6ms transfer time
- 12-bit digitisation
- 16-bit extended dynamic range
- Camera link / GigE interface
- Synchronisation / control: via TTL pulse or pixel clock



## Cooled 4 megapixel CCD cameras

- 2048 (h) x 2048 (v) CCD array
- Input pixel size : 7.4 x 7.4 microns
- 22 mm diagonal
- 2 fps at full resolution @ 12 MHz
- > 4 fps with ROI VGA format
- Readout noise : 8-12 electrons @ 12 MHz
- Full well capacity : 40,000 electrons
- Dark current : 0,05 electrons / pixel / second
- 16-bit digitisation
- USB 2.0 interface
- Synchronisation / control : via TTL pulse

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